

OPERATION ELOP

THE FINAL YEARS OF
NOKIA'S MOBILE PHONES

TRANSLATED FROM THE ORIGINAL FINNISH BOOK *OPERAATIO ELOP*
WRITTEN BY PEKKA NYKÄNEN & MERINA SALMINEN

N. ASOKAN, LIISA HOLMA, SIRPA IKONEN, TIMOTHY JASIONOWSKI,
HARRI KILJANDER, JYRKI KIMMEL, ASKO KOMSI, JASON MADHOSINGH,
EMMA OIVIO, JANNE PARKKILA, KIMMO SAVOLAINEN, WILLIAM SMITH,
KATARIINA SUVITAIVAL, PETRA SÖDERLING, MAILIINA TURANLAHTI,
KEVIN WRIGHT AND ANONYMOUS CONTRIBUTORS

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The little green spy boat seen from the old Nokia House in the Keilalahti bay, Espoo, Finland. Photo by Jari Ijäs on December 8, 2010, with a Nokia C7.

On October 8, 2017, Joe Belfiore of Microsoft casually announced the death of Windows Phone. In a series of tweets he explained that Microsoft will continue to support the Windows Phone (and Windows 10 Mobile) platform but “building new features/hw aren’t the focus”. That was the end of Microsoft’s smartphone endeavor.

Fast rewind to 2010.

On September 10, 2010, Nokia of Finland replaced its Chief Executive, Olli-Pekka Kallasvu, who had been at Nokia for 30 years, with

Stephen Elop, a 46-year-old native of Ancaster, Ontario, and the head of Microsoft's business software unit, in a bid to turn around the company's struggling smartphone lineup and stop a decline in its market share in the U.S.

On February 11, 2011, Nokia and Microsoft announced plans for a broad strategic partnership to build a new global mobile ecosystem with Windows Phone. [1] Under the proposed partnership Nokia would adopt Windows Phone as its principal smartphone strategy, and contribute its expertise on hardware design, language support, and help bring Windows Phone to a larger range of price points, market segments, and geographies.

On September 2, 2013, Microsoft announced that it would buy Nokia's Devices and Services business and license its patents for \$7.2 billion. Also as part of the deal, Nokia's CEO Stephen Elop was announced to eventually go back to Microsoft and lead an expanded devices team. In November 2014, Microsoft announced the first Microsoft (non-Nokia) branded Lumia smartphone, the Lumia 535. However, Lumia device sales decreased sharply after the introduction of Windows 10 in 2015. On June 17, 2015, the Microsoft CEO Satya Nadella announced that "now is the right time for him (Stephen Elop) to retire from Microsoft".

On October 7, 2014, two Finnish journalists Merina Salminen and Pekka Nykänen published their book *Operaatio Elop* in Finnish, probing into the events that took place in Nokia's device business under the CEO Stephen Elop's period in 2010–2013. The authors had interviewed over 100 people for the book, most of them being current or former Nokia employees. The book came out in Finnish and although there was interest in an English version, the authors' publishing agent was never able to build a viable business case for the English version of the book. Some former Nokians suggested crowdsourcing the English translation for the book in 2015 but the publishing agent's contractual agreement was holding back any publication of an English version until 2017. Some chapters were translated by volunteers in 2015 and the remaining chapters have now been translated into English. The full English translation is now published here the first time, under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) license.

We, the English translation team would like to express our warmest thanks towards journalists and authors Merina Salminen and Pekka Nykänen for their kind support and information dissemination spirit. Please support Merina and Pekka by buying the original book! And when you read the Finnish book or our English translation, please do remember that the story hails from the year 2014, and our mission was to translate the original Finnish manuscript in English, not to rewrite it to reflect the context of year 2018 nor to reflect our personal opinions. So, when the book says “currently”, please read it as “in October 2014”. We have streamlined the text a bit when Americanizing it, and to assist the global reader we decided to show the Euro figures mentioned in the book also in US dollars, using the exchange rate applicable at the time of the reference.

When we were working on the English translation, a small piece of news about Stephen Elop and Finland caught our eye, even mentioning the original book. The Finnish daily *Iltalehti* wrote that Elop had been seen in the Nokia headquarters on the Espoo Karaportti campus on November 13, 2017. The article was speculating that the visit might have been linked to Elop’s current job with the network provider Telstra in Australia, where he started in April 2016, and further mentioned that in the book *Operaatio Elop* he had been described as “one of the worst, if not the worst CEO in the world”.

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For readers who prefer a Kindle or PDF version instead of this online version, we provide exports in PDF/EPUB/MOBI formats from Medium. Please consider the environment before printing the 300 pages.

In the spirit of *Connecting People*,

N. Asokan, Liisa Holma, Sirpa Ikonen, Timothy Jasionowski, Harri Kiljander, Jyrki Kimmel, Asko Komsa, Jason Madhosingh, Emma Oivio, Janne Parkkila, Kimmo Savolainen, William Smith, Katariina

Suvitaival, Petra Söderling, Mailiina Turanlahti, Kevin Wright and anonymous contributors.

And now to the book.

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[1] The day was still February 10, 2011, in Redmond, Washington, when the announcement was published in Finland.

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Operation Elop

The final years of Nokia's mobile phones

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1. Foreword

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The rise and fall of Nokia is a unique story. In just ten years, a small, multi-industry company transformed into one of the brightest stars in industrial history. Equally unique was its demise and collapse, from the pole position of the mobile phone market to its furthest margins. On September 3, 2013, Nokia announced its intention to sell its mobile phone business to Microsoft. That date has been branded on the hearts of the Finns, equal to the loss of Estonia [2] and the September 11 attacks.

This book seeks answers to the questions left unanswered in the memoirs of the former Nokia chairman Jorma Ollila: Who was Stephen Elop and why was a Canadian outsider selected as the new CEO of Nokia? What was the logic of adopting a smartphone operating system conceived outside of Nokia? Why Microsoft's Windows Phone and not Nokia's own MeeGo or Google's Android platform, an option once described by a former Nokia executive as "like peeing in your pants in the winter for warmth?" [3] Why did the company lose its top talent and where did they go? Why did the renowned Nokia spirit simply vanish?

As Elop assumed his position in October 2010, Nokia's market position was already under threat, but some believe it was his strategic decisions

that led its descent and the sale of Nokia's mobile device division to Microsoft. Others believe he chose the best option from an increasingly short list of bad options, that Nokia's decline was inevitable in the face of renewed competition and rooted in its slow acceptance of alternatives to Symbian and its vaunted S60 platform. Still today, some believe that Elop was Microsoft CEO Steve Ballmer's "inside man," sent from Redmond on a quest to deliver market success to Microsoft's foundering mobile platform. In this vast landscape of conflicting narratives, we seek to document the hard choices that led to the end of this small country's unlikely domination of the mobile equipment market and assess whether there was a way to salvage "the Nokia Way" or if its end was truly inevitable.

During the process of researching this book, we have interviewed over a 100 people with first-hand knowledge about why Nokia ended up as it did. Combined, their stories weave a narrative, one which touched—directly or indirectly—the lives of most Finns, as almost everyone in this Nordic country of six million knows someone who has worked at Nokia. Many of the interviewees worked at Nokia between 2010 and 2013 while the company was in turmoil, when the old laws did not apply any more. When key people were replaced. When executive leadership went AWOL. When things which should not have happened happened. This book depicts how the top management decisions cascaded through the organization, what kind of consequences they had, and—most importantly—how they were seen among the company's middle management and rank and file employees.

In addition, we have investigated how Nokia's actions appeared outside the company. Did the new Windows strategy convince its network provider [4] customers? What was the outlook for Nokia in Silicon Valley? What was the perception of Nokia in the eyes of its shareholders?

This book differs from earlier Nokia studies, as it concentrates on recent history and events, seeking to synthesize a narrative of these fateful years. The book is not about the history of Nokia, nor a parting shot by former employees. It is a critical look at Nokia's exit from the mobile device market, constructed from a neutral point of view using traditional journalistic methods.

Many of those interviewed wanted to remain anonymous, as some are still afraid or still revere Nokia's unique position in Finland. What is strikingly evident is the affection of these former Nokians towards the company. During their days at the company, they believed they were building the future; afterward, they mourn over the wreckage left behind. Ultimately, many just needed to tell us their side of the story.

This book follows the events from the day Stephen Elop entered Nokia's storied history, seeking to unveil the background of the events at all levels and amplify the perceptions of all people involved in this story. To that end, the point of view will shift from chapter to chapter, as the events are observed through the eyes of engineers, middle management, top leaders, and the Nokia Board of Directors, but together seeking to answer one simple question: Could the demise of Nokia have been prevented if there had been a different CEO?

We hope this book will provide a unique insight into what exactly happened at Nokia from 2010 to 2013 and, for some Finns, assist them in the necessary grieving process for Finland's greatest national champions. Nokia mobile phones are now history and unlikely to come back; its customers will move on to something else. However, the end of Finland's domination of the mobile equipment market has its own silver lining: Hundreds of startups have been founded by ex-Nokians, creating and dominating new markets. The future of the renewed Nokia, one with a renewed concentration on networks and location based-services, looks bright. In the end, one can learn and benefit from the good and bad choices, but what is truly important is to progress.

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[2] The 1994 maritime disaster on the Baltic sea when the ferry MS Estonia sank causing 852 deaths.

[3] This is actually an old Finnish proverb, inspired by the arctic climate of Finland. Interestingly enough, both Nokia's MeeGo and Google's Android share the open source Linux operating system kernel.

[4] Network providers are also referred to as "operators" or "carriers". In this translation, we use the term "network provider". More explanation in the addendum to the glossary in Appendix 2.

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2. Hope awakens

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News editor Mirjami Saarinen confesses she has only vague recollections of the end of a certain workday in 2010. The morning, however she remembers crystal clear.

It was September 10, 2010. The majority of the staff of *Kauppalehti*, a major Finnish business paper, was attending a morning seminar downtown Helsinki. Staff not attending the seminar was producing the morning online news and planning the next day's paper, when a press release appeared on editor Niko Ranta's display. The title was so startling that Ranta started to read the release aloud. The atmosphere at the news desk became electric. That was the moment, which divided Mirjami Saarinen's recollections of that day. She can still remember, how the staff was returning hurriedly back from the seminar, where the news broke amidst the breakfast. After that point, she can hardly remember anything clearly.

As it was a Friday, *Kauppalehti*, as a 5-day paper, had a dilemma. The rest of the Finnish media would consume the news completely during the weekend, but *Kauppalehti* still had to be able to produce pertinent news for the Monday paper. Based on her experience, Saarinen knew what she had to do. First, she collected all available editors to work on the news. At the same time she worked on fast news flashes for the online front page. After that, the team started to think angles, which would be still topical on Monday. Would the news still be front page material on Monday, or would it end up on page three? How many pages to allocate and so on. At the same time it had to be decided, who would attend the coming press conference. According to Saarinen the rest of the day was like controlling a huge traffic jam.

The start of the press release—i.e. sacking of the Nokia's then CEO Olli-Pekka Kallasvuo (known universally within Nokia as "OPK")—was not unexpected. That had been speculated all fall by the Finnish media, which traditionally was nearly toothless regarding Nokia; lately, it had become more critical and demanded Kallasvuo's head on the plate. Until this day, any public criticism regarding Kallasvuo's position would have been taboo: Nokia was revered—even feared—among the Finnish press, and all critique was typically much muffled and well veiled.

What came next in the press release was indeed startling. Everybody familiar with the company had been betting on Anssi Vanjoki—a very strong and controversial Nokia power figure—to succeed OPK. Instead, the press release introduced a practically unknown Canadian as the company's new CEO. Who on earth was Stephen Elop? A man nobody had heard of! Was he really the best of available bad options? And what a strange name!

Saarinen had quickly half a dozen editors working on the news, and more info started to flow in. A software guy. Coming from Microsoft. Had been in charge of Microsoft's biggest division. More renowned globally than in Finland.

A photographer, two editors and news editor-in-chief Arno Ahošniemi headed for the press conference starting at 1 p.m. The auditorium of the Nokia headquarters in Keilaniemi Espoo was filled by members of all relevant established Finnish media as well as international media having presence in Finland, including Reuters and Bloomberg. This was news also at the global level.

The stars of the show kept waiting for themselves for a moment, then it all started. Two figures well known by the Finnish media entered the room: Jorma Ollila and Arja Suominen, EVP of Nokia Group Communications. They were accompanied by a smallish, rather sympathetic looking man. He had an unaffected, even modest look. His tie, combining wine-red and red, appeared almost Soviet Union-like. Moreover, his grey suit and white grey shirt oozed of caution. He had an army-style haircut and his dull-looking glasses seemed to fit poorly behind the ears. That man was not the next Steve Jobs, was the quick, collective verdict of the room.

Jorma Ollila quickly took the reins. He introduced Elop and emphasized that the whole of the Nokia board had been actively participating the selection of the new CEO. The board had wanted to find the best possible person to accelerate Nokia's renewal. According to Ollila, Elop had a great combination of software background and proven leadership skills to match the challenge. In addition Ollila—the guy who lifted Nokia to the top—emphasized Elop's sensitivity to the cultural differences. Understanding the Nokia's tradition and the essence of "Finnishness" would be the key factors contributing to Elop's

success. Elop was someone, who could understand the very core and the possibilities of Nokia, Ollila estimated.

Then it was Elop's turn. He shook hands with Ollila and swung behind the small round table filled with microphones. It took but a few seconds to realize the man was a master with the words. Smooth appearance and a reliable presence were like a magic wand, erasing any doubts of the media with a single wave. This man could talk... really talk! His English sounded good, unlike his predecessor Olli-Pekka Kallasvuo's. A glimmer of hope arose among the audience. Maybe it would all end up well after all.

Elop started by thanking Ollila and the Nokia board eloquently about his nomination, which was a great honor. Then he continued and outlined his vision about the big changes shaking the mobile industry. Trendy buzz words and phrases like cloud computing, social media, tablets, apps and so on popped up during the speech naturally. According to Elop, Nokia's problems were big opportunities. Nokia had tremendous strengths, especially its super capable people. "We" slid into the speech subtly and Elop assured he would listen to the employees and the customers very carefully. He maintained he was one of the "Nokians"—almost a Finn, if you please—and said he would cheer for two countries in the upcoming Olympics.

After the well-prepared speech was over, Ollila moved next to Elop for the Q&A. Elop sipped water from the glass and was ready.

The very first question was addressed to the board chairman Ollila. He was asked when he would retire from his position. Instead of a vague comment, Ollila said "soon". The second question was also pointed to Ollila. A Swedish reporter asked for a summary of Kallasvuo's mistakes, but Ollila replied that this was not the time for a retrospective but time to look forward, then added there had been shortcomings in the implementation of the company strategy. Now, it was the time to proceed to the next phase with a new CEO.

When the third question was also addressed to Ollila, the situation became a bit comical. Elop, however, reacted quickly and replied instead of Ollila. "What would be the next steps for Nokia?" Elop replied it was too soon to comment on that but he firmly believed the answer would be found within Nokia—and his task was to make sure

that would take place. In a similar way Elop elusively replied to the question, whether the mobile device operating system should be changed. However, he stated the operating system would be critical factor in the strategy.

Without a prepared speech Elop was, if possible, even more credible. His hands moved naturally and stressed key messages exactly at the right moment. The movement was almost magical. Perhaps, this could turn into something. Perhaps the American shareholders would finally be happy. Perhaps this man could rescue Nokia. Elop's undisguised ambition would be manna to Nokia.

After one hour the conference was over and the media started to return to their offices. At *Kauppalehti* the task list until Monday had become clear. The press conference would be covered by Ilkka Sinervä. Merina Salminen would analyze Elop's quotes regarding Nokia's challenges. Antti Mustonen would make the feature story about Elop. Editor-in-chief, Hannu Leinonen would analyze, in his weekly column, what would happen to Nokia's special heritage as a Finnish company, which up until then had been steered almost solely by Jorma Ollila.

Looking back to that unusual day, it is obvious that at least *Kauppalehti* editorial staff was quick to point out Elop's strong and possibly ominous ties to Microsoft. There were instant comments like "Microsoft to buy Nokia?" and many saw Elop's nomination as the first step towards a merger. For some the vision was frightening, but not for all. One of the latter was an anonymous member of Nokia top management, who had dealt with Elop a lot. He [5] recalls being ecstatic about Elop's arrival and opened a good—a really good—bottle of red wine that day.

We do not know how Jorma Ollila felt after that long day. We do know, that the day was the first step in Ollila's plan to rescue Nokia, started a few months earlier. Nokia now had a new leader. A kind of leader the market and foreign shareholders had been expecting. The project—called Operation Elop—had started. [6]

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[5] or "she"?—the original Finnish pronoun "hän" conveys no gender information.

[6] *The writers want to point out that in real life there was no “Operation Elop”. This is simply the name they chose for the original book.*

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3. Mr. Vanjoki, last minute runner-up

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The starting point for the replacement of Nokia’s Chief Executive was at a crayfish dinner party for the board members in August 2009. In his memoirs, *Against All Odds*, Jorma Ollila writes that one of the board members approached him asking if the company management was all right. Something that Ollila himself had been wondering, and so it was that the cat was let out of the bag. For a long time the board had remained loyal to Olli-Pekka Kallasvuo, a long-term fellow worker of Ollila and a well-liked colleague, generally referred to as OPK. The general consensus was that the problems would be resolved without assistance, but now things were going downhill rapidly.

After the dinner party things started to evolve. The decision to replace the Nokia Chief Executive Officer was of such magnitude that it would only be made with Ollila’s consent. Towards the end of 2009, Ollila, too, was ready to go ahead with this. In November–December the board had a yearly evaluation round regarding its own performance as well as the role of the chairman of the board. Vice-chairman Marjorie Scardino was heading these discussions, and they were mainly focused on the operative management. In his memoirs Ollila mentions that practically every board member had posed the question of whether the Chief Executive was up to his task.

These discussions were the actual initiation of the replacement process. In January 2010, the board had a lengthy discussion regarding the performance of the organization, and Ollila was given the mandate to talk with the Group Executive Board members about the state of the corporate management. This he did, with Kallasvuo’s consent.

There were about a dozen of these talks, and, according to Ollila, the opinions about Kallasvuo were evenly split between those unquestionably supporting OPK and those having serious doubts. Ollila writes: “Olli-Pekka is an agreeable person who does not stir up strong

antipathy. The doubts, however, were clear and strong. The discussions with the executive board were not the main factor leading to the replacement of the Chief Executive, but did indeed provide additional data in support of the decision-making.”

The concerns within the board were said to have grown gradually. With each passing day, the board believed less that the methods used would lead to success. There were product delays. There were decisions made based on a lack of options and in haste. Also the way Kallasvuo and Ollila were working together caused discontent within the board as the two of them sometimes tended to agree things just between themselves. Apparently one example of this was the decision to hire the former prime minister of Finland Esko Aho as the executive vice president for corporate relations and responsibility.

In 2007 Nokia reported a record-breaking financial result. After that, the board was able to blame the global financial crisis that began in 2008 for some of Nokia’s problems. The awakening did not take place until 2009, beginning to be noticeable also in the language of the board.

During summer 2010, the board visited Silicon Valley, California. The doubting of Kallasvuo’s ability to run the company had turned into a predominant state of mind. In his memoirs, Ollila mentions one board member being against dismissing Kallasvuo. This is contradicted by another source familiar with the case claiming it was only Ollila himself standing in the way of changes. Granted, he is a living legend, but also a challenging character. Many thought he should have stepped down once things started to go downhill in order to enable proper inspection and evaluation of the current situation, leaving room for questioning the existing structures.

There were rising concerns among the shareholders, too. “What should we have been satisfied with?” asks a representative of a shareholder referring to the operations by the board chaired by Ollila during the last years of 20th century.

The deputy CEO of Ilmarinen Mutual Pension Insurance, Timo Ritakallio considers it surprising that Ollila did not leave the company after his time as the Nokia CEO. He points out that Ollila’s mere presence, although unintentionally, was tying the hands of his

successor. “With Ollila having led Nokia’s rise as well as being a very strong-willed chairman of the board, it is obvious that Kallasvuo was not entirely free to operate as he may have wanted to” says Ritakallio.

A representative of a big Finnish shareholder holds the board equally responsible for Nokia’s problems. The board left issues unattended, one of which was the situation of Nokia Siemens Networks. NSN spent years in a difficult impasse due to a delay in the integration of Siemens and Nokia. The need for change was significant, but Ollila was not stepping into the role of *primus motor* in order to change the operation mode. The deadlock was apparently frustrating Scardino the most. She was considering leaving Nokia already in 2009.

Many of those interviewed for this book consider it odd that the board appointed Ollila to be the main headhunter for the new Nokia CEO, since he, after all, had been the one to choose Kallasvuo, who now had failed at his task. Other members of the appointment committee were Scardino and a Swedish consultant Per Karlsson, a long-term trustee of Ollila.

Dame Marjorie Scardino (born 1947) is the first female executive to have made it to the FTSE Top 100 List of largest British listed companies: She was appointed CEO of the British publishing company Pearson. She joined Nokia Board of Directors in 2001 and was appointed vice-chairman of the board in 2007. Scardino is known as the Iron Lady of the Anglo-American publishing industry. She has also worked as a publisher of The Georgia Gazette as well as The Economist Group CEO. By the time she joined Nokia, she had had a prominent career in the traditional publishing industry but had no experience in internet-based industries nor had any in-depth knowledge of mobile business. According to two major Nokia stakeholders, Scardino’s input as a board member was weak.

Karlsson (born 1955) has a background similar to Scardino. Ollila had requested him to join Nokia Board of Directors in 2002. He was a high level company consultant with a notable career. He was working at Boston Consulting Group until he joined Ikano Holdings, a financing company set up by the sons of IKEA’s founder, Ingvar Kamprad. Karlsson and Ollila share a common interest in finance.

Out of the three members of the appointment committee, only Ollila had experience in the technology industry, but even he, according to many, was not in touch with the service-driven internet-age mode of operation.

Spencer Stuart, the London-based headhunting company specializing in the information and communication technology field, drew up a list of Nokia CEO candidates in June 2010. Ollila and the team selected a short list of names: three from North America and two from Finland. Among the American candidates was the Canadian Stephen Elop. The Finnish candidates were Anssi Vanjoki, head of Nokia Mobile Solutions and Niklas Savander, head of Services and Devices.

Vanjoki (born 1956) joined Nokia in 1991. He was a member of Ollila's core team, the so-called dream team that led Nokia to its success. Other members of the team were Kallasvuo, Matti Alahuhta, Pekka Ala-Pietilä and Sari Baldauf. Before Nokia, Vanjoki had worked at the 3M conglomerate. At Nokia, Vanjoki had been heading Nokia Mobile Phones, Multimedia division as well as Markets division. During summer 2010, he was carrying out a task the board had assigned him, examining the research and development operations. At the same time he was in the process of generating a new strategy for Nokia, again assigned to him by the board, with Kallasvuo's consent.

Savander had been with Nokia since 1997, but his choice as the next Nokia CEO seemed unlikely from the start, despite his appropriate background in sales, marketing and services. He was deemed somewhat reserved as a leader both within and outside the Nokia organization.

Having completed the candidate short list, the appointment team started to travel. The board was appreciative of Ollila's efforts: "He did a huge job traveling and carrying the main responsibility." Ollila flew on a private plane from Helsinki to San Francisco to interview the foreign candidates. He had set up the schedule in such a way that he could meet five candidates in three days. Three of the interviews were in East Palo Alto Hotel in Silicon Valley—the first at breakfast, the second over lunch and the third in a meeting room. He then continued to Microsoft in Redmond to meet with Elop over breakfast in the privacy of his suite. In the afternoon, Ollila flew east to Southampton to meet with the fifth candidate over dinner.

It was no easy task to carry out. In Finland he was a king, but in Silicon Valley he was the chairman of the board of an outdated technology company.

To fully appreciate Ollila's difficulties in carrying out the task, one has to be aware of the perception of Nokia in California. An American analyst believes that the board overestimated its chances to attract a top American corporate executive for the next Nokia CEO. California is at the core of America's own cell phone service technology CDMA (Code Division Multiple Access). "Everyone there is in the system-on-chip manufacturer Qualcomm's camp. All Google and Apple executives, are close to Qualcomm and live in the CDMA-world. These people have always seen Nokia as a dinosaur representing the European GSM (Global System for Mobile communication), the past. From California, the view is somewhat different to the one from Espoo."

In his memoirs, Ollila mentions being unsure, as he was returning home, whether the new CEO would be found amongst those interviewed. Fairly quickly the US list of candidates was reduced down to two names. The number one candidate was the number two man in a well-known technology company. According to Ollila, he was an executive in his fifties and who had been with the company for a number of years, having risen to his position through various roles in the company. Ollila says to have met with this candidate twice. He sees this candidate as the right choice—he was well acquainted with the technology companies in the world, and both his leadership style as well as his values were suitable, but after long consideration, the candidate withdrew from the process for personal reasons, not Nokia, claims Ollila.

Various number one candidates have been speculated on, both in the media as well as in the interviews for this book. One is Apple's current CEO Tim Cook, who in 2010 was Apple's number two man. Based on our interviews, Cook very likely was part of the process and a candidate for this job. He fits Ollila's description quite well.

Cook joined Apple in 1998 and was 49 at the time of Ollila's travels, which could be interpreted as "in his fifties". The fact that he was also a member of Nike Board of Directors only added to his suitability.

The other name proposed as Ollila's number one candidate in the interviews was Sun's Jonathan Schwartz. He does sound like a good candidate, but doesn't quite fit Ollila's description. He was only 44 years old at the time and had already resigned as Sun's CEO in February 2010, which doesn't fit Ollila's description of a number two man, despite the fact that Oracle had purchased Sun around that time.

An American reporter, David J. Cord, living in Finland, wrote in his book *The Decline and Fall of Nokia* that Ollila's number one candidate would actually have been former Sun CEO Scott McNealy. The media was widely spreading this idea only to discover that McNealy had already a few weeks earlier denied this in a tweet that leaves no doubts: Ollila had never asked him to run Nokia.

The wildest guess was Yahoo's then CEO Marissa Mayer, a former Google executive with Finnish origins. Mayer had a small child, so her family situation would have prevented her move to Finland. But she surely does not fit the description of "a man in his fifties".

We believe Ollila's description of the number one candidate is true. What possible reasons would he have had to share false information? He could have just as well left that part out altogether.

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In order to understand the selection process, it is important to know who were the ones making the decision.

In 2010, the Nokia Board of Directors consisted of six other members in addition to chairman Ollila, vice-chairman Scardino and Karlsson.

Lalita Gupte (born 1948) was the chairman of the board of ICICI, an Indian financing company. She had solid experience in both operational and official posts in finance.

Bengt Holmström (born 1949) was professor of economics in MIT. For a Finnish researcher, he was an exceptional academic superstar.

Henning Kagermann (born 1947) was the former Chief Executive of the German software company SAP. He was a top name in European technology industry in his time.

Keijo Suila (born 1945) was the former Chief Executive of Finnair. He was one of the most valued corporate executives, one who in the past had also worked in several senior positions in Huhtamäki and in Leira.

Isabel Marey-Semper (born 1967) was an executive in the French cosmetics company L'Oreal. She was experienced in matters of high level strategy, corporate planning as well as intellectual property rights in European companies.

Risto Siilasmaa (born 1966) was the founder and chairman of the board of F-Secure, a Finnish information security company. Siilasmaa was one of the highly respected corporate executives within the technology industry in Finland.

The lack of technological competencies stood out in this crowd. Only Siilasmaa was representing the current information and communication technology. The other expert in the field, SAP's Kagermann, represented the older generation. The honorable German gentleman is not likely to have spent his time in the prevailing techno scenes. Holmström was moving in respected technology circles in the US, but as a researcher. Ollila had valued finance and consumer business experience in IT over technology when forming the board. Karlsson and Gupte had finance backgrounds, Suila, Scardino and Marey-Semper were experienced in consumer business. Having Scardino and Marey-Semper as board members for a high-end technology corporate like Nokia, struck many of those interviewed for this book as rather odd because their mobile competence was scarce. It is also worth noticing that there is hardly any public data on Marey-Semper.

One could ask, why weren't there any other type of competencies present in the Nokia board? A technology start-up entrepreneur? Venture capitalist? Someone with up-to-date connections to network providers, subcontractors, and, above all, mobile device consumers?

Horace Dediu, an analyst who is well acquainted with both Nokia and Microsoft, points out that with Nokia competitors, the boards mainly had advisory roles. For example, the biggest shareholders, Sergei Brin, Larry Page and Eric Schmidt had the strongest voice in Google. According to Dedieu the American technology companies are not

willing to render power to financiers or other outsiders, because that would weaken the disruptive thinking that defies and questions existing structures. The most distinct example of disruptive thinking and the role it plays is the legendary founder and Apple CEO Steve Jobs. Dedieu believes the Nokia board was professionally managed, but instead of focusing on vision, it focused on optimizing.

Let's take a look at the Apple Board of Directors in 2010 for comparison. It was chaired by Arthur D. Levinson, chairman of Genentech Board of Directors. Pharmaceutical and technology businesses have similarities, such as R&D at the core of operation. Innovation as well as protection of intellectual property rights are both of utmost importance. One member of the board was Bill Campbell, chairman of the board of software company Inuit, with a long standing career in the software business. The technology industry was represented also by Ronald D. Sugar, chairman of the board of Northrop Grumman, an aviation and aerospace technology company. Al Gore, the former Vice President of the United States, was there to manage high level public relations. At Nokia, the former prime minister of Finland, Esko Aho, had the equivalent role as a member of the Nokia Group Executive Board. The consumer point of view in the Apple board was represented by Millard Drexler, the chairman of the board of the clothing company J.Crew.

The Google Board of Directors in 2010 had six other members in addition to Page, Brin and Schmidt. L. John Doerr, a venture capitalist specialising in technology industry and a former executive of the Amazon online store, John L. Hennessy, a professor of computer science at Stanford University and the founder of Atheros, a semiconductor company, Ann Mather, a board specialist focusing on gaming and internet business and a former executive at Pixar Animation Studios, Paul S. Otellini, a former CEO of the semiconductor company Intel, K. Ram Shriram, Sherpalo Ventures CEO and a professor of biochemistry at Princeton University, Shirley M. Tilghman.

Two of Nokia's fiercest competitors, Apple and Google, obviously had boards more competent in global technology and internet knowhow than Nokia. To aggravate the situation, the Nokia Board of Directors was manned more with fine titles than substance. Scardino was the only American on the board despite the fact that the highest level of software competence was found in the US.

Would the Google and Apple boards have chosen Elop as the Chief Executive Officer? Hardly. To them, Elop represented the bygone world. He had no knowledge of consumer business and came from Microsoft, a dinosaur that had failed to progress from the PC to the mobile environment.

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The board members were aware of the great responsibility on their shoulders. What they most wanted was to get rid of the deep feeling of frustration. Moreover, all progressive work had come to a halt because of the ongoing replacement of the CEO. Therefore, the recruitment was swiftly processed. When Ollila's number one candidate declined, the only ones left were Elop and Vanjoki.

According to the magazine *Bloomberg Businessweek*, Elop's experience and his CV had impressed Ollila. Elop had been leading Microsoft's Office business worth \$19 billion, one of the world's biggest and most profitable business enterprises. Elop also had a reputation of not being afraid to take the bull by the horns and of being able to solve internal conflicts.

As a matter of fact, Elop had already made an impression on Nokia leaders in 2009 when Nokia and Microsoft were in negotiations over provisioning of Microsoft Office applications in Nokia Smartphones. The negotiations had proven difficult. Nokia was at its peak, and Microsoft was known for their inflexibility. Problems arose right at the very beginning, says one of the Nokia leaders. At 9 a.m., an army of Microsoft lawyers marched into the meeting venue Nokia had chosen. A porter at the reception requested them to sign a traditional piece of paper to enable him/her to present them with visitor passes. Something in the wording of that piece of paper was not to the Microsoft lawyers' liking, and in the end, they were allowed in without visitor passes. That day of negotiations had an unpleasant start.

The negotiations carried on as they started, with difficulty. However, in April, a Nokia executive Kai Öistämö and his team had met with the Microsoft negotiating team who were now led by Elop. He had made a good impression on Nokia managers with his frankness and eagerness to solve things, and he wasn't being political about anything. He had given an impression of himself as being a strong leader and a master of

words. His Finnish counterparts perceived Elop's demeanor as familiar and pleasant. On the eve of May Day, much to the surprise of both parties, there was a breakthrough in the negotiations and the agreement was signed later on in the summer.

The news of Elop's performance in these negotiations must have reached the ears of those who were now in the process of electing him as the new Nokia CEO.

Vanjoki had many supporters both within and outside the Nokia organization. He knew Nokia and its reference groups like the back of his hand. In August 2010, it looked like the scales were about to tip in his favour. The board had not yet made the final decision, but the outcome seemed almost certain. The new CEO would be Finnish. The strategy work assigned to Vanjoki would not go to waste. A new era was on the horizon for both Vanjoki and Nokia.

By September 10, 2010 the tables had turned. Elop had after all been appointed as the new Nokia CEO. What happened during these few weeks?

The main driver in the events was Scardino. She was the spokeswoman on the board for the foreign shareholders, in particular for the American pension fund investors. As a member of the appointment committee, she was the natural point of contact for the American pension funds that were dissatisfied with the progress Nokia was making. For the foreign shareholders, Vanjoki was not a sufficient guarantee for renewal to take place. A bigger shake-up was needed, and the shaker needed to come from outside the Nokia organization. Scardino told her colleagues that only after talking to Elop did she realize the gaps Nokia had in understanding the new era. Scardino was the one to tip the scales in Elop's favour at the last minute, the appointment committee presented Elop as their preferred candidate.

The Nokia Board of Directors were between a rock and a hard place, says an analyst who has studied Nokia for a number of years. They were forced to prove to the American investors that Nokia was no longer just a Finnish company. Although Nokia shareholders were spread across the globe, from the American point of view too many of Nokia employees were still based in Finland. The investors could only be assured by a big move: Either transfer Nokia headquarters to United

States, or, appoint a non-Finn, preferably a North American, as the new CEO. By choosing Elop, the board could keep the headquarters in Finland.

Another analyst, who is very familiar with Nokia, believes that also Elop's excellent command of words as well as his seemingly impressive background with Microsoft worked in his favour in addition to him being a North American. Those appointing him were hoping to get a charismatic frontman like Steve Jobs. Elop's connection to the Windows operating system was not likely to have weighed in the negotiations. Had this been a factor in the recruitment process, the Nokia operating system strategy would not have been so drastically changed as it eventually was, says the analyst. But he/she does think it is possible, that the American shareholders pressured the board to choose someone from a software company like Microsoft.

According to him/her, no one in United States considered Elop for the job because his CV was not suitable: He had no in-depth mobile competence nor consumer business understanding. By appointing Elop, Nokia showed just how far to the margin it had drifted. There simply weren't any A-list candidates available. If there were no suitable candidates with software backgrounds available, the next best choice would have been to appoint someone with a telecommunications background either from a chipset company, a network provider or a competitor, suggests the analyst.

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The board was concerned about Elop's commitment. Would his family join him? Finland was far away and a different kind of environment. Elop's response was that this has been discussed with the family, and that it would be a good solution for everyone concerned. Elop was considered sincere about it, but what about after he has been travelling 200 days yearly for a few years? Other concerns were raised. What about him not having experience in consumer business? Some members of the board were bothered about his tendency to speak quickly. Would he be able to listen, would he get people onboard or would he be a solo artist raising himself above others?

The board was aware of Elop's history of job hopping. They considered it to be a normal feature of American business culture, deeming the

Finnish business culture to be closer to the Japanese one. The new era of steep and fast changes required agility and new ways of thinking. The board believed Elop had these capabilities.

In the end, the decision was unanimous. A person involved in the discussions says that Vanjoki was considered an enthusiastic, bubbly and innovative personality, but that he was also considered a somewhat contradictory character, even within the organization. Vanjoki has historical baggage, unlike Elop, and the board thought it best to emphasize renewal. In retrospect, whether the choice was right or wrong, at the time of decision there was a clear logic to it, points out a source who was following the process closely. For years there had been questions about Nokia's strategy for entering the US market, with nothing but uneasy glances as a reply.

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In August 2010, the Nokia Board of Directors made the final decision. As a result, Vanjoki resigned two days later. Apple's Jobs called Vanjoki asking him to work for Apple, but Vanjoki declined. He was not going to be just another hired executive.

The commentary following Elop's appointment was cautiously optimistic. His merits were considered good, particularly his communication skills, experience in software business as well as the fact that he was North American. When interviewed by the largest Finnish newspaper, *Helsingin Sanomat*, the new CEO said he was fully aware of Nokia's dominant role in Finnish society. Elop went on listing characteristics he considered typically Finnish: Openness, integrity, transparent communication, ethics and respect for other people. Naturally, ice hockey as well as the salty liquorice, "salmiakki", were mentioned, too.

The news editor-in-chief, Mikael Pentikäinen, wrote in his article the next day that, based on his background and characteristics, Elop had every chance in succeeding in his task: "Everyone in Finland is wondering, if Elop will move Nokia out of Finland, but there is no indication of that. Elop will move to Finland, and Ollila, who will continue as chairman of the board of Nokia, will continue to maintain Nokia as the flagship of Finland's economy. There is every reason for us Finns to believe that Nokia will get a strong, new beginning with Elop

now in the lead. The better Nokia succeeds, the stronger Finland and its economy will be.”

The commentary of Nokia personnel in the media was moderate, nobody wanted to dismiss the new boss straight away.

Enthusiasm for ice hockey as well as his software competence worked in his favour. Concerns were raised with regard to Finland’s districts, if the Finnish ties were to weaken now that the CEO was a non-Finn. Local newspapers were even more concerned about the various Nokia sites across Finland. For instance, the *Kaleva* newspaper in Oulu wondered what will happen to Nokia’s functions in Finland with a Canadian heading the company. “What would happen to the Nokia sites in Salo and Oulu?”, *Kaleva* asked.

The news of the replacement of the Nokia CEO reached international media. According to the German *Frankfurter Allgemeine Zeitung* newspaper, Elop was Nokia’s last chance. The British *Financial Times* did an interview with Elop and Ollila, in which they rejected the idea that Nokia would abandon its own operating system. Ollila stated that Elop had not been hired to renew the Nokia strategy.

There were more doubts expressed in the American media. In Seattle, Elop’s home town, the *Seattle Times* pointed out that Elop was the third high ranking officer in Microsoft to have left the company within a year. The newspaper did an interview with Rob Enderle, an analyst, who thought Microsoft lost a great talent. According to Enderle, Elop had high hopes for the position of CEO, but that at Microsoft, there was only a slight chance at this. Jim Cramer, a host of the *Mad Money* program at the financial news channel CNBC joked: “It doesn’t matter who Nokia hires, short of Steve jobs, it still won’t save the company from obscurity. There is no way to make a comeback to the mobile phone market. Nokia’s biggest problem is that the company isn’t on the radar of the key US demographic that decides which cell phones will sell and which won’t—teenagers. Our teenagers don’t know jack about Nokia and this guy from Microsoft ain’t going to change that.”

The *Wall Street Journal* believed Elop’s primary task would be to ensure a convincing competitor to Apple’s iPhone, since that is where Kallasvuo had failed. According to *WSJ*, the software executive would need to navigate through “a group of cultural and institutional

underwater rocks” and that Elop was known as a pragmatic and decisive leader, who could turn large entities into smaller, more manageable parts. However, the American newspaper did have doubts about whether Nokia’s actions had been bold enough: The head of Microsoft’s business division was not the most obvious choice to speed up Nokia’s business integration or image renewal nor was he used to being the underdog. *New York Times* thought the appointment of a Microsoft executive was telling a tale of Nokia and Microsoft working more closely together than before. The newspaper reminded of Microsoft having similar innovation issues to Nokia, and mentioned that Nokia had failed in building profitable business relations with four of America’s biggest telecom network providers, which put together were selling over 90% of mobile devices in the US.

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The mobile nation was eagerly waiting to see if the new CEO would make an appearance at Nokia World in London, one of the most important events for Nokia stakeholders, on September 14, a week after the announcement. The event was considered particularly exciting for investors. The audience was curious to hear Vanjoki’s announcement to leave Nokia. He was an executive valued by investors, customers and reporters, who were accustomed to hearing bold statements from him. At his farewell appearance, Vanjoki presented Nokia’s new Communicator. Seemingly cheerful, he thanked the Nokia World audience for the 20 year journey and made his exit from stage, as they applauded.

In addition to the new Communicator, Nokia launched four new smartphones. The executives were doing their best for Nokia’s credibility.

Due to the replacement of the CEO, the main speaker in London was Niklas Savander. He pointed out to the audience that Nokia was selling 260,000 new smartphones daily, which was more than Apple and Android put together. Savander promised a sale of 50 million devices for the models presented in London. He also thanked Olli-Pekka Kallasvuo for a fine 30-year career in Nokia.

Kai Öistämö, Nokia’s chief development officer, countered concerns arising from the appointment of a Microsoft man. Since Öistämö knew

Elop well from before, he was sure Elop would adapt well to Nokia.

A large customer also spoke at Nokia World. Vittorio Colao, CEO of Vodafone, the British network provider, was of the opinion that the best markets for device manufacturers as well as network providers to be in were in developing countries. Colao complimented Nokia on its ability to survive the smartphone battle and said he was well pleased with the ambition Nokia was showing.

The day after the event, Elop did make an appearance after all. He met with customers but not the media. Officially his duties would not begin until the following week.

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4. The lame legacy of Mr. Kallasvuo

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Olli-Pekka Kallasvuo left behind him an organization in which three corporate divisions—smartphones, feature phones and services—competed for the resources, power and attention. The smartphone unit would have needed support from the services unit, but came only second in the pecking order after external paying customers.

The product portfolio of the company was exceptionally large. This strategy had worked well while business was still blooming, even if only a small part of the company's vast product range was successful, those best-sellers brought in enough money for the business to be successful. By 2010 the vast product range had become a burden. There had not been a best-selling product in several years and the situation had started to gnaw at the sales staff, especially. The company had in its hands a huge number of products that did not sell well. The still high sales volumes were blinding. Attention was focused on the positive fact that the company was selling 400 million phones annually even if the majority of the sales volume came from 30 euro basic phones which had next to no impact on the bottom line.

The constant delays in the phones-to-market schedules increased the burden. The prototypes of feature-rich lead products were developed fast, but the completion and testing for the mass market entry took too

long. Management time was wasted in the meetings that focused on minor details such as a minor software adjustment. Sometimes more than ten vice presidents were present in such meetings. The product schedules were perpetually delayed until it became evident that demand for such products would no longer exist at market entry.

The situation was worst for the company's biggest money maker, its smartphone operating system Symbian. With over 6 million lines of code, the software platform had become unmanageable. Hardware design and Symbian software development were almost in a state war and were at each other's neck daily. Time, money and mental resources were wasted to tweak the outdated Symbian for each product. There were so many product lines that the product managers could not manage to keep up-to-date what was going on.

Although considerable strategic weight was given to the software development and services, Nokia, in essence, was a pure hardware manufacturer in regard to its profitability, money-making mechanisms and operating principles. After all, software and services accounted for less than 1% of its revenue.

Up to then, the company had managed to cover its costly software in the phone pricing, but now this strategy no longer worked as competitors had started to launch phones of superior quality.

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During the Kallasvuo era, the confidence of investors and shareholders in Nokia's management had waned from initial euphoria to next to nothing. A Nokia analyst at an American venture capital investment company remembers having a critical view on the capability of Nokia to switch over from basic phone business to smartphones. The analyst considered Nokia to be very vulnerable with its "institutional baggage" in the form of 130,000 employees together with Nokia Networks (NSN) and with the majority of the employees being located in Finland. The analyst also states that Nokia was focusing on the wrong technology platform and using billions of euros to its software development.

Nokia was more vulnerable compared to its competitors. Korean Samsung, as a conglomerate, manufactured computers and other electronic devices in addition to mobile phones, and was therefore not

so susceptible to suffer from a slowdown in one of its product segments. Samsung was able to sell its mobile phones for retail businesses at a lower wholesale pricing, as their transactions also included other products than just mobile phones.

Apple secured their profitability with expensive Mac PCs and iPods at the time when iPhones were not yet bringing in much revenue.

According to many interviewees, Nokia as an organization had drifted into a state of inertia. Elop would soon find himself in the middle of a battlefield of middle-aged men. Instead of external competition, the competition was internal. Common interest had been replaced by the optimization of the vested interest. The famous Nokia-spirit was had begun to ebb away. Constant organizational changes confused the working environment as employees had to reapply for their positions. People were somewhat arbitrarily transferred to new positions. There were employees, whose projects had been ed, but they got to keep their jobs.

The matrix organization structure played a key role in the management problem: People were part of a project under different teams, but nobody had an overall responsibility of the end product. The team spirit killed any individual creative spirit. Ideological and innovative individuals were labeled as lone wolves. Yes-men with no opinions of their own would flourish. For example, the normal trial-and-error software development technique was no longer used in Symbian software development. A person who was in charge of software development says that the problem was in the management which adjusted and fine-tuned projects ad nauseam. Even according to Nokia's internal evaluation, the projects with the least management level involvement were the ones best on schedule. When the engineers were left alone to do their work, the results came forth.

Mikko Kosonen, the former Senior Vice President of Strategy and Business Infrastructure in Nokia and currently the President of the Finnish Innovation Fund Sitra, wrote a book on strategic agility together with Professor Yves Doz of INSEAD, a top-rated European business school. [7] In principle, strategic agility existed, but in practice it was only a dream. The lack of strategic agility and rigidity resulted in playing safe. In the technology driven business, that marks the beginning of the end.

When talking about the working environment atmosphere, many mentioned the word 'fear'. Fear of losing one's job or position kept their mouths shut even when something should have been voiced. A sugar-coated picture was given to the management. An employee working in the strategy department resorted to check the true status of upcoming phone projects from a friend working in development, because the official status given could not be trusted. Nokia was the emperor with new clothes, but nobody dared to say it out loud.

The layoffs had started in 2008. When money was becoming an issue. The organization had been streamlined many times over, but the scope of the operations remained unchanged. At every decline of the financial outlook, streamlining continued. There were divisions which had been fully reorganized 3–4 times within a year.

The Group Executive Board was equally stagnated. Niklas Savander, Kai Öistämö and Tero Ojanperä had shuffled their roles several times, but nevertheless stayed in the company. According to an outdated Nokia principle, it was considered beneficial for the executives to hold several different positions to increase their competence. During the growth era the principle had worked.

But when the phone sales started to decline, new people and fresh ideas would have come in useful.

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The company had gone to the dogs, at least partially. But what would the customers think of the situation? Elop knew that the feedback was not going to be good.

The customer base was divided into two. Network providers traditionally had long-term commitments with phone manufacturers and they continued selling Nokia phones like business as usual. For several years, European network providers had enjoyed economic growth in the wake of Nokia's success and were therefore more inclined to overlook the problems their trusted business partner had started to experience. The feedback from the large electronics companies and other retail businesses with shorter order cycle was more hard-edged.

For example, the French retail chains Carrefour and Océan started to question Nokia's famous customer orientation. The French retail chains were wondering why Nokia force-fed its own music applications and other applications to its phones even if the customers wanted iTunes or Spotify. Nokia had not entered into strategic alliances with service providers, because it believed that it can produce such services by itself. According to a former Nokia sales director, Nokia should have integrated popular services such as Spotify into its phones and advertised to its consumers how the services worked best in Nokia phones. Instead of doing this, a lot of money was spent to fight against such services. As a device manufacturer, Nokia was not as agile in the service segment as the service providers.

Network providers were also slowly awakening to reality. They were worried about the inflexibility of Symbian which meant that it was not a popular platform among application developers. That could not be overlooked as Apple's iPhones and phones based on Google's Android were now used as a new baseline for phones. Network providers compared the data usage of smartphone users. Users of Samsung Galaxy running on Google Android used ten times more data compared to the highest data users with Nokia phones. So the users of Galaxy, which offered a seamless user experience, stayed in the network using data applications for much longer periods of time. And the network providers started to be more insistent in demanding to know what Nokia was going to do to increase the data usage in their phones.

After the initial hiccups, the popularity of iPhones' skyrocketed 2009. When Elop was looking at his Nokia playing field in the end of 2010, iPhone had already become Nokia's biggest competitor. It caught Nokia off guard and happened unnoticed while Nokia had closely watched its traditional competitors, the phone manufacturers.

Nokia had lost a big chunk of its smartphone market share. According to Strategy Analytics, Nokia's market share had shrunk to 34.4% by the summer of 2010 whereas in the beginning of that year its market share had still been at about 38%. Nokia had put a record number of 26.5 million smartphones on the market, a whooping 61% more than one year before, but it still was not enough to retain its market share in the skyrocketing smartphone market. 77 million smartphones were sold worldwide during the summer 2010. That was a record 78% more than year before.

Apple had started with low production volumes, but was increasing its volume quarter by quarter. In 2009, the production volume of Nokia was triple the volume of Apple, but in 2010 only double. It was exceptionally peculiar since Apple had only one smartphone in the market while Nokia had tens. During the summer of 2010, Apple reached the second market position with its 18.5% market share for the first time. Third market position was held by RIM whose Blackberry phone had 16% market share.

Nokia's strongest market area was Europe where Nokia dominated the smartphone markets. Nokia's strength in Asia and Latin America was its ability to launch durable and affordable feature phones. In these market areas, the Nokia brand was strong and Nokia's distribution network seamless. In those markets, the status quo would be good enough. However, in the United States Nokia as a phone brand was practically non-existent. Elop realized that starting with a clean slate was the only option in the US. There was also a lot of baggage as Nokia had alienated the American network providers with its arrogance. American network providers were not dependent on Nokia to the same extent as their European counterparts, who had huge numbers of Symbian smartphone users as their customers. In an interview with Helsingin Sanomat in October 2012, Jorma Ollila admitted that Nokia's strategy in Silicon Valley had proved to be a complete flop. "The Mobile Phones unit had 1,000 employees in Silicon Valley and their main task was to follow the latest trends in the software development. Google and Apple did a better job at it. It was Nokia's biggest failure."

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Expenses were watched over carefully after Kallasvuo's rein. The Financing and Purchasing departments had much leverage as it was the rigorous cost control policy that was behind Nokia's initial success. During the low-yielding years, expenses were controlled even more rigorously. R&D costs had been cut heavy-handedly. The dominating role of Financing department had been established during the Ollila era and was further reinforced during Kallasvuo leadership.

This ideology of extreme efficacy was causing difficulties. According to the platform based R&D, devices and software utilized as many of the same mechanical and software components as possible. Ideally, hundreds of different smartphones were produced using only two to

three different platforms. Software was also built based on software platforms and different features were added on top of the base platforms. This operating principle was both efficient and cost-effective. According to a manager working in the middle-management of the Symbian and MeeGo platforms, what was gained in cost-efficiency was lost in inflexibility. The overall budget was not to be exceeded even if using a slightly more expensive component would have been advantageous for a better end result.

According to a manager, too much attention was paid to small segment earnings instead of looking at the big picture. Costs were controlled by projects and units and some projects were terminated even if it had made sense to keep them up and running to be further developed in other units. Plenty of babies were thrown out with the bathwater.

Cost control was further intensified when the company started using more consultants. A manager formulated it like this: “A US-based consultant looking into saving a mere dime, was more occupied in optimizing his own business rather than that of Nokia”.

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In all this gloom and doom mentality, the new CEO was about to find some positive surprises in Nokia. The challenger attitude was still alive and well within the company. It had been dormant and buried deep, but was brought back to life by the crisis. The Finnish work ethic can be characterized by the solicitous and pedantic work attitude. One manager in the company’s top-management described it as “manic fear of failure”: Every little detail was checked and rechecked over and over, and even after doing so there was still the shadow of doubt if everything possible had been done. According to this manager, this attitude was prevalent, irrelevant of the fact whether the company was doing well or not. This philosophy, allegedly dating back to Ollila, was deep-rooted.

Positive in the situation was also that the low-end phones were still yielding profits at a steady pace in the developing countries. The Nokia brand was strong in India. Nokia was still challenging the local cut-rate phone companies in China. The low-end low-cost phones seemed to be the lifesaver when the times were hard: The steady cash flow from their sales was to keep the profitability at a tolerable level.

Many were of the opinion that Nokia's Ruoholahti Campus in Helsinki was the place to watch for. The MeeGo unit developing smartphones based on open-source software had 2,000 top software engineers developing something that could be the next big thing in software engineering. Great expectations were laid upon the first MeeGo phone and before the end of his leadership, Kallasvuo had removed many obstacles from MeeGo's path.

In production and logistics Nokia was world-class. Nokia's industrial engineering techniques had been synchronized in the beginning of the 21st century to the extent that Nokia could easily move production batches from one continent to another wherever production capacity was readily available. This operating method was based on the innovative *dfm* (design for manufacturing) process developed by Nokia. Engineers had designed the details of the manufacturing process with extreme care to avoid any unnecessary activities (/functions). This was of vital importance, especially during the peak years, when Nokia sold half a billion mobile phones requiring 120 billion components. In addition to the optimization of the logistics, Nokia's mobile phone assembly was also tuned to perfection. Ideally, only 3–4 base units aka *engines* were used for all phone models in the manufacturing pipeline. During high demand, base units were always in stock, so the production could be started on the double. Some 150 types of covers, keyboards and other small components, and 300 types of sales packages were in use at a time. The components needed for the final stages of the phone production process were ordered with 24-hour lead time at its best. Suppliers were often located in the immediate vicinity of Nokia phone factories. There were no inventories as production runs were done to order.

Seamless cooperation with the companies supplying production equipment and machinery further increased the efficiency. In more critical areas of production line, e.g. as regards the component mounting equipment, there was strategic cooperation with 2–3 suppliers at a time. Cooperation with fewer suppliers would have made Nokia more vulnerable and with more suppliers, less efficient.

Citius, altius, fortius—faster, higher, stronger. This motto well described the everyday life at Nokia at the time. The efficiency of the engineering processes of the company was simply mind-blowing. Nokia

also had world's best know-how in the fields of radio technology, modem technology and hardware design.

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Elop would soon come to realize that Nokia's sales organization was lacking. The sales technique adopted from Asia was applied globally. In a mass market area like India, large sales staff was required as there were tens of thousands of points of sale. In India alone, Nokia had 5,000 salespersons at its peak, whose job was to present the new phone models to independent retail dealers. These retailers did not have inventories, so Nokia sales staff was continuously restocking the points of sale.

In Europe the wholesale market for mobile phones operated differently. Purchasing was done in a more centralized fashion. It was good enough, if the manufacturer had good relations with the purchasing directors of the largest network providers and consumer electronic retail chains. The sales staff in retail stores did not have influence on the retail selection. Nevertheless, Nokia still had a huge number of salespersons also in Europe. A member of sales staff visited 15 points of sale a day on average, mainly to do some chit chatting and to dust some retail phones. Bizarre performance evaluation metrics were applied to such sales staff: Visiting 15 points of sales a day constituted a job well done. A sales director earned the bonus by introducing the Asian sales model to the set number of countries even if the model was not viable in Europe.

A former Nokia sales director now working for a competitor says that it was precisely this close relationship with network providers that got the Nokia sales system into a rut. For 15 years Nokia sales more than doubled. The same happened with key customers i.e. with the network providers. Both parties only focused on the positive outcome ignoring the weak signals of brewing troubles. The network providers did not know how to tell Nokia that their phone models were no longer appealing to customers. In 2010–2012, many members of Nokia sales staff still believed that everything was just fine, and that the next phone model launch would come and save the day.

This sales director remembers proposing a sales technique change for two consecutive years. In his view, a more quality-based sales model

would have been more viable in Europe. Instead of the army of phone-dusting sales staff, a smaller number of committed “sales reps” would have been used to visit retail dealers to organize well-planned and targeted sales campaigns and activities.

Sales, just like many other functions, were plagued by too much complexity. Salespersons with direct customer contact were good at their job and knew their customers well, but they were given too many additional tasks that took time and energy from the actual sales work. Their immediate managers understood and supported them, but the decision makers were located far away, sometimes even on another continent. Even if there had been wisdom and goodwill in the workforce, the organizational system had made everything insurmountably difficult. The situation was aggravated by the plummeting market.

The sales director mentioned that things are done differently by his/her current employer. When the head office gives marching orders, everybody follows suit. If the key product or product line sales are not up to par, feedback is given promptly. Additional funding for marketing is also allocated fast if needed. In a similar situation at Nokia, there was a lot of talk, but hardly any action. One’s money was not put where one’s mouth was.

Nokia controllers considered Sales merely as a necessary evil and salespeople as an unruly flock that needed constant watching. From the point of view of salespeople, there seemed to be no common sense in doing things and progress has become extremely sluggish. The finance department just wanted to wait out the problems. “Before Elop, there was nobody in the company who would have had the guts to say that enough is enough”, says the director.

Nokia had led the way in certain sales strategies, such as in online marketing. Nokia.com had grown exponentially during 2007–2009 when measured by the number of visitors. Online sales had doubled in six consecutive quarters. Right things had been done at the right time. This is substantiated by the fact that at the same time Apple reached the landmark of one billion online customers in its online store. E-commerce was a rapidly growing market. However, Nokia’s online sales had dried up as a result of the profitability issues that started in 2008. There were no resources to further develop the online sales and online

marketing, even if the customer base had just started to move from brick-and-mortar stores to using online shopping and services.

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Jyri Engeström, a long-time Silicon Valley resident, is one of the few Finns who have been involved both in the development of the Nokia operating system and the Google operating system. In 2007, Google bought the social networking and microblogging service *Jaiku* owned by Jyri Engeström and Petteri Koponen.

According to Engeström, Nokia and Google were as different as chalk and cheese. Nokia was then developing Maemo software by an outdated organization consisting of hundreds of people coordinated by low-level managers between various office sites. Google was developing Android by a small compact unit lead by the charismatic Andy Rubin, who had joined Google following a company acquisition, just as Engeström did. In 2007, there was a narrow window of opportunity for Nokia to enter into collaboration with Google and according to Engeström Nokia should have seized the opportunity then. Engeström says that Nokia's belief in the superiority of its own software development manifested in arrogance and diminished Google's interest in partnering with Nokia regardless the fact that Google valued Nokia as a similar trendsetter in hardware design then as Apple is considered now. The decision by the then Chief Technology Officer, Tero Ojanperä, to set up Nokia's US headquarters in the White Plains suburb of New York was of big symbolic significance and raised eyebrows in American software development circles. The question was: Why did Nokia ignore Silicon Valley?

A manager in the Nokia smartphone product development recalls that when Android was just emerging in 2007–2008, Nokia had been sneering at such a small-scale American project. Android was not taken seriously as its developing teams in Silicon Valley were small. It was believed that there was no way such small teams could compete with Nokia's large developer base of thousands.

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Elop had now the task of prioritizing the actions to be taken in the wake of the lame legacy of Kallasvuori. Cutting the expenses with a heavy hand was to take place. A sensible operating system was to be chosen for the smartphones. US operations needed a makeover.

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[7] *The Dynamics of Strategic Agility: Nokia's Rollercoaster Experience*, *California Management Review*, Vol 50, N°3, Spring 2008 (Mikko Kosonen and Yves Doz).

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5. The wonderboy from Ancaster

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The small, picturesque town of Ancaster is one of the first European settlements in Ontario, Canada. The area is known for its historical downtown and good hiking paths. There are around 30,000 residents. The weather is like in Helsinki. Because the Great Lakes keep the winter relatively warm, the average temperature in January is -5 °C (23 F). In July, the average temperature is 22 °C (72 F). Over the years, Ancaster has grown to become part of the ninth largest city in Canada, Hamilton. The nearest metropolitan city is Toronto, 70 km (44 miles) away to the northeast. Equally far away to the west is Waterloo, where the mobile phone manufacturer RIM (later Blackberry) started its activities in 1984. If you head southeast, after 100 km (62 miles) you end up in Buffalo in the United States, and you pass Niagara Falls along the way.

Stephen Andrew Elop was born in this environment on December 31, 1963. His father designed transformers at the electrical company Westinghouse. His mother was a chemist. As the middle child of three boys in his family, Stephen had a normal, middle class childhood. His first job was as a caddy at Hamilton Golf & Country Club, and according to legend, he learned how not to laugh at people who are trying their best. At the same time he developed a hatred toward tobacco. Nothing was more disgusting than when someone asked him to hold a cigarette stained with lipstick when they went to swing at the ball, Elop has stated.

His free time was dominated by his interest in technology. Even his grandfather had worked as a radio operator in World War 2. He chose the Hamilton Faculty of Engineering at McMaster University in Hamilton as his place of study. The university, which received its name from the founder, William McMaster, is one of Canada's upper middle-tier universities. In the worldwide QS university ranking, in 2013 it was ranked at 140, the fifth best in Canada. The University of Helsinki was 69th in the same ranking, and Aalto University at 196th.

The year was 1981, when the eager budding engineer started his studies. Besides studying, he wrestled with 30-hour work weeks. Professor of computer engineering, David Capson, remembers Elop as the character who walked into his office and past him carrying a ladder. Elop climbed up the ladder and peeked up in between the ceiling tiles. In his dirty hands was a spool of cable. He was building a new and exciting thing, an ethernet network that covered the whole campus. 22 kilometers of cable was used, according to press reports. Capson had had hundreds of students, but he says that Elop had left an impression on him. Elop was exceptional and well-focused, one of the two best students that year, Capson remembered.

Elop met his wife while doing computer work at the university. The two of them had different opinions on how computers work. The disagreement led to a bet.

"It was just flirting: If I am right, I will take you to dinner. Nancy won, so we went to a rib restaurant. Not very romantic, but a good start. It led to marriage", Elop told the *Forbes* magazine in 2005.

Elop graduated in 1986 as the second best in his course. He has less education compared with many other top leaders. Five years of hard work brought him a bachelor's degree in computer engineering and management. It was now time to transition into work life.

After that, things started to happen. Elop developed into a successful, sales-oriented leader who understood customers. When Elop stepped into the business world, information technology was revolutionizing the workplace. Apple and Microsoft were hot topics. Secretaries exchanged their typewriters for desktop PCs and companies started appointing IT managers. Elop joined a small software company called Soma. Their first success came quickly, when Lotus, who were known

for their 1-2-3 spreadsheet program, bought Soma for a good price in the early 1990's. Elop continued working in the consulting unit of Lotus, until 1994 when he moved to the fast food chain, Boston Chicken, as the Chief Information Officer.

His first steps as a leader in a publicly listed company were colorful. The American company, Boston Chicken, was a fashionable company in the US during the mid 1990s. A year before Elop arrived, shares were sold out immediately after a share issue, and the share price had tripled. Things had already overheated too much, and finally debt and the new chicken counters which had appeared in grocery stores forced Boston Chicken to apply for protection from creditors under the US bankruptcy laws. Before the bankruptcy, there were 18,500 employees and 1,100 restaurants. The euphoria had taken the company to the wrong side of the law. The lower level managers jumped from the sinking ship. One of them who had made the right conclusion was Elop, "We didn't like what was happening in the company. There were good and bad times, but the food was good, at least", Elop had recalled about the experience.

At that time, Nokia had unveiled its first Communicator, and was bringing the second version to market.

Boston Chicken is known nowadays by the name Boston Market, and was, from the time of the bankruptcy till 2007, under the ownership of McDonalds. The chain had profiled itself with the Boston marathon. There one can eat three whole chickens, two potato pies, eight pieces of cornbread, six side dishes and two desserts in under an hour without help.

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The train continued onward. It was the year 1998. The persistent, smart, and fast-moving engineer went to work in California and moved upward in the San Francisco software company, Macromedia, via the IT and sales departments to become CEO. Macromedia had given the world the web page design program Dreamweaver, as well as Flash, a multimedia technology which brought graphics and animations to web pages. There, Elop really started collecting the experience, which he used to charm during the Nokia times. The internet bubble had just burst. The bottom dropped out of the markets, and new competitors

were threatening to take away their livelihood. Newspapers rattled on about how Macromedia was headed for disaster.

Elop took focusing as his dictate. He reviewed the company's strengths, weaknesses, even topics that seemed irrelevant, and decided to throw all of Macromedia's chips into Flash. The change was huge, but afterward, Macromedia made a bigger profit than at any point before the bubble burst.

During that time, Nokia was wrestling with cameras and Symbian. Both were announced in 2002. The first 3G phone was announced the same year, and the clamshell model in 2004.

At Macromedia, Elop was instilled with a belief in big changes and a stubborn focus on a chosen strategy. The seed had been planted. Change was possible even in difficult conditions, when the correct products are chosen, and when one can see which direction the world is heading, was his reasoning. The association is easy to make: Windows Phone became his new Flash.

In 2005, there was a merger ahead. Macromedia was bought by another American software company, Adobe, which we know from, among other things, the PDF document editing program Acrobat, and the professional photo editing software, PhotoShop. The merger was difficult. Seeing through the deal would take seven months because of antitrust officials. Employees were confused: What would happen to them? What about the products? Elop built from this a second leadership philosophy: Everyone supports everyone else, no one is more important than anyone else. Arms linked, everyone together.

What happened? Macromedia had the best financial results during that seven months than it previously had during its entire history.

After pushing through to the end with the merger, Elop continued with Adobe with the title WWFO, world wide field officer. He was responsible for sales, country-specific marketing, partnering and customer service. His last work day at Adobe fell exactly one year from the time he had started at the company. He received his yearly salary, \$500,000, with bonuses of \$315,000, and a severance pay of \$1,880,000. His stock options were, at his moment of departure, worth \$22,500,000. If his term had lasted less than a year, he would have not gotten the extras.

During the same time period, Nokia announced its final successful flagship model, the N95, and Olli-Pekka Kallasvujo was the CEO.

At his next employer, Juniper, Elop's salary arrangement looked quite similar. His work ended on the same day that nearly \$800,000 worth of options became free to cash in. Elop was clearly swimming in money. Next stop would be Microsoft.

But first to Juniper. They manufacture network equipment, meaning hardware. Aside from software, Elop gained experience with hardware in this way. His title was COO, Chief Operations Officer. Even if Elop was not the CEO, on the headhunter lists he was already one of the absolute elite at this stage, and could definitely get a job in the senior management of any major IT company. The jump over to hardware manufacturing added to his value, even if there were no great achievements made during his year at Juniper.

During this period, Nokia was at the top of its game. Its market share had surpassed 40 percent for the first time.

Elop won the jackpot on the eve of Thanksgiving in 2007. The CEO of the software giant Microsoft, Steve Ballmer, called him and wanted to meet. They met. They talked about information technology, the change brought in by mobile phones, cloud services and Google. Elop sensed that Ballmer was interested in him, if there was a suitable position open. There might just be one opening up, so they met again after a few months. There were also other Microsoft leaders along, including Bill Gates.

It didn't take long after this, when Elop met Ballmer at the Kitchener-Waterloo airport near Hamilton. The men drove to Elop's house. The family still lived in Hamilton. They all sat around the fireplace in the room downstairs. They talked the whole afternoon into evening. Nancy Elop was especially pleased with the visit. She was able to ask Ballmer what kinds of schools they have there in Redmond, Washington.

A few days later, Ballmer called and asked Elop to come to work. Elop was stuck in a difficult quandary. He was supposed to start as the CEO of Juniper. There was already a briefing prepared about the nomination. Elop described the decision as the most difficult one he had made in his life up till that point. Ballmer won. Elop took over the leadership Microsoft's Business Division at the beginning of 2008.

Even if Elop was totally unknown in Finland when he was appointed at Nokia, in North America he had become a star. He led the largest division of the world's largest software company. Contrary to popular belief, the Windows operating system is not Microsoft's largest source of income. It is the Office software, which belonged to the Business Division. Windows brought in 27 percent of the sales, the Business Division 31 percent. The profit in the Business Division was almost half, in other words about 7 billion euros (\$10.2 billion) a year. Turnover was 19 billion euros (\$27.7 billion). It was estimated that there were half a billion users at the time.

However, Microsoft faced a challenge with the Office suite of software that includes Word, Excel, PowerPoint, and a few other programs. Google had started to offer the same services over the internet for free. So users could make texts, spreadsheets, and slide presentations without paying for software. The work happened over a network connection to software on Google's servers. The documents were also saved there. Elop started to work on a solution for this problem.

He had a move to Redmond ahead of him, this time a real move. The Silicon Valley Elop had commuted from Hamilton by plane. Adobe had paid \$145,000 during 2006 for Elop's travels between home and work. Juniper had reserved \$200,000 a year for his travels between home and work.

The family had grown to 7 over the years. Having children was an adventure, and required a lot of persistence.

Elop told the *Kauppa-lehti Optio* financial magazine, in an interview in the fall of 2010, how the family was able to have a second child after a long struggle in the 1990's. It required calls to the US Senate, the Canadian parliament, and the Chinese government. The countries were in agreement on one thing: It would not work; don't even try. The Elops pushed, persuaded, and negotiated. They did some hard work, until eight months later, the heavens opened up. The papers were in their hands and the Elops had gotten what they wanted: An adopted daughter. The wish came true a few weeks later, when the Chinese officials let them and their nine-month old bundle out of the country. The difficulties continued, however: The child needed a citizenship. Canada had a policy of not giving citizenship if the child lived outside the country. Elop lived in the United States because of Boston Chicken,

and their adopted daughter was Chinese. The combination was too much for the bureaucrats. Finally, the Canadian prime minister decided otherwise. The issue was put to rest during his visit in San Francisco with the Canadian Governor General—in other words an official representative of Queen Elizabeth ceremoniously granted citizenship to Courtney Elop.

Courtney, who at the time of writing this in 2014 was 18, and her big brother, 22, got triplet sisters for company, who are now 14. The father has said about the triplets' birth, that the couple has maximized its capital invested into fertility treatment.

Elop said how, in the middle of the 2000's, he occupied his weekends with his children's hobbies and playing ball. He recounted how he encouraged the children's individuality. Each of the triplets got to have her own birthday party. Once they had a birthday party on the morning of the closest Saturday, another in the evening, and the third was on Sunday morning. Everyone invited their own friends, even if all the friends were the same.

Despite all the commuting, Elop had bought a fabulous house in Silicon Valley. Its subsequent sale became a scandal when he started at Microsoft. In Microsoft's 2009 financial statement, reporters found a footnote: "Mr. Elop received help with moving expenses, travels, shipping his belongings, in getting a temporary apartment, and in what he had to pay himself." The statements showed an expense of \$4.1 million. House prices in California had plummeted, but Elop was allowed to recover his losses. The sum should be compared with Ballmer's salary from the same period: He received \$1.3 million. Microsoft shareholders were furious, and the company finally had to change its policies in supporting its leaders.

The Elops bought a house in Redmond in 2008, which had 8 bedrooms and 1,100 square meters (11, 480 square feet) of living space for just under \$4 million. The house had, among other things, a tennis court and a wine cellar.

During that period, Nokia built its first touchscreen phone aimed at the mass market, the Nokia 5800 Xpress Music, which went into sales at the end of 2008.

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Google Docs. The challenge was formidable. It was believed that Microsoft was doomed. How could a dinosaur from the past compete with an agile player in internet technologies?

Only a few years passed by, and the arrangement had been turned on its head. Elop had built up free versions of Office, which were funded by advertisements. They had more limited functionality and could be used over the internet, but together with the commercial version, the experience was better than with Google Docs. This direct response to Google had demanded massive changes in Microsoft. Elop's halo grew. Elop's accomplishment, Office 2010, pushed ahead like a train and even surpassed expectations. He overtook Google without dropping the commercial version, and as a result made Microsoft a leader in cloud services.

"Google can be beaten, Google can be beaten", Elop repeated like a mantra during press interviews during that period. It's not a wonder that Nokia's headhunters contacted him.

What kind of man did Nokia choose then? Everyone knew that a huge visionary like Steve Jobs would not come. Elop was a doer and change manager. He got the trains to run on time, but didn't necessarily inspire anyone, were the appraisals. The office guy, pencil pusher, representer of his product. A general, and even his hair was short. A guy, who among nerds, starched his shirts. But full of energy and eager to work, using the well-known term 24/7. And loud.

"Stephen is certainly not shy. He definitely says what he needs to say.", according to one assessment. "It never felt like he was afraid to ask dumb questions", said one colleague from Microsoft.

Elop described himself during those times as passionate, vigorous, rational, decisive, and detail oriented. He recounts that technology is a part of himself, and he admitted that he feels at home in rooms full of engineers talking about programming strategies. At the same time, he was saying how he has passionately given himself to conversations about the feelings of consumers.

What about charisma? Did he have it? One of the authors of this book met Elop for the first time one month before his appointment at Nokia. Microsoft had invited journalists to Amsterdam to show off their ways of working in their Holland office. The event was centered around a

small seminar, where the main speaker had to be replaced at the last moment with a person from the US. Before it began, the speakers congregated in the front of the auditorium. One's eyes naturally found themselves drawn toward a certain individual who had a charismatic aura to him, someone who was clearly a leader of some sorts. He was the Microsoft Holland director, Theo Rinsema. Elop was next to Rinsema. He fit into the category of "the others", even if he seemed to be conversing a lot.

When Elop got on stage, he spoke in a technical manner about cloud services. He spoke fluently, but not in a way that would blow your mind. When he offered an interview with the reporter after his speech, the answer was "no". It was, of course, partially due to the fact that the purpose of the seminar was to get familiar with the office solutions, and Elop had come to the program by surprise. The main reason, though, was that his speech gave very little that could be used as material for a press article.

Fortunately, a picture was taken. It would be of use in a few month's time.

For a hobby, Elop had mentioned flying. In the online publication of the Wharton School in Pennsylvania, it was noted that there were two types of pilots: One type wanted experience gliding in the air, the feeling of freedom when flying through clouds. For the other, the attraction was in the technology. They loved navigation, meters, and the software behind them. Elop said that he was in the latter group.

The question was unavoidable: Would Elop be, after all, the correct choice for Nokia, troubled by its engineering-centric culture? Wouldn't a more visionary and charismatic figurehead be needed? The virtual world is a long way away from leading people and managing the media game.

The considerations were unnecessary. Elop was Nokia's chosen one. It was time for him to get to work.

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6. Platforms and ecosystems

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In Finland, we've heard over and over how the very heart of Nokia smartphones, the Symbian operating system (OS) was mediocre, old-fashioned, and slow. Its intended successor, MeeGo was being delayed and delayed. Why couldn't they get Symbian to work? What was the hold-up with MeeGo?

The answers lie partly in technology—this chapter takes a brief look into that.

First, the basics. A smartphone is a small computer. In order for it to work, it needs a piece of software called the operating system, just like a computer does. The OS in Apple iPhone is iOS. In Samsung's most popular models it is Android. On Nokia's smartphones, it was Symbian when Elop joined Nokia.

The user interface (UI) is what the users see on their screens, and how they interact with their phone. Menus, icons, and keys are all part of the UI.

Let's take a brief look into history. Symbian was developed by telecommunication companies Ericsson, Panasonic, Motorola, Nokia, and Psion in 1998. In those days Microsoft Windows had a near-monopoly dominance in personal computer (PC) operating systems. PC industry players like Dell, Compaq, and others saw their profits being squeezed because, in practice, every computer in the market had to run Windows OS, and Microsoft was naming its price. This is why Nokia and its partners wanted to keep the mobile operating systems in their own hands. As a result, Microsoft and Nokia became nearly arch enemies. Negotiations between Nokia's Jorma Ollila and Microsoft's Bill Gates are known to have ended in harsh disputes.

The strategy paid off, Symbian was a success, and Microsoft's mobile operating system, Windows Mobile, became marginal.

At the same time, a root cause for Nokia's problems started to emerge. Those device manufacturers who had selected Symbian OS for their smartphones were able to build their own UIs. The idea was to use a common baseline, but to allow each phone brand to launch their own look and feel. Software technologies in those days were still immature. For example, Ericsson needed to adjust Symbian deep inside its core

systems so they could get the Ericsson smartphones to look different from Nokia smartphones. The resulting derivatives were called UI platforms. Nokia built two of them: S90 for Communicators and S60 for smartphones. [8] This way it was easy to launch devices in the business phone category, or multimedia phone category. The trick worked and Symbian became a market leader.

From there, application developers became part of the equation. App developers code additional applications which are sold, for example, in Apple's App Store and Google Play. In other words, apps are those Instagrams, WhatsApps, and Angry Birds. Creating applications for Symbian was challenging, as the app developer needed to operate deep under the surface in order to get their apps to work. Learning the development tools took forever, and each Nokia model needed their own versions of the app.

Apple had a different idea. It created just one phone model in which the UI and OS were combined. This made things easy for the app developer. In addition, an exclusive marketplace, Apple's App Store where it was easy for people to buy their Angry Birds and other apps, was a revolutionary idea.

Google joined the action in 2005 by purchasing a company called Android. As the legend goes, its founder Andy Rubin had started to develop its software for the very reason that Symbian was so complex and its development environment poor. Everyone expected Google to announce their own smartphone and the press was speculating and speculating. On November 5, 2007 Google launched a free operating system for smartphones but no device. This was a big surprise. Google did not want a Google smartphone, it wanted the entire mobile phone industry. The revenue would come from ads and services.

Android took its most important step in early 2007. After the launch of iPhone, Google had scrapped its original, keyboard-centric user interface. The work was started from scratch and based on the touch screen. For additional apps, Google followed Apple's example: Apps had to run in each Android phone without any modifications.

The thinking was different at Nokia's Keilaniemi headquarters. Nokia was trusting its old war horse with their touch screen development. Symbian's old menu structures, which were accused of being complex

and for a good reason, lie deep inside the core system and Nokia was stuck with them. Nokia's touchscreen felt superimposed and the app developers' pain continued. In the end, Nokia acquired Symbian to itself but that was too little too late. Over the years, so many layers and additions had been integrated to the system that it had become an unmanageable lump. If a coder changed something in the right arm she did not know what would happen to the left toe. Phones got jammed, died suddenly, and rebooted themselves without a warning.

Samsung introduced their first mobile phone in 1989. The beginning was slow since in those days Motorola was dominating the Korean market as they pleased. In the mid-1990's Samsung had considered giving up the entire mobile industry because of the low quality of their products. Their primary products were semiconductors, motherboards, memory circuits and integrated circuits. After the first Android smartphone arrived on the market in 2008 by Taiwanese HTC, however, Samsung was back in. It launched the first Samsung Android smartphone in April 2009, that's 18 months before Elop arrived at Nokia. And so the Android ecosystem quickly became dominated by Samsung. When Elop joined Nokia, Android's market share had risen to 25 per cent.

Nokia's alternative to Symbian was born behind the scenes and partly in secrecy. It started in early 2000 when a small group of Nokians started to figure out whether Linux, an open source operating system created by a Finn, Linus Torvalds, could work in smartphones. Even though using open source software added legal barriers, the project was finalized and the first device bearing its fruit, an internet-enabled touch screen tablet, was launched in 2005. The tablet lacked phone capabilities though, and based on our interviews, Symbian directors blocked it.

The operating system was named Maemo. As soon as it was permitted to be fitted on a phone, that first Maemo smartphone was a reasonable success. It attracted a community of open source developers who created Maemo apps. With 12,000 members, this was the largest mobile developer community in the world.

Then Nokia did something remarkable. It partnered with the chip manufacturer Intel, and the two companies renamed Maemo to

MeeGo. [9] In order for us to understand why this union was disastrous, let's take a brief look into technology.

One of the hardest parts of creating mobile phones is embedding the software operating system onto hardware electronics. Nokia built their smartphones using processors from the American chip manufacturer Texas Instruments. In addition, Nokia now needed to align MeeGo with Intel's processors. The work was cumbersome, and especially power consumption proved difficult. Intel's chipsets were designed for laptop computers, so in Intel's world, power consumption was not a problem. Nokia's competitors, however, were using processors from Qualcomm which were specifically designed for small devices with a low power consumption.

Software developers spent months streamlining Nokia's Maemo and Intel's corresponding software, Moblin. This enormous amount of work did not carry over to an end product, and ultimately did not benefit the customer experience. Instead of one giant corporation the work was now carried out by two, and the process was stalled even more. MeeGo was delayed and delayed.

This proved costly. The original Texas Instruments chipset was becoming obsolete and the replacement from Intel did not work either. At the same time, competition was moving onto Qualcomm's second generation processors. Nokia was running propeller airplanes while others had moved onto jets.

We'll revisit the cooperation between Nokia and Intel in chapter 14.

Apple and Android brought a magic term into the mobile phone industry: Ecosystem.

An ecosystem is a set of e device manufacturers, app developers, service providers, and network providers where all benefit one another. The more apps one platform has, the more eagerly consumers will buy those smartphones. The more smartphones that are sold the more services are used, etc. This creates a positive domino effect.

On a strategy level, Nokia had understood the importance of ecosystems and mobile internet, and in 2008 decided to turn itself into an internet company. The Services and Software unit was led by Niklas Savander. The beginning was slow, services were previously developers

in units independently, and partly overlapping. Billing mechanisms, technical platforms and frameworks, business models—each unit had their own way of addressing these issues. Music was created in Great Britain, maps in Germany and email in Oulu. That brought decisions to the director level and turned them into politics.

In August 2007, Olli-Pekka Kallasvuo had announced Nokia would collect all of its services under the brand name Ovi, which in principle sounded good. The launch, however, was tragic. At the time of the launch ovi.com did not link to any services. All it was a static page with a collection of icons.

With time, the services began to harmonize somewhat, but around 2009–2010 ovi.com did not even work with one set of username and password. Colors, fonts, and the general look and feel were a mess. The smartphones and their services had no graphical or functional similarities. Most issues would have been technically an easy fix, but Nokia's complex organization made it too hard. The ecosystem was scattered.

As if that was not enough, there was a leadership catastrophe. In 2009, the company decided to split the responsibility of services between Savander and Tero Ojanperä. The model was dubbed two-in-a-box. Responsibilities were not clear, and the very introduction of this management model indicates just that.

In early 2010, Nokia faced the music and announced its navigation service would become free. This was an important milestone. Services themselves would not become a major source of revenue, but a means to sell devices and engage users.

The situation was dire. App developers thought Nokia was a difficult partner who did not understand how important an app store is for consumers. Nokia's own services did not fly and its software platforms were becoming obsolete. Around that time, Nokia's own application store ovi.com had 16,000 apps, and the Apple App Store had 300,000. The means to maintain a functional ecosystem were poor.

But: Newly finished Symbian 3 was a promise of something better. And MeeGo started to be ready for commercial use.

[8] The S90 reference in the original Finnish book may have been a misunderstanding. The Series 90 UI platform (S90) was developed by Nokia for media phones running the Symbian OS, such as the Nokia 7700 and 7710. It was different from the Symbian Series 80 UI platform (S80) developed for Nokia's Communicator devices like the Nokia 9210 and 9300. Devices running the S90 UI platform did not reach major commercial success and eventually the platform development was cancelled, while elements of the S90 user interface continued to live in the Linux-based Maemo platform by Nokia.

[9] MeeGo was using source code from Maemo by Nokia and Moblin by Intel.

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7. The euphoria of the initial weeks

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Stephen Elop was abroad on his first workday at Nokia. Maybe it was a sign of things to come. It was Tuesday, September 21, 2010. He participated in meetings that had been booked for Olli-Pekka Kallasvuo.

After he came to Finland, he immediately started to get to know the personnel. His first appearances were met with approval and people were charmed. Interviewees tell that they felt euphoric. Elop gave such a convincing first impact that people finally felt that there would be some decisive actions. From the first moments, he seemed to beam energy. Jorma Ollila's thought that "a Canadian would be a better match with Nokia than an American" seemed to work. The company had a CEO that felt like he belonged, but who would obviously also get things done. He was like a half brother, whom the Finns soon started to call by a more Finnish name: Seppo Elo.

The good news started to leak outside Nokia. According to these leaked insights, Elop talked openly in front of the thousands of Nokia employees about both the good and the bad things, which was unheard of. One could ask anything from the new CEO. His doors were open both in practice and metaphorically. In a speech to the Oulu personnel, Elop told them that he daily heard that some people had never had a

chance to voice their opinions. In North America he claimed he'd only seen that happen once or twice. It was time to stop holding back bad news. It was time to increase transparency in Nokia.

On his first workday, Elop sent an email to every Nokia employee. In that email he asked people to answer three questions: What do you want me to change? What do you not want me to change? What do you think I might miss? He promised to take the comments he would receive and process those to form the basis of his leadership at Nokia. One of the interviewees said that she answered the questions completely openly and without holding back. She told us that she was very impressed when Elop—or one of his assistants—replied. According to the reply she had made excellent observations, which were well fitted with the basic principles according to which Elop would base his strategy. There was also a promise to look into and fix any and all shortcomings mentioned. The main message was that the Nokians could only win as one company. Those who would put themselves in the game would be rewarded. Fairness would be high on the agenda.

This message fit the company perfectly, one interviewee remembers. “I felt like now, finally we could roll up our sleeves and start winning big.”

According to Elop's later comments, the majority of the messages were about the responsibilities and how very split they were. Things fell between the cracks. Elop got inspiration for one of the favorite sayings he used in his first weeks: At Nokia everyone and no-one is responsible.

From very early on, Elop got close with the employees. He would interview managers on lower levels of hierarchy and even blue collars to get to the bottom of what Nokia was really like. He wanted to minimize the filtering of middle managers. He was seen in the canteen. Nokia employees working in the headquarters could find themselves in the elevator with the CEO, dressed in jeans and carrying a backpack. In one of the first internal information sessions, Elop complained how difficult it was to mark an email read on Nokia phones. According to his experience it was done differently on different Nokia models. One of the attendees claimed that Elop was wrong. He was invited on the stage, and after some clicking it was agreed that the CEO had been right. The message was clear. The new CEO would voice his opinions on the product level, unlike his predecessor.

People were quick to notice that Elop was an email-person. Many of the interviewed people mentioned that it was difficult to get hold of him on a phone. You had to either meet him, or send an email. According to one interviewee, Elop had almost a magical way to respond to emails immediately. Email replies would be sent regardless of the hour. Some started to wonder, whether the man slept at all. The most important mission seemed to be to create trust and hope amongst the Nokians. At the time, there were still 65,000 of them, excluding the employees of NSN, the network infrastructure provider. Elop approached Nokians with stories from his own professional history: “At Microsoft we beat Google. We can beat Apple just as well. RIM can be beat. We can be better than anyone. We are in the first minutes of the first round with Nokia”, was a message repeated over and over again in meetings with the personnel.

Another Elop-ism was pulled from Macromedia. Elop loved to share the story of how Macromedia focused on Flash and succeeded (described in chapter 5). Nokia could do the same.

After the initial euphoria of the first weeks, the board started to have a nagging feeling: When was Elop listening? He was either travelling or talking all the time. In English. Learning or even attempting to learn Finnish was limited to single words and pronunciation. However, it seemed like the personnel thought the worry was without grounds. Elop was very likable and socially skilled, the workers were easily swayed to his side. The people felt like this was the first time in ages they were heard, which noticeably improved the morale. The message was clear: If there is a problem, do something! If you cannot, tell me why not.

“Stephen was a spectacular motivator”, said one interviewee.

“He had an unbelievable poker face and was very convincing in assuring people about things that would later turn to something quite different. He seemed like a leader who is very goal oriented and committed to his job”, said another.

Many people also brought up the positive feelings stirred up by the humane side of Elop. Petra Söderling, who used to work in Symbian, remembers seeing Elop for the first time in a Town Hall personnel session organised in the canteen of the Nokia House. Everyone working

in the headquarters in Espoo were invited and were anxious to see what type of man would appear on stage. Elop made a lasting impression: He was warm and emphatic, and appeared to have a humble attitude towards the task given to him. He also talked about his family and children and made jokes of himself, which was something new to the Finnish audience.

A few months later Söderling had the chance to spend a few days in the company of Elop, during the Mobile World Congress in Barcelona. There again he was warm, and very open towards everyone. He shook hands with the people working at the Nokia stand both in the morning and when closing for the evening. He thanked people for their contribution, looked them in the eye and seemed like a member of the team. Compared to his predecessors Jorma Ollila and Olli-Pekka Kallasvuo, the warmth of the new CEO seemed fresh and nice, according to Söderling.

A director who visited network providers together with Elop had also very good experiences of how Elop handled Nokia's stakeholders. He was active, appeared smart and knowledgeable in front of the customers, and spent time together with them.

At least a part of Finland was almost in the state of Elop-hype. During the first days in Finland, Elop went to Stockmann's, the largest department store in Helsinki, to buy underwear. While scanning the barcodes, the young sales assistant asked, whether she could give him some advice on Nokia.

Of course there were those who were not charmed by the Canadian. One Nokian remembers being confused and surprised when he realised that most of his colleagues found Elop inspiring and thought that he would boost Nokia. To him Elop had only been unremarkable and colorless, not much else.

In the first leadership team meeting, Elop referred to himself as a hockey coach that has arrived to lead a new team. The team was good, but now it would have a better coach than before. The goal was to calm the working environment in the leadership team and reduce the fear the members had for their positions.

The ways of working in the leadership team were changed quickly. My colleagues have talked more during the fall of 2010 than they have for

the past 10 years together, said Mary McDowell, General Manager for Nokia Mobile Phones (the feature phones unit), in an interview with Bloomberg Businessweek. According to Juha Äkräs, Executive Vice President, Human Resources, Elop forced the leadership team to look at themselves in the mirror and to review their own actions. For the first time in history, the goals, key performance indicators and reward plans of everyone in the leadership team were shared amongst the members. “We no longer work with objectives that are contradicting. We all look in the same direction”, said Äkräs to Financial Times.

Behind all the talk, there was something deeper going on. Elop kept his distance, says one former member of the leadership team. The new CEO seemed family oriented, and visited Finland only shortly. It felt like he would rather have spent his time with his family in Seattle. The same leadership team member says that he had wondered whether Elop was actually hoping to work in Seattle, as the competition for the successor to Steve Ballmer was about to start. A comment repeated by several interviewees was that as every member of the leadership team wanted to make a good impression with the CEO, Elop accidentally ended up with more power than he should have. The leadership team became a poodle rather than a terrier. There were tensions within the team, caused by the nomination of Elop. No one was willing to say more about the topic. It is, however noticeable, that Elop was quite cautious in changing the leadership team. Very often a new CEO brings in some of his trusted people from earlier companies, so as to speed up the renewal of the new company. There was really just one person following Elop to Nokia: Susan Sheehan. Sheehan travelled with Elop, wrote or got his speeches written and took care of Elop’s personal messaging. Officially Sheehan was reporting to Arja Suominen, Senior Vice President, Nokia Communications. In reality, she worked directly for Elop without reporting about her work to anyone else. According to an interviewee who worked with the communications department, it was clear that Elop understood the importance of communications and followed closely what the Finnish press wrote about him and Nokia. This kept the department busy, as someone had to translate and summarise the articles in English. The negative headlines of the Finnish press got more and more stressful for Elop with time, the person says. Elop was also uncomfortable with the interest that was directed to his person. The communications team had to explain to Elop, why he was sometimes ambushed by a journalist of *7 Päivää*, a Finnish yellow press publication, in the parking lot. Most of the time the communications

people were glad to finally have a CEO who was a good speaker. However, there were obvious cultural differences that were challenging. For example, Elop rarely listened to the journalists during interviews. Finnish journalists expect there to be a dialogue with their interviewees, rather than a presentation.

The middle management was puzzled by Elop. In meetings he would just sit and listen, says one director. The only feedback he would give, was “good job”.

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Elop has said himself that during the first weeks of the fall of 2010 he met and interacted with thousands of people who were working for Nokia, customers of the company, and partners. There were tens, if not hundreds, of flights. He met with the network service providers, large mobile phone distributors, application developers, other mobile device manufacturers as well as with subcontractors. There was no time for hobby flying. His own Cessna Turbo 182 plane was stored in the US.

During the first fall, Elop even visited Cupertino in Silicon Valley. During this visit, Elop met with Steve Jobs. There is no information about what the two talked about. It might sound strange that he visited a competitor, but it’s common practice with CEOs of large corporations: During these visits one introduces oneself, listen to the thoughts of the other party and tries to feel whether there would be possibilities for collaboration. Thus, this meeting with Jobs was not related with Nokia platform decisions.

Elop’s first tweet after being nominated was sent in late November 2010. It was four months since his previous tweet.

| @selop 26 Nov 2010

| *Thanksgiving ... a day to be thankful, for both our personal good fortunes and for the promise of what lies ahead.*

Elop said he liked it in Finland. He said that it was easy for him to understand his new home country. Finland shares the same cold and dark winters as Canada. A supporter of the Vancouver Canucks ice

hockey team had also become a supporter of the Espoo Blues hockey team. Ice hockey is one of the best ways to meet people in Finland, Elop said. He also said that he had heard so many stories about saunas and the related rituals that he had tried it. It had been pleasant. Elop had more challenges with food. Especially the combination of spaghetti and sauce with fish was strange. Timo Ritakallio, deputy CEO of Ilmarinen, a large Finnish pension fund, remembers he tried to get Elop to join dinners and talk in events, but had no luck. The excuse was always the same: Elop was too busy.

“I knew he played tennis. So I asked him to come to the court at 7am since, while in Finland he would send emails even at 5am in the morning. But he said he didn’t have time”, says Ritakallio.

Ritakallio says that he got to know Elop at an event organised by Harry Harkimo, a serial entrepreneur, at the Winter Classics (Talviklassikko) ice hockey game on January of 2011. The game was played between the two Helsinki teams IFK and Jokerit. A number of Finnish corporate leaders and decision makers, including the CEO of Kone Corporation Matti Alahuhta and the Parliament Spokesperson Sauli Niinistö tried to get to know the man who had been hired to save Nokia. [10] Ritakallio says that it was evident that the size of that task was visible in Elop: “He had understood the overwhelming public pressure and interest towards his role.”

Elop’s family had stayed in Canada. Elop said that he wanted to better understand the demands of the job and how much he would have to travel before making the final decision on moving his family to Finland. He said that his family liked snow and that he felt that they would find it easier to settle in a country where ice hockey was such a large part of the culture.

Elop stayed in touch with his family mostly by phone. He said that he had given several Nokia phones to his children. On his second tweet as Nokia CEO, Elop talked about the phones his son was using:

| @selop 27 Nov 2010

| *Sim card swap meet: debating the pros and cons of our new Smartphones with my tech-savvy son: N8, E7, C7 ... hint, he’s a photographer.*

The story got continuation after a few days. On that day the son was carrying N8, E7 and X3. These tweets however didn't have a word about the most important part. The dad had an important job: He would have to change the world so that his son wouldn't have to feel embarrassed for these phones on the school yard.

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[10] After the original book was published, Matti Alahuhta has left Kone Corporation in 2014 and Sauli Niinistö has been elected the 12th President of Finland, in office since 2012.

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8. The rumble begins

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Businesswise, Elop's Nokia career had an unpleasant start. Bad news about the sales of the smartphone flagship model N8 arrived the same day he started work. People who had pre-ordered their phones were told that they would not receive their devices until in October. Investors became nervous because the sales of the phone were originally promised to start in June and now these sales would be missing from the July-September earnings. The share price fell nearly five percent.

The Board of Directors had given Elop a fairly basic task: Increase the top line (turnover), stop market share erosion, and fix the bottom line (earnings). However, only after a couple of days, the Californian website, Venture Beat, knew that Elop had been given the green light to dramatically change the existing strategy. This authorization also covered the operating systems used by Nokia phones. Reliable sources within the Nokia board confirmed that the news story was correct. As a consequence, as early as three weeks after his start at Nokia, Elop launched project Sea Eagle to analyze the various options for the existing smartphone strategy. At the same time, Venture Beat released another predictive Nokia-related news story. According to the website, Nokia would be adopting Microsoft's Windows Phone platform alongside the other Nokia smartphone platforms. However, this was

unfounded. An alliance with Microsoft had not even been properly discussed internally at this point.

The board was most concerned about Elop's relationship with Ollila. They were afraid that Ollila will continue his domineering role, even though the new CEO needed his own space to do his job. One member of the board reports that he noticed how Elop censored his own words every time Ollila was present and smoothed over his statements about Nokia and the bad shape it was in then.

After the Board of Directors conducted an annual internal evaluation of its own activities without the chairman, vice-chairman Scardino delivered feedback to Ollila and told him about the board's concerns regarding the degree of freedom Elop had.

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Exactly one month after Elop became the CEO of Nokia, the rumble began.

It was the time for the publication of the July-September 2010 earnings report. The numbers were good and pleasant to report. Profits were more than expected and net sales had increased by five percent from the corresponding period in the previous year. Smartphone sales rose 61 percent year-on-year and ten percent from April to June. N8 was ready and in stores, which held out the promise of a positive outlook by the end of the year. Elop said he was surprised at how the shortage of components, rather than weak demand, had limited the sales. Analysts praised the company's profitability, which Nokia had started to defend at the expense of market share. Hints about the acute crisis were impossible to find even between the lines. The only negative message was the drop in market share. "Amazing Nokia" was the first reaction of the financial magazine *Arvopaperi*. The stock price jumped more than seven percent. American MKM Partners' Nokia analyst Tero Kuittinen opinioned: Staggering earnings report. Good sales figures in Europe were the key factor. The earnings were better than expected, net sales were better than expected, the profitability margin of the Mobile Phones unit was better than expected, as were the average phone prices.

Staggering, perhaps, but Elop was unmoved by the results. The new CEO had to show who was the boss. He announced that he would lay off 1,800 people, including 850 from Finland.

“In the five weeks since joining Nokia, I have found a company with many great strengths and a history of achievement that are second to none in the industry. And yet our company faces a remarkably disruptive time in the industry, with recent results demonstrating that we must reassess our role in and our approach to this industry” Elop stated in the press release.

Credit rating agencies agreed. Moody’s maintained their A2 rating, relying on the strong financial position and net worth but said it would consider lowering the rating if the market position in expensive smartphones did not go back to earlier levels and the operating profit margin did not rise above 10 percent. During the July–September quarter, the percentage had been 6.2.

The worst layoffs were targeted at the Symbian product development and the service-oriented Services unit, which Elop instructed to focus on a consistent user experience instead of separate products. These actions were drastic: The size of the workforce would decrease by at least 10 percent, perhaps closer to 20 percent among product developers. The mood was one of both shock and confusion. Nokia had about 20,000 employees in Finland at that time including the employees of Nokia’s Networks unit. Symbian product development employed a total of four thousand people in Salo, Oulu, Tampere and the Helsinki metropolitan area. The statutory negotiations [11] concerned all of them. Nokia offered severance packages to those volunteering to leave the company.

That same afternoon, Elop faced investors for the first time in a conference call. He had started to embed far-reaching expressions in his speeches.

One of them was the US. Elop promised to devote a large part of his time to recapture the American market. According to him, there was no “systemic reason” why Nokia could not succeed in the US. It was all about execution and focus on the right things. Elop reminded everyone that there are only three or four strong network providers in the US.

They knew exactly what kind of products they wanted to bring to the market.

At a later date, according to Elop, Nokia will have a “crisply articulated strategy” that would liberate “innovative capacity.” Elop agreed with concerns about Nokia’s inability to get things done and vowed to change it. He said he saw Nokia as an unpolished gem with tremendous strengths. Nokia was the market leader. It had an army of tens of millions of smartphones all around the world. Relations with the network providers were good. Thus, Nokia would differentiate itself from its competitors and stand on a sustainable footing again.

Elop spoke about MeeGo, the operating system that was designed to be the future platform for expensive smartphones. He said his first impressions led to confidence and high expectations. However, he said it was clear that the first MeeGo device would not be released until next year.

The investor call was a great success. The new CEO responded to questions smoothly and quickly. Reporters and analysts praised the plans and the visions. *Forbes* went furthest and wrote a very positive article in the second week of November. It construed that Elop’s wishes for MeeGo were high. As Elop had pledged to cut the workforce by three percent and was planning to increase the speed of product launches, *Forbes* estimated that Nokia stock value should rise by 20 percent. The stock value would then be 10.20 euros (\$14.60). However, the magazine pointed out that the forecast would only be realized if the profitability of basic feature phones would be maintained.

In addition to the layoffs, Elop made another important decision. In 2008, Nokia bought a promising Norwegian company named Trolltech. Whereas an application developer would have to spend half a day to implement a simple application for Nokia smartphones, the tools from the Norwegian company would let them accomplish the same job in minutes. Trolltech’s miracle product was named Qt. The acronym is pronounced like the English word “cute”. Qt would be the Nokia ecosystem. It would challenge Apple and Google’s Android. Nokia’s own internal software development would also be done with Qt in the future.

Stock Analyst Sami Sarkamies says he thought that the strategy was promising. Qt could have been used to create a unified interface for all of Nokia's smartphones. The consumer would not have needed to know if the phone was based on Symbian, MeeGo or Windows. Usage of all devices would have been more or less the same. The developer would have had to implement the application only once.

"One could say that, with minimal changes, all applications work on all of our devices, and the work that remains is our problem," Sarkamies says.

An experienced application developer echoed similar sentiments: The new strategy was credible and a welcome step forward. Interest in Nokia grew as the speed of software development reached the level of its competitors. The tools were good. The strategy was clearly a defensive move to support the MeeGo platform projected as the future platform for smartphones. There would be a natural transition between Symbian and MeeGo. Together they would form an evolving ecosystem. A relevant question was: Why didn't Nokia redraw the lines earlier? The main reason is obvious: As an outsider, Elop was able to do what the internal power struggle had hitherto prevented. Reason finally prevailed and the most obvious absurdities that Nokia had experienced could be eliminated.

At the same time, Elop brought application developers to the center of mobile phone development. He had been wooing them earlier when he made a surprise visit to the Nokia World event to give away the \$1 million prize to Nokia's developers. In his speech, he borrowed from his former boss, Steve Ballmer, who had many years previously declared: Developers, developers, developers! Elop repeated the same thought with style, discretion, and without affectation. Developers would have a big effect on Nokia. The prize was awarded to Kenyan John Waibochi's virtualcity.co.ke mobile service, which solved the logistics problems of small businesses.

At the end of November 2010, Elop started making changes to the executive leadership team. According to the announcement, the leadership team would have more sales power at the beginning of January 2011 when Jerri DeVard would start as the head of marketing and communications. DeVard had over 25 years of experience with

large consumer brands. For example, she had worked for Revlon and had been part of Barack Obama's election campaign.

The newcomer was expected to stir things up and get things going. The leadership team of grey suits appeared to be highly "technocratic" even though one of the members was female. One reason for welcoming the American brand expert was due to the fact that, to American ears, native English sounds better than a perfect English-speaking Finn. In addition, the Nokia brand was trending downwards in international comparison. The brand consultancy firm Interbrand estimated that Nokia was the 8th most admired brand at that time. This meant a drop of three positions from the previous year. Only the motorcycle manufacturer Harley-Davidson had lost more brand value than Nokia.

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[11] Finnish labor law requires employers to conduct statutory negotiations before any job reduction. More explanation in the addendum to the glossary in Appendix 2.

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9. The consultant with a Microsoft connection

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One of the best-kept secrets regarding Nokia's strategy choices was the role of McKinsey & Company, the management consultancy.

McKinsey & Company, a US-based management consultancy is one of the best known in its field. *The New York Times* magazine listed it as the most prestigious in the field in 2011. McKinsey, and the two other US-based management consultancies Boston Consulting Group (BCG) and Bain, hire the most talented students from business and engineering schools. They send the fresh hires abroad for training. McKinsey has nearly a hundred offices in 60 countries. Its non-disclosure agreements and requirements for secrecy are tight. McKinsey consultants are not permitted to publicly discuss matters of individual customers because

the McKinsey business is built on customer trust. This professional confidentiality also binds former employees.

McKinsey is a privately held company, and does not share its financial figures publicly. However, in 2011 Forbes estimated McKinsey's turnover to be roughly 5 billion euros (\$7 billion) with approximately 9,000 consultants. According to an estimate found on the internet, a team of one experienced and four junior McKinsey consultants charge roughly half a million euros (\$700,000) a month. This is well over \$100,000 per consultant. A book published in 2014 compares McKinsey to a luxury product; when they are summoned it sends a message to others: We can afford McKinsey!

Over the years, the best brains of McKinsey have made some strange recommendations. In 1980 McKinsey told AT&T that mobile phones would remain a marginal product. The airline Swissair went bankrupt 12 years after they started to follow a strategy created by McKinsey. Enron, the energy company that went through a scandalous collapse, was one of the largest customers of McKinsey. More than that, Jeff Skilling, the Enron CEO who was convicted of federal felony charges relating to Enron's collapse, was an active McKinsey alumnus (former employee). In 2000, McKinsey recommended the media giant Time Warner a merger with internet service provider AOL. Jeff Bewkes who was the CEO of Time Warner some years later, has called this merger the largest mistake in corporate history. Into this gallery of horrors, we can also add the case of Nokia from 2009. An organizational change was done during Olli-Pekka Kallasvuo's tenure. This change fully paralyzed the company at a critical moment. The change was made based on the recommendations of McKinsey.

These errors are counterbalanced by customer satisfaction. 85% of customers return to use McKinsey again. When you choose McKinsey, you know that the consultants are not stupid and that they have an efficient global organization to support them.

Stephen Elop had good relations with McKinsey already prior to his joining Nokia. He had used the consultancy already back when he was at Juniper Networks, and continued to work with them at Microsoft. Endre Holen, a Norwegian based in McKinsey's Seattle office, had become Stephen Elop's trusted man. Holen most likely was one of the most influential people behind the Nokia strategy and renewal. Elop

contacted him soon after being appointed as the CEO of Nokia and asked him to participate in analyzing what should be done with the company.

According to McKinsey's Seattle office website, Holen has worked for the company for over 20 years. He has a master of science in structural engineering from the Norwegian Royal Institute of Technology in Oslo and an MBA from Berkeley. His clientele consists mainly of high technology and telecommunications customers. He is experienced in projects ranging from strategy and product development to sales and marketing. Industries mentioned include software, product manufacturing, services and wireless technologies. Like for Elop, flying is a hobby for Holen.

The website lists an article published in the *McKinsey Quarterly* magazine written by Holen and a colleague. The article is about Kevin Johnson, who became the CEO of Juniper Networks after Elop jumped to Microsoft at the last minute. The authors—and thus also Johnson—believe that after entering a new company, a fresh CEO has only a very short time window to announce the changes (s)he wishes to make. If (s)he misses that window of opportunity, the changes cannot be made or are considerably more difficult to execute. If the changes have not been put into action within 12–18 months of the entry, it is too late. According to Johnson, and most probably also the author Holen, a new CEO also has to have a basic understanding of the state of the company starting from the very first day. This could be something like “This is a good industry, but our company is in trouble”. Within a few months, the CEO needs to have figured out the long term goals, the strategy to achieve them, and the leadership changes necessary.

The article about Johnson was written in June 2010, only three months before Elop was nominated to lead Nokia. Johnson says that upon his arrival at Juniper, he posed four questions to the leadership team. It shouldn't be a surprise that these four questions included the three questions that also Elop put to Nokia's leadership. In an email sent to his direct reports, Elop had only omitted one question: What are you most proud about Juniper (Nokia)? There are also other interesting coincidences. Johnson came to Juniper from Microsoft, of all places.

Holen actually has surprisingly many ties with Microsoft. Elop's ideas on leadership, on the other hand, seem to be inspired by Holen.

Following Holen's arrival at Nokia headquarters in Keilalahti, Espoo in the fall of 2010, a steady stream of junior consultants from across the globe also began to arrive. This was usual practice at McKinsey: The best candidates for a project are invited to join, regardless of where they were based. The young employees of McKinsey's Finnish office also started to commute between Keilaniemi and Helsinki city center. These consultants took over the strategy work, regardless of the fact that Nokia itself had an unusually large strategy department. McKinsey was tasked with building a "Winning Strategy" together with Nokians to turn Nokia around. Another Norwegian consultant, Trond Riiber Knudsen from the Oslo office of McKinsey took the position of Endre Holen's right hand man. He specialized in sales and marketing.

The people who worked at Nokia strategy department around this time say that the situation was very confusing even prior to the McKinsey invasion. After the spring 2010 layoffs, the size of the department had gone down from 250 to under 200. In this environment, people acted as though they always had something important and urgent under way. It was very difficult to know what others were working on, as projects were classified confidential or secret. This was combined with a limited amount of teamwork and a culture of not questioning the common beliefs. Symbian was considered the sacred cow that all career-conscious employees supported at all costs. Of course it also made sense to speak favorably of MeeGo. According to the official documentation, the strategy department has invariably supported MeeGo. Windows Phone, on the other hand, was practically unknown to all analysis prior to Elop.

The Nokia strategy department had become a sort of a stepping stone for all young and aspiring wannabe-people. Outside the department there was also talk about the number of people whose last names were the same as those of several well known Finnish corporate leaders. There was a Halmesmäki, a Juusela, a Suila, and a Sundbäck to name a few.

These people were more or less closely related to their more famous namesakes, but according to one Nokian, to an outsider, it seemed like these people were eased into the department to get a line on their CV from world-class strategy work.

It seems understandable that Elop chose to use super-expensive external consultants despite the size of the internal strategy team at his disposal. Nokia needed to get a fresh outside-in view. Company profitability or market share didn't give much reason to trust the work of the strategy department. The mission given to McKinsey was: "Make sure you challenge us". Elop wanted to understand Nokia properly, and to make sure that nothing was overlooked. What were the strengths of the company? What sort of partnerships were needed? Could there be some hidden gems somewhere? That Elop allowed Holen to participate in Nokia leadership team meetings aptly reflects the nature of the assignment. Holen almost became an additional member of the leadership team.

The arrival of McKinsey marked the start of a countdown for Nokia strategy department. Elop continuously cut down its personnel. By spring 2011, the headcount in the department was down to a hundred. The explanation was that after Windows Phone was chosen as the new strategy, the main focus was on implementation, not planning. By 2012, the Nokia strategy department had shrunk down to 50 people. Replacing internal strategists with consultants caused conflicts. As one can guess, cultures collided. The external consultants were seen as invaders, especially as their personalities, most notably Riiber Knudsen's, caused conflicts. Most junior consultants were still inexperienced in international business and their attitudes were, in the words of several interviewees, arrogant. Nokia engineers were honest and said things bluntly and openly, as is the Finnish way. Consultants experienced in the American culture however often assumed that they were embellishing the facts. PowerPoint presentations were made at an astonishing speed. McKinsey would make a 100-page presentation set out of thin air, said one interviewee. If you wanted to make sure that your initiative would get implemented, you should always engage McKinsey, said another. Many were also wondering what fresh insights and approaches the consultants could come up with.

There are varying estimates on the number of McKinsey consultants engaged with Nokia at this time. A total of 50 is an educated guess. Usually there were 5–10 of them on average working on site, at the busiest times there could be tens of consultants. The McKinsey consultants had their own assistant as well as their own premises with a "war room" at the Nokia House headquarters.

The massive size of this endeavor can be deduced from the sales numbers of the Finnish McKinsey. The common practice at McKinsey is that the local office does the invoicing on a case. The turnover of McKinsey Finland was a little under 13.9 million euros (\$20 million) in 2009 and a bit above in the following year (14.2 million euros). However, in 2011 their turnover more than doubled surpassing 36.4 million euros (\$50 million).

In the financial statements submitted to the Finnish trade register, there is a line called “other costs” after employee costs. These “other costs” were 8.3 million euros (\$12 million) in 2010, and 28.7 million euros (\$40 million) a year later. These figures most likely give a very reliable estimate on the pass-through billing. Considering that these “other costs” were 5.8 million euros (\$8 million) in 2009, we can make the rough estimate that Nokia paid about 20 million euros (\$30 million) for McKinsey consultants. Reading the financial statements of McKinsey Finland is almost amusing. The text on the action report stays the same word to word, year after year, only the numbers change. Sometimes not even that: Every one of the reports for the years 2010, 2011 and 2012 states that the ending fiscal year is the twentieth year of McKinsey’s Finnish subsidiary (actual numbers are 21st, 22nd, 23rd respectively). Even though the turnover more than doubled in 2011, there is hardly a mention of this increase in the report.

McKinsey was not the only consulting company that was interested in doing business with Nokia. All consultancies recognized that this was the perfect time to act. In large corporations, a new CEO very often starts to drive changes and needs help. At least one of these other consultancies raised Android as a clearly winning bet for Nokia. The capability to effectively distribute phones to the developing markets was considered as the strength of Nokia. Nokia, however stuck with only McKinsey.

Now we come to an important point of interest. What McKinsey and other consultancies sell, is not just recommendations, but also glory. The end result of their effort is owned by the client, never McKinsey. McKinsey helps large enterprises in making a great number of important choices. However an outsider still thinks that these are choices that the company and its leadership made.

The relationship between clients and consultants is symbiotic: Who pays tens of millions for recommendations they don't implement? No one. That is why people believe the consultants. And consultants tailor their recommendations to please their customers. McKinsey has such a high reputation that it is known to have been used also as a rubber stamp. On occasion, it has been invited merely to give rationales and supporting arguments for decisions that were already made before it entered.

We are not claiming that this is what happened with Nokia. Many of the people we interviewed thought that both Holen and McKinsey were objective and followed the appropriate hygiene rules. According to one estimate, a consultancy such as McKinsey cannot afford to enter a company as public as Nokia with a ready-made strategy. One leadership team level interviewee said that the analysis Holen presented them with was very convincing. McKinsey was dedicated to their work. Also, most of the corridor talk on Holen appears to have been rather positive than negative.

Regardless, the role of Holen raises questions. Why did Elop choose as his right hand man a consultant who had such strong ties with Microsoft? A man who was in an ongoing customer relationship with them? Why didn't McKinsey consider him unfit for the project? Shouldn't McKinsey make sure that there is a firewall between consultants that work with competing clients. There is no doubt that there has been a conflict of interest with Holen. For example, we do not know what his role has been when Microsoft decided to use Windows Phone 7 to increase its efforts on entering mobile phone markets.

According to one reliable source, Holen was or had at least been the account manager for Microsoft at McKinsey.

It looks like neither Elop nor Holen had fully thought through the implications of Holen's role. How does it look like if a consultant who actively works with Microsoft, or at least is close to the company participates in Nokia leadership team meetings? The dual role of Holen is like adding fuel to the fire of conspiracy theories.

Holen's own LinkedIn profile has minimal information. There are not too many recommendations from others, either. It is likely that Holen has limited the number of recommendations he wishes to show, but

there are two themes on this list that catch one's attention. The person who has been most active in giving recommendations to Holen is Niklas Savander. He gives a thumbs up for Holen on almost all aspects relating to strategy, change management, and mergers & acquisitions. Teemu Suila, who earlier worked in Nokia strategy and is now the Chief Operating Officer at Rovio praises Holen's strategy skills. The third most-active recommender is Zig Searfin, who happens to be a vice president -level leader at Microsoft, according to LinkedIn.

It appears that the board of Nokia was unaware of the linkages of Holen and of the double role of McKinsey. We do not claim that these linkages would have directly affected the choices that Nokia made. However, we all know that it is easier to lean towards the more familiar option, the one that you can easily find supporting data on. Rather than towards something more unknown. In terms of appearances, it is indefensible that the strategy choices of Nokia and operative decisions relating to them were made by two people with such close linkages to Microsoft.

McKinsey continued to work closely together with Nokia also after Windows Phone was chosen. After the size of the strategy department stabilized to around 50 people, the consultants became more and more involved with regular, less strategic projects and participated in developing device sales strategies for Microsoft.

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10. The platform choice

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Microsoft's CEO Steve Ballmer was in a tight place in January 2011. He was flying with his staff on a private plane to Helsinki, when snow and fog prevented them landing in Helsinki. A decision was made in the Swedish airspace: The plane will land in Stockholm instead of Helsinki. Ballmer would continue from there on a scheduled flight, which were still able to land in Helsinki-Vantaa. Ballmer's tall and stooping image would have been a topic of rumors on any flight, so he hid from the situation by quickly heading for the lounge in Arlanda, states Wall Street Journal. Suddenly, he hears his name on the intercom. There

was something unclear with his ticket for the scheduled flight. They wanted him to check in at the desk.

Luckily for Ballmer, no one noticed him being paged. He took care of his ticket discreetly and snuck over to Helsinki to meet Stephen Elop, while avoiding the public eye.

The events leading up to Ballmer's flight to Helsinki started in the end of October, when Elop had started mapping out the strategic options for Nokia. The Qt strategy, announced in October, was built up with great seriousness and the management, as well as the board, had accepted it. But when Elop had, over time, gotten familiar with the company better, he began to change his mind. According to one member of management, Elop started to view Nokia as too mixed up. With the smartphones, a clear choice had to be made: Either continue our own way, in other words put our effort into MeeGo, or go unequivocally in either the direction of Google or Microsoft. Apple was out of the picture, because it had shut out other manufacturers from its ecosystem.

Microsoft under Ballmer's leadership had shown up in the smartphone world with new energy, when it announced its new operating system, Windows Phone 7, in February 2010. The first phones using it appeared in sales in November. The reception had been favorable. The graphic design had been considered fresh and original. The tile based start screen differentiated from competitors and pleased many. The way social media was integrated into the phone's functionality was praised. In the middle, instead of separate services, were people and their messages. Windows Phone 7 was easier to use than Android and more modern than Apple's iOS. The differences could be compared to a house. On the iPhone, one room led to another, for example from the kitchen to the dining room, always via the entrance way. Android was like a doll house. The user could jump into any room from the outside. Windows Phone, on the other hand, got rid of some of the walls between rooms. The usage of the phone was no longer based on silos formed by the different apps. The product was actually quite good, unlike Microsoft's earlier concoctions.

The newcomer's solution had its beginning in the latter half of 2000, when the company was thinking about a successor to its successful PC operating system, Windows 7. Microsoft's design department was

accused of copying, but without cause. Now they wanted something new. After dozens and dozens of brainstorming sessions, it was decided to go with tiles. The brilliant idea was to put tiles beside each other and on top of each other instead of icons. This is how the exciting layout got started; the content was alive and targets were easy to touch.

Eureka! Now they only needed boldness at the management level. And boldness was found. The first incarnation of the system was in mobile phones. Windows Phone 7 was born as a test bed for Windows 8 for PCs, where there was also the intention of bringing in the tiles.

Thanks and praise for the freshness of Windows Phone 7 was received with joy at the end of fall in 2010, but the financial success was meager. During the first six weeks, Microsoft announced that they had delivered 1.5 million phones to retailers. The manufacturers at the time were Samsung, HTC, Dell, and LG. What was not shared was whether or not the phones were sold to consumers or if they were lying around in the stores. Microsoft wrestled with the same problem as Nokia. If the ecosystem is to succeed, it had to be large enough.

In the Nokia management in the fall of 2010, Windows Phone was shot down straight away. Choosing it as the only platform would be approaching madness was a common opinion heard. Guarantees of success against Google or Apple were not present. Elop was, from confirmed sources, thinking along the same lines. He considered the Microsoft choice unsure, but from sources in management he still continued to ensure it remained on the agenda.

In November 2010, when Nokia started actively researching external alternatives, Microsoft's share prices had gone up. It was approached with the same seriousness as with Google. Elop had collected a close-knit group around himself at this point, who would back his decisions. Three leaders who had been with the company a long time were in this group. They were Kai Öistämö, Niklas Savander, and Timo Ihamuotila.

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During those times, 46 year old Öistämö was one of Nokia's most controversial characters. He started at Nokia almost directly from the school desk in 1991, after he did his dissertation in his hometown, in the Tampere University of Technology. The tall and slender doctor

proceeded with big strides in his career in the mobile phones division, and in 2006 was in charge of the whole group. He was appointed to the board in 2005, and in 2008 he rose to leadership of the Devices division. In July of 2010 his title became Chief Development Officer.

As mentioned previously, Öistämö had done business with Elop already in the summer of 2009, when they negotiated bringing Microsoft Office to Nokia phones. The two of them got along well, and Elop started quickly confiding in Öistämö when he started at Nokia. His job description was to be responsible for strategy, business cooperation, business development, and joint ventures in the field.

Öistämö was a pleasant, modest, and easy-to-approach person. Interviews portray him as friendly and tell that he doesn't carry an air of importance. One person described him as "terribly nice". Öistämö is married with three children. His hobbies include tennis, skiing, and golf. His professional values, however, change the overall picture. According to many who have been interviewed, Öistämö is one of the top culprits of Nokia's difficulties. The claim is based on the years 2008–2010, when Öistämö was in charge of the Devices division. He bloated up Symbian, defended it at every opportunity, and created tens of device versions. Öistämö had bloated MeeGo, together with Alberto Torres in the summer of 2010, to an organization of over 2,000 people.

As a leader, Öistämö is described as a yes-man. He is claimed to sniff out his own bosses' opinions before sharing his own opinion. What ends up transpiring is always pleasant to his boss. He has another incomplete skill as a leader of people—he doesn't give feedback, nor does he have a grasp on how to develop people. But he is fair and analytical, according to appraisals.

As a person, Niklas Savander gets different appraisals. He is described as distant and arrogant. He is, according to some, a typical salaried manager, who would rather protect his own position than come up with new ideas. One stock analyst tells us how colleagues actually shun Savander, because he seemed so full of himself.

One partial explanation for this might be found in the man's family history. His father, Magnus Savander worked, among other things, as a CEO in the conglomerate Rosenlew, known for home appliances and harvesting combines. His mother Christina was born into the von

Frenckell family, who owned Rosenlew. After school, Niklas left Pori to go study in Helsinki and graduated from Helsinki University of Technology's mechanical engineering department in 1987. A year later, he had also gotten papers from the Helsinki Swedish-language Hanken School of Economics, with a degree in international marketing. Savander came to the marketing unit of Nokia Networks after working 9 years at Hewlett-Packard. The year was 1997. The road quickly led to assignments in enterprise devices, marketing, and technology platforms.

In 2009, the American magazine *Business Week* listed him as one of the hopes of the business world. According to the magazine, Savander was leading the Services division at that time, when Nokia had expanded from phones into mobile internet. He had gotten mobile phone users to buy music, games and navigation services. Under his leadership, Nokia had also developed services for feature phones used in developing countries.

Savander is married and he has two children. According to Wikipedia he plays and referees in ice hockey. His other hobbies are telemark skiing and golf.

Savander's achievements at Nokia bring up conflicting comments. People who worked with him a lot say that the first impressions you get of Savander are wrong. He is described as a born leader, who concentrates on the big picture. On the other hand, his achievements with Nokia's internet services, especially with ovi.com, remained only as promises. Colin Giles, who had been fired from his position as head of sales, was believed to have been used as a scapegoat, so that Savander would not need to leave due to Nokia's loss of status in China.

Like Savander, Timo Ihamuotila belongs to a well-known business family. He is the son of the former CEO of the Neste oil company and the cousin of the CEO of the Marimekko fashion company, Mika Ihamuotila. Ihamuotila completed a licentiate degree in the Helsinki School of Economics in 1997. Only the PhD dissertation is missing from his doctoral degree.

During Elop's time at Nokia, the 44-year-old Ihamuotila is described as precise and quick-witted. As a counterbalance to being somewhat colorless, he is considered a leader who knows his business. He is

described as an upright, transparent, pleasant, and a very professional financial leader.

Ihamuotila started his career in assignments in finance, first in the Kansallis-Osake-Pankki bank and in 1993 as a risk analyst for Nokia. In 1996, he left to Citibank, but returned to Nokia to a leadership role in finance in 1999. Afterward, he was responsible for, among other things, Nokia's CDMA business in the US, the mobile phone product portfolio, and from 2007, global sales. On the same year, he was appointed to the board. He started as the Chief Financial Officer in 2009.

Ihamuotila is married and has three children. In his free time, he plays tennis, skis, reads, and spends time with his family.

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It was Monday, November 15, 2010, when Elop and his three soldiers headed to Microsoft's control center in Redmond.

Elop had told about his first impression of the negotiations to *Bloomberg Businessweek*. When he, Öistämö, Savander and Ihamuotila were waiting together for a taxi in front of the Bellevue Hotel near Microsoft's headquarters, Ballmer had sent a huge limousine to greet them. Elop said how he felt so awkward that he would have wanted to walk. A group of four received them in a small conference room. This group included, together with Ballmer, Qi Lu, who was responsible for internet services, the leader of the mobile unit Andy Lees, and the person responsible for the Windows Phone technology, Terry Myerson. After small talking about being back to the site of his former employer, Elop went straight to the point. Nokia had decided to either stay with its own software, or team up with Google or Microsoft. The decision would be made soon. He said that he would publicize the decision in the analyst meeting on February 11, 2011.

Myerson recalled that Elop has given a familiar impression at the meeting. This strength is again not from intuitive decision-making, but is a question of creating clear and quick processes, where a rational person feels comfortable. Microsoft was certainly interested in such things.

The next time they met was on December 6 in the W New York—Times Square hotel in New York. Jo Harlow, who was in charge of smartphones at Nokia, was also present at the meeting. The task of the conclave was to decide whether or not Windows Phone would be able to run on Nokia's chipsets. The concrete technical analysis continued after a few weeks in Reykjavik, Iceland.

A source who was present in the Microsoft negotiations says that Elop was very neutral in the meetings. He often discussed with his team and made the members express their opinions. According to sources, decisions were made together, as opposed to Elop being a dictator and driving Nokia into the lap of Windows Phone. He really coaxed out the expertise of his team, the source says.

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The first contact with Google came when Elop and Google's CEO Eric Schmidt talked on the telephone, and Elop told Schmidt that Nokia was making some big decisions. Besides Schmidt, Andy Rubin also took part in the call.

It is good to clarify a couple of things at this point. Microsoft's Windows Phone 7 was proprietary software. Only Microsoft could modify it. It charges license fees from phone manufacturers. Android by Google is open source software. Anyone can use it for free and modify it however they want.

Why did Nokia even need to negotiate with Google? If a manufacturer wants their devices to access the Google app store, they must use Google's standardized version of Android. The manufacturer agrees to preload, among other things, Google's maps and the Gmail email service. After fulfilling these requirements and many others, the manufacturer can fully enter the Google ecosystem. Google allows modification of the user interfaces, but only to a limited degree, so that using the device remains similar independent of what device is used.

Another option is to put Google's standardized version to the side and download Android for free and create one's own version. This is what the Amazon online store did with its Kindle tablet, and built services and an online store by itself. In 2010, however, this option was off the table for Nokia. Nokia was looking for a ready-made ecosystem.

Elop was as direct as he was in Redmond in his first contact with Google. Symbian was dying and MeeGo was late for its schedule. Nokia wanted to understand if Android would be a good replacement for these. At the same time, Nokia said they would also study Windows Phone and compare these two. The follow-up work was taken up by Öistämö and John Lagerling, a Swede who was in charge of Google's Android partnerships. On November 11, 2010, in other words four days before Elop and his four-man-team made the trip to Redmond, Lagerling arrived in Finland. First there was dinner with Nokia's American leaders, and on the next day there was a meeting with a delegation of about 10 people from Nokia in Keilalahti.

According to a source present, Google seemed to really want Nokia to join the Android world. The company assured that Android can be customized more than Nokia understood, especially compared with Windows Phone. Even if Google was criticized continuously for having Samsung, HTC and Sony Android phones differ from each other too much, Nokia would be given leeway to create its own user experience. Google saw that Nokia differentiated from these competitors in that it had a global area of operation. Nokia would be able to create better local services and user experiences for network providers and customers, one person present remembers being discussed. The Nokians also noticed that they had been living partially with misinformation. Nokia could continue with Android with its own maps side-by-side with Google's maps. The same applied with the app store. Nokia's music service as well as ovi.com could continue, as long as the phone had Google Play.

The discussions continued at a fast pace after the first visit. Google seemed to really want Nokia.

Some constraints were set by the Open Handset Alliance behind Android, OHA. Unlike Windows Phone, Android is not controlled by one company, rather by an alliance of 84 companies which is led by Google, where the members are able to use Android in an equal manner. Google was in a difficult position. By giving Nokia special privileges, it risked its relationship with other manufacturers. The reactions would be difficult to predict. Creativity was needed.

As the negotiations proceeded, a solution was found. Google offered Nokia, among other things, plenty of say in choosing the direction of

Android development. By directing Android development to align with its own competitive goals, Nokia would gain some advantage, even if the changes would be available for everyone at the same time. Now Nokia was interested. Android and Nokia had an area where their interests converged in a brilliant way: Developing countries. If Android could be made to work on cheap hardware, Nokia would be best at getting in through in developing markets. The arrangement was enticing. Google would secure the position it was dreaming of in smartphones, and Nokia would become part of virgin Android markets. The precise details remained hidden, but Nokia was able to learn that Google worked Android into clearly cheaper models than Windows Phone.

Another flexible point of Android was in its predictability. Nokia wanted to publicize the new software features earlier than when the phones go into sales. The reason was brutal: Nokia was more solid than its Korean competitor and needed more time to build a phone. If the information about the new Android features was available earlier, Nokia would have enough time to get them in the first wave, like the others. Google was willing. It promised to make the publicizing of its plans earlier and to release the source code to its partners. The solution would have been useless for other Android manufacturers in relation to Nokia, but would not have broken the OHA rules.

Google made a substantial offer regarding distribution of income. Nokia would have gotten a portion of the income from Google's search engine, app store, and other services which originate from Nokia phones, and the terms would be in relation to Nokia's influence in the ecosystem. We don't have information about precise percentages, but at any rate, Google's promise was quite exceptional, considering that Nokia would still have been able to keep its own services in its phones.

Contrary to what Nokia has claimed, Google was ready for concessions. It was ready to flex as far as it could in the framework of OHA, and even then some more.

Then some big money stepped into the game, as well as the mysterious Nokia employee with the name Rahul Mewawalla.

According to his profile in the social media LinkedIn, Mewawa transferred to Nokia in 2010 from the television company NBC.

Previously he had worked at Yahoo, among other places. During his time at Nokia, Mewawalla's title was, according to LinkedIn, Global Head of the Business Division, Global P&L Leader, Global Vice President and General Manager.

Mewawalla had a simple task. He created pressure outside the official negotiations, and above all he tried to milk money from all the possible contract partners. Mewawalla's thinking was based on the assumption, that MeeGo would succeed and produce Nokia a revenue stream of sum X. If Nokia were to choose some other platform, it would lose that sum. Sum X was therefore an alternative cost to choosing an external platform, and the sum was several billions of dollars. Many interviewed describe that reasoning as strange. Mewawalla's role and methods of negotiating were considered strange in a Finnish company. The opponents had difficulties understanding which direction Nokia was going.

Nokia found understanding from Microsoft with relation to money, but Mewawalla ran into a wall with Google. Google notified Nokia that it would not be able to pay one cent for someone to use its free operating system. It definitely does not fit into Google's way of doing things, was the answer.

Creativity was again needed.

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The board of Nokia followed the progress of the Microsoft and Google negotiations calmly. In 2010, there was the normal number of meetings, 13, out of which a few were held by phone. In the fall there was no reason seen to speed up the pace. Three options, continue with our own software, Google and Microsoft, were all under consideration at the same level, and all were being researched with open hands. The information close to the board was under review. Also Elop seemed to be proceeding with his eyes open, and avoided sales pitches on behalf of Microsoft. Even if Elop became a board member only in spring 2011, he was in the meetings presenting the information expected of the CEO.

After some time, doubts began to gather around Google. Mostly the board grew wary of losing their own software work. As part of the

Google camp, Nokia was expected to end up with huge numbers of layoffs, because the platform would come from outside, and the possibility of other software work was limited. The potential of the maps company, Navteq, would be weakened. Nokia had bought it four years prior for the huge price of 5.7 billion euros—the deal was one of the largest in Finnish business history. The board started asking if we are ready to make such big sacrifices. Another conclusion that had come up was, through Android, Nokia would become a slave of Google. In Elop's speech, one would hear his familiar words of “our ability to differentiate from the competition” on the scale. Samsung had taken over the Android ecosystem, and they would be difficult to compete against, because, through its displays and semiconductors, it had a competitive edge in price, R&D, and logistics.

The choice of Android might increase sales, but what would happen to profitability? Nokia's services team had doubts about Google's trustworthiness: Would they dare to give them strategically important user data for their services without fear of misuse?

The arguments for Microsoft became better, day after day. Microsoft needed Nokia more than Google. They could not risk letting Nokia jump over to Google's ship, because it would be the beginning of the end for Windows Phone. Microsoft promised Nokia its own app development as well as innovation. Doing things themselves was part of Nokia's culture, so Microsoft assured that they would suit them better than Google. Nokia would be able to influence the end result. Both companies were challengers, and they both had a common enemy.

There were also certainly suspicions toward Microsoft. It was hard to imagine it as a cradle of innovative culture, and the Windows Phone ecosystem was only just getting started. The board was given working Windows Phone 7 phones, so that the members could get to know the possibilities of the platform. The relevant question remained in the air, nonetheless: What would a Windows Phone device be like? How would we make it competitive? How would it differentiate?

In the internal dynamics of the board, there were some strong characters besides Ollila—Henning Kagermann and Risto Siilasmaa. Only they had a background with software.

Siilasmaa is described as being active in the board and bringing in valuable input. He knew Microsoft—he is known to have admired the company during its greatness in the 1990's, and on top of that Siilasmaa's company, F-Secure, had made its business by patching the security holes in Microsoft Windows.

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The third big hot potato was Nokia's own hope, MeeGo. It was late. But it looked better. Anssi Vanjoki had, before he was let go, come to the conclusion that MeeGo had been turned in the right direction. Alberto Torres, who was often in disagreement with Vanjoki, was also in agreement. MeeGo would reach its goal, as soon as the leadership problems could be cleared out of the way. There were estimates in the management that the broad category of products would be ready by the end of the beginning half of 2013. At the end of the fall, Nokia's most organic path, MeeGo, was the choice most supported by management.

The strategic lineup started looking like this:

MeeGo Nokia would continue with its own software, differentiate from its competitors, and its money would stay in its own pocket.

Google Success was clear. Nokia would become a mass producer. The risk is low and the profit expectation is low.

Microsoft Would it work? Nokia would have to get its software from outside, and they would need to pay licensing fees. The risk is high, and the profit expectations are low.

At around the end of 2010 and the beginning of 2011, the situation was getting tense. Elop had gone to Seattle before Christmas. When he came back to Finland, he continued the decisive conversations.

According to an estimate from the board, the fate of MeeGo would culminate during these weeks. Elop had expected more support from the network providers than what they had. A CEO from one of the world's 10 largest network providers confirms the claim. He recalls Elop visiting for lunch and showing off MeeGo devices. The CEO remembers that he had been unimpressed. The picture he got of the phones was

that they had appeared too late. He told Elop directly that Nokia would find it difficult to create a real ecosystem with them. It would have taken more money than what Nokia had, the CEO remembers.

According to a member of the Nokia leadership team, the lack of credibility that Torres had as leader of the MeeGo project also affected Elop's considerations. An operating system is chosen based on its technology, but in an equal playing field, the option which shows the most credible plan gets picked, the CEO reminds us. It would be very difficult to push MeeGo to the side, if it had been led by someone more convincing than Torres.

On January 3, according to *Wall Street Journal*, Öistämö walked into his boss's office and notified Elop that he was worried about the possibilities MeeGo had. The two of them calmly decided to talk with twenty MeeGo people, from programmers to managers. Before the first interview, Elop collected everything that was known about MeeGo on a whiteboard, according to the version described in *Wall Street Journal*. The products under development, their launch times, and the error level of the software. The news was bad. At that pace, Nokia would have three MeeGo devices in sales before the end of 2014.

Elop tried to call Öistämö, but Öistämö's battery was empty. "He was probably trying out an Android phone", Elop joked later. When they finally talked on the January 4, the truth was, according to Öistämö, a bitter pill to swallow.

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Mewawalla kept at his tough push throughout the end of that year. The sources of money, nonetheless, remained dry. Google's thinking was that it would not pay money for using Android, but it notified that it understood Nokia's need to get cash to help with the cash problem caused by the platform change. The creativity appeared in the form of patents. Google offered to buy Nokia's patents to be used for Android. In this way, Nokia would have gotten cash and Android, Nokia's new platform, would get more power against its competitors. Nokia still kept its cool. It wanted cash and considered Google's offer for the value of the patents too low. One possibility to take care of the cash flow would be to overcharge for the patents, but Google didn't seem to be ready to

do this. What was probably the most likely scenario, was that the parties' price expectations were too far from each other.

Elop kept a physical distance from the negotiations. He and Schmidt had not met in a real negotiation even once. There were two or three phone negotiations, but there were only meetings at events, at the most. Elop was also not known to have met any of the other Google negotiators. This makes one wonder, when it is known that Elop met Microsoft's Ballmer at least twice in direct negotiations.

In the beginning of January, something happened. The negotiations with Google stopped.

According to one version of the story, it started at the world's largest consumer electronics fair in Las Vegas on January 6–9, 2011. The newest Android phones and tablets got a very good reception. So good, that Nokia's value in the eyes of Google dropped decisively. According to this version of the story, Google understood that it could take over the world without Nokia, nor would it need to risk its relationships with other manufacturers by taking in Nokia with special conditions. Now Nokia only had the standard conditions, which are jokingly said to be: Welcome to Android, the source code can be found for free in the internet.

This version of events are not likely the real story. The deciding point in January was, according to a dependable source, that Nokia finally understood, that it would not get money directly from Google under any conditions. Nokia wanted a quick solutions and billions of cash. Google offered a position based on Nokia's strengths in Android, but it would only have produced money in the long run.

When this was understood, the negotiations with Microsoft got a fire lit under them. They moved to questions about business activities and marketing. The meeting in London was with Öistämö's Microsoft counterpart, Andy Lees. Someone who was closely following the negotiations told *Wall Street Journal* a few months later that at this point the contact almost broke. Nokia realized that Microsoft was, after all, offering the world's largest phone manufacturer the standard agreement, even if Nokia was casting all its chips into the game. The Nokians showed their eye for the game. The Microsoft crew knew that Nokia was negotiating with Google. Nokia jumping ship to Android

would ruin Microsoft's chance of a century. Just because of this, Ballmer flew to Helsinki, to assure the Nokians that Redmond was serious.

On January 10, 2011, Öistämö, together with his colleagues spent the morning in a windowless room in the cellar of a London hotel. Nokia told Microsoft that it wanted freer rights than the competitors to innovate with Windows Phone. The Navteq maps had to be the basis for all Microsoft services. On top of that, Öistämö decided to ask a large sum of money. Öistämö had calculated correctly. Microsoft had come to the conclusion that it could not afford to let Nokia slip from its hands. According to *Bloomberg Businessweek*, the negotiations proceeded quickly after this. When the parties met for dinner in an Indian restaurant, the agreement was sorted out in time for dessert. The description in the magazine was partially a legend fed to the public. All the items, including the money, were negotiated throughout the fall, but they created a package out of all of them.

The contract was completely different from what Microsoft had made with other manufacturers. It included marketing money, reduced license fees, and special rights with regards to technology. The road appeared to be opening up. Nokia would get its ecosystem and the driver's seat for Windows Phone. The special status was only achieved, according to Elop, because Nokia promised to do everything it can for the benefit of Windows Phone. The arrangement included a commitment not to use other smartphone platforms.

The board got the results put before them on the second week of January.

The reception was favorable. According to the information the board had, only three people presented questions that were even somewhat critical. Otherwise, the reaction was a poodle-like "sounds good". The decision was, in the end, unanimous. No one voted against. Microsoft's terms with its billions of euros were viewed as the best.

In our interviews some recounted how they actually thought differently.

One interviewee describes how he found the agreement directly unreasonable. Nokia took a risk, but Microsoft would take most of the profits. Another said how he suspected that Windows Phone was not

ready as a product. Also, it was understood that Microsoft had a bad brand reputation. Elop's activities caused bad feelings. One described how Elop borrowed from his ex-workmates, when talking about the details of the system. Elop seemed to be bypassing the normal communication channels with Microsoft, and gave an impression that he knew more about the product than what he told the board. He was thought to have insider information, which made the board think that he was making his decisions based on better information than the rest. One board member uses the word "blindsided". Elop gave the understanding that Windows Phone was going strongly upward. In reality, looking back, Google benefited, he estimates.

One thing that was considered very brazen was Öistämö's strong support for Windows Phone. MeeGo's difficulties were, in many people's opinion, the achievement of Öistämö. He had led the team for 18 months out of the last two years. Now he had become a turncoat and stood behind Elop.

The board had put forward a proposal, where Windows Phone would be used for the expensive smartphones, and Android for the cheap ones. According to a reliable source, Elop had said that Ballmer would not agree to any special terms, but that Microsoft demanded exclusive rights. The standard agreement for Windows Phone would always be available, but in this case there were billions of euros invested. Microsoft offered so much money in the short term, that the offer was difficult to refuse. When on the other side was Google's zero-offer, the game started to be clear. Google started getting the message that Nokia was going with the competition.

The negotiations should have been confidential, so the Nokians were quite shocked when one of Google's leaders, Vic Gundotra tweeted on February 9:

| @vicgundotra
#feb11 *"Two turkeys do not make an Eagle".*

The date of the hashtag pointed at Nokia's capital markets day, where it was promised that the new strategy would be announced. The hint was easy to understand. "I guess they did not like the decision", Elop commented on the tweet later.

For senior managers in Nokia, the first four months of Elop's leadership were a tough time. One picture of the period was a combination of confusion and self-defense. When survival through organizational changes was uncertain, everyone concentrated on making an impression on their new boss.

Before announcing the decision, Elop invited 200 people underneath the top management level for two days at Windsor, near London. Windows Phone 7 devices were handed out to the group, so that the managers could demonstrate the features to their subordinates. Windows Phone phones were sold out right away in Finland, when lower management started to familiarize themselves with their new area of work.

The board convened for their decisive meeting on February 10, 2011. There was nothing left to decide. The briefings for the morning were already ready or in progress. The board accepted Microsoft Windows Phone 7 smartphone as its only platform unanimously, out of formality. The most serious issue was the promise of Nokia's own platform and development work. The board wanted to avoid the mass layoffs, which would have resulted from choosing Android. The board certainly affirmed that they would be sailing in unknown waters. The brand would get watered down, when they started selling Windows Phone 7 devices instead of Nokia. The atmosphere could be described like this: They would have wanted to make a decision, where they could say, "Wow, now this will really take off." Microsoft gave so much money, but it still felt like they were between a rock and a hard place. Their thoughts went in the direction of hoping that the ecosystem would gradually take off.

The details of the contract are still mostly secret. It is known that Microsoft promised to pay Nokia \$250 million a quarter to support the platform. Microsoft would buy licenses for Nokia's patents and would put money into the marketing of Windows Phone. The sums to be used for marketing or the wishes regarding them were not detailed in the contract. They would be decided case-by-case. Nokia would pay royalties of about 10 euros (\$15) per device to Microsoft for using Windows Phone. There was a minimum sum per year for royalties, which Nokia would be obliged to pay regardless of the sales volumes, and the sum would increase over time. The base fee would be, for a long time, bigger than the minimum royalties. The royalties would start

running only when phones were in sales, so in the beginning, Nokia's cash flow was strongly on the receiving end.

Microsoft would start to use Nokia's maps and navigation platform in all its services, and would benefit from Nokia's relations with network providers and could charge users for its own services together with the phone bills. Nokia would install the Bing search engine on its devices. The revenues from the services would be shared. Nokia would get its own share from the advertisement revenue from Bing searches and from the ads in the maps.

The contract was most likely for at least five years, if not longer. Nokia was not allowed to use competing platforms in its smartphones. The first opportunity to withdraw with a reasonable penalty was probably at the end of 2013.

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Even if time was spent mostly on smartphones in Nokia's strategy planning, the board decided in the same meeting regarding the other parts of the new strategy. There would be two support columns besides Windows Phone.

The name of the first one was "the next billion". Nokia calculated that there were 3.2 billion people still without a mobile phone. The company started approaching these potential customers in Brazil, Russia, India, Indonesia, China, and Africa with its old feature phone platform, which is called S40. Despite the name, it is a separate product from Symbian and S60. They promised internet, full QWERTY keyboards, and partial touch displays in their simple feature phones. Because of the huge sales volumes, S40 was believed to be an attractive platform for Java app developers. For people with no access to the internet, there would be services based on text messages.

MeeGo was put on the back shelf, just in case. The developers would get to launch one product to market. Afterward, they would start to search for and sniff out the next big disruptions. The service portal ovi.com was, in practice, given its farewell. It would join the Windows Phone app store.

Nokia announced that it would restructure its management and organization. Estimates made beforehand were off in that all the Finnish members of the Group Executive Board would keep their positions. New blood was found in-house. The new members were Colin Giles (sales), Rich Green (technology), Jo Harlow (smartphones) and Louise Pentland, who as the person responsible for legal matters, brought patent issues to the Group Executive Board. Because Torres, who was responsible for MeeGo, left the Group Executive Board immediately, the number of members grew to 13.

In the beginning of April, 2011, there were two business units: Smart Devices, which was specialized in smartphones, with Jo Harlow at the lead, and Mobile Phones, with Mary McDowell at the lead. The Markets unit, responsible for product sales, would be led by Niklas Savander and Services would be led in the meanwhile by Tero Ojanperä. Kai Öistämö, who had an important role in the Windows Phone negotiations would be in charge of development.

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When the February 11 finally arrived, Elop made a tweet directed back at Google's Gundotra:

@selop

@cheureux Or this: *Two Bicycle makers, from Dayton Ohio, decided to fly.*

#NokMsft #feb11

The sentence refers to the Wright brothers, the designers of the first working airplane. When Orville Wright lifted off into the air on December 17, 1903, the flight lasted 12 seconds and was 36 meters long. Wilbur Wright flew 259 meters on the same day, and the flight lasted 59 seconds. What was reassuring in Elop's short allegory was that unlike with many pioneers of flight, both brothers survived their test. Wilbur died of typhoid fever at the age of 45, and Orville at the age of 76 of a heart attack while he was fixing the doorbell of his home.

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11. Reactions

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Elop's busy fall and early winter peaked at London's Hotel Intercontinental on February 11, 2011. News about Nokia's selection of the Windows Phone platform had already been released. After introductions, Elop took to the stage wearing a dark grey suit and tie. Watching his speech, one wouldn't have guessed that investors had already voiced their opinion of the strategy—the price of Nokia shares had fallen 14 percent.

Elop started with a short introduction to how mobile phone markets had changed, how the competition between devices had become a war of ecosystems, and how Nokia would be winning that war. Then Elop quoted Winston Churchill:

The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty.

According to Elop the whole technology industry was based on this optimism. He said that he was very thrilled about the partnership between Nokia and Microsoft. Together the two companies would have a chance to change the direction of the war on ecosystems.

Elop then invited Microsoft CEO Steve Ballmer on stage. Ballmer boasted of how the users of Windows Phone were extremely satisfied with the platform and how the number of applications was rapidly increasing. The collaboration with Nokia would boost development of the ecosystem even further. For example, Nokia's map services and superior camera technology would become a key part of the ecosystem.

According to Ballmer, plans for the first Nokia Windows Phone devices were already moving forward, including talks with network providers and chipset vendors.

The duo, former subordinate and boss, went to the middle of the stage for handshake photos. The pair perched on two bar stools to answer questions. One of the first questions was about the schedule; when would the phones come on the market? Elop said that they wouldn't give any estimates of the schedule at that time. However, he assured that Windows Phone would allow Nokia to release phones even faster. The next question asked about changes to the relationships with other phone manufacturers on the Windows Phone ecosystem. Ballmer

answered that Microsoft would continue to collaborate with them. Nokia would get a special status, but no exclusive rights. Elop added that the goal was to ensure the success of the Windows Phone ecosystem. Within that ecosystem Nokia could differentiate as it would enjoy a special status.

Elop said that in collaboration with Microsoft-based phones Nokia would be better positioned to compete in the sub-hundred euro price category than with Google.

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The Nokia press conference was the technology news of the day around the globe. Internet publications started immediately to comment on the announcement.

For most, the first reaction was a shock. Nokia was expected to announce some collaboration with Microsoft, but it was thought to bring Windows Phones on the markets only in a few countries. No one had foreseen that Nokia would go all in with Windows Phone, with no other options.

In the interviews for this book even some major Nokia shareholders expressed their surprise in the choice. They had expected a strategy based on a mix of platforms.

“I expected a multi-platform strategy. MeeGo was a bold move and I expected the company to hold on to it. I saw business potential in Windows, mainly because Nokia had such a large number of enterprise customers”, said one owner.

“Choosing only Windows was an extraordinary strategy choice. None of the financial details, goals, terms and conditions were revealed. This left the investors totally in the dark. That was a strong signal that the terms were still open. It was obvious that this was done in haste”, says another owner.

Even three years later it is still confusing to read the reactions that have now been shared in the public. Journalists and industry outsiders seem to have been most accurate in their forecasts of the things to come.

One of the commenters, C. Enrique Ortiz, editor of a blog called *About Mobility*, stated on a post dated February 11 that Nokia had not correctly identified what the real threats were. The real competitors were Apple with iPhone and the manufacturers of Android phones. The manufacturers—not Google or Android.

“Relationship with Microsoft will help fence off HTC and others just on the Windows Phone front, but that is a tiny front. And if you ask me, this looks like the beginnings of a relationship that may end up in Microsoft absorbing Nokia”, Ortiz estimated.

According to Tero Kuittinen from MKM Partners, Elop had decided to risk the Symbian sales for the rest of the year by moving forward with Windows Phone. “Nokia jumps into the freezing waters with a platform that only has 3% market share”, Kuittinen commented.

Many thought that the combination of Microsoft and Nokia was a no-win situation. “Nokia sold itself for free. Google and Apple laugh on their road to duopoly”, analysed Neil Campling from Aviate Global LLP brokerage.

A developer shared his frustration on Forum Nokia: “Wow, what can I say! Nokia just killed all my interest in developing anything on its platforms ever again.”

“I’m shocked! One of the biggest wins in corporate history for Microsoft. For the first time ever a leading technology brand rejects its own platform for its smallest competitor”, commented Tomi Ahonen, a technology consultant.

Motorola’s reaction was also telling. Nokia’s competitor stated that the partnership was uninteresting, almost a non-event. Alain Mutricy, head of Motorola Mobility, stated that the partnership was a strong indication that Nokia would not be competitive in short term.

But the reaction was not all negative. After the initial shock, some positive comments started to come up. Many thought that the collaboration could still be a win for all parties.

“I’m very excited. Nokia makes excellent devices and Windows Phone 7 is really a great operating system. Toast for the beautiful partnership!

This union is made in heaven”, Gary Marshall from *Techradar* congratulated.

“Strategically a very smart move, both parties win. Why wasn’t this done earlier?” asked Rene Schuster from the network provider O2.

“This deal will lift Nokia back up in the forefront of smartphone manufacturers”, beamed Andrew Harrison for Carphone Warehouse.

The Finnish newspapers made some hilarious interpretations. On one of the tabloids there was a headline that claimed that Elop had said that it was time for Nokia to “*shoot a duck in the head*”. The tabloid further stated that Elop had called this—quite rightly so—a Finnish proverb. The meaning was lost in translation. Elop used the proverb “*to shoot ahead of the duck*”, which was meant as a way to make clear that it was time for Nokia to become more tuned towards sensing and anticipating the changes in mobile industry. The tabloid journalists had never heard the proverb before, and it was thus wrongly translated.

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Stock markets gave the heaviest verdict on the announcement of February 11th. After two days of market activity Nokia had lost 5.7 billion euros (\$8 billion) of its market capitalisation. To give some perspective: Microsoft later bought Nokia’s phone operations for 5.4 billion euros (\$7.5 billion).

The parties most affected by the choice of Windows platform voiced their opinions loud and clear. On the day of the announcement one thousand people marched out of the offices at 2 pm in Tampere, one of the centers of Symbian development (half of the 3,000 people who worked on the site worked on Symbian development). Kalle Kiili, the union spokesperson, told *Finnish News Agency (STT, Suomen Tietotoimisto)* that many people actually used their flexible working hours when leaving the office early. The employees were still very loyal towards Nokia. Kiili hoped for more information and clarity on cost savings and plans to increase efficiency. Even if people demonstrated, the personnel considered Windows to be a better companion than Google, according to Kiili.

The reactions in the MeeGo camp were stronger. In the main development site at Ruoholahti, Helsinki people watched the London event via a webcast. One witness describes the scene:

“Almost everyone went straight to the bars, and didn’t come back to work for days. The best Linux developers started to leave Nokia the following week. Intel was especially quick to make offers.”

Social media was boiling. Joe Wilcox from *Betanews* summarized the feelings: First Tunis. Then Egypt. Now Nokia. There was a storm of protests against the decision across Twitter.

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February 11, 2011 was a Friday. Two days later the yearly mega event Mobile World Congress kicked off in Barcelona. On the press event that Nokia organised on Sunday evening the biggest question was finally voiced publicly. Someone from the audience shouted: “Are you a Trojan horse?” Elop was calm in his reply. He said that he obviously was not a Trojan horse. Nokia had been careful to include the whole leadership team in the strategy development process. Only the Nokia board could make a decision with this big of an impact on the company, he assured.

Elop reminded the audience that even though Nokia would have to pay royalties for using Windows Phone, they would reduce costs on product development. Elop didn’t answer to questions about the size of those savings.

On the third day of the Barcelona event there was a surprise as Elop joined Ballmer on stage during a press conference. Together, they assured the crowd that the ecosystem of Nokia and Microsoft would be the best for all network providers. Elop promised to listen to the service providers who were worried about the power of Apple and Google. Network providers were promised new ways to increase revenues from their own applications and services. The priority of Nokia-Microsoft is to create the best platform for network providers to create value, Ballmer promised.

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Ballmer answered the last question in the London press event. He recounted how he had first talked about the Nokia strategy choices together with Elop in November. Elop had then told him that the decision would be made in only a few months.

“To me that sounded, should I say, fast. And here we are. I think it’s incredible.”

Ballmer is one of the most experienced corporate leaders globally. He has worked in the IT sector, in the fastest moving business his whole career. Still he thought that the Nokia decision making process was exceptionally fast. So fast, in fact, that he commented on it publicly.

In just three months Nokia had made the decision that would seal its destiny. This decision were prepared by a man who had only worked for the company for five months—a CEO who had come from outside the industry.

The question is unavoidable: Had Elop and his team had enough time to see the full picture?

How could they know whether Microsoft had been open and honest? It’s not stupid to leave something unsaid. It’s stupid not to ask. Fixating on making the announcement on the Capital Markets Day in London raises some eyebrows—as if it was more important to make the decision than make it a good one.

An entertaining detail in these Nokia strategy development initiatives is related to numerology. The strategy work that Kallasvuo had ordered from Anssi Vanjoki was known as 10–10–10, as it was to be announced on October 10, 2010. The London capital markets day was on February 11, 2011 as stated before. Europeans commonly write that date as 11.02.2011. This is a palindrome, the same digits regardless from which end you read it.

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12. The great bluff

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One wonders how, in connection to the selection of Nokia's strategy, there was barely any criticism regarding the reasons. Columns, editorials and some analysts explained how Nokia could not differentiate with Android, how it could innovate with Microsoft, how the Nokia-Microsoft ecosystem was the best for network providers and how phones with MeeGo OS would have gotten to the market too late. All like straight from Elop's mouth.

Many people interviewed for this book attack the reasonings of Elop surprisingly vigorously. Impressions vary from "complete bullshit" to "distorted".

In this chapter we will examine the main arguments point by point. The review is partly unfair, since hindsight is always 20/20. Still, it's valid: Argument proven wrong by time is still wrong. The target is to consider the situations at the time of the decision making, rather than from the viewpoint of what has happened since.

Elop's reasonings can be described with three words: A great bluff.

According to the people interviewed, he had immersed himself with everything related to mobile business during the first few months. He knew the platforms, their ecosystems and was excited about the devices all the way to the smallest of details. A good example of this is an interview with a programmer in *Financial Times* who, as a protest, resigned after February 11, 2011. He described a face-to-face meeting with Elop. Exhibiting deep knowledge of the subject, Elop had made many excellent and detailed questions related to both technology and functionality. To have based his decision on wrong information was an impossibility, according to this programmer. Ergo, he was distorting the facts. Conclusions from interviews within and without Nokia are in line with this thinking.

In early 2011 Android, MeeGo and Windows Phone were like three sprinters shoulder to shoulder at the finish line. Anyone could become the winner. All had their pros and cons. Once one had been chosen to be a bit better than the others, it was natural to bend the arguments to support the winner. Some of Elop's arguments were valid. Some were forced to fit the mold. Some were just empty words.

Nokia Could Not Differentiate With Android

This is the argument most used by Elop. According to him, Samsung had taken over Android. Nokia would have become a simple hardware manufacturer, fighting for its existence without proper weapons. The fate of the likes of HTC, LG and SonyEricsson has since validated this argument, according to Elop and Siilasmaa.

The CEO of one European network provider sees it a bit differently. He thinks Nokia itself proved the argument wrong. After the launch of the first and only MeeGo phone, N9—less than half a year after publicizing the Microsoft strategy—Nokia clearly differentiated itself from the competition by industrial design, states this CEO. Anyone who held an N9 or a Lumia phone understood that this was a Nokia, not a Samsung. Nokia would have brought a modern, prize-winning design language to the Google ecosystem, differentiating from the competition before the customer would have even turned on the device.

What gives this argument some additional weight is the fact that, other than Motorola, all the Android manufacturers came from the Far East. Due to the Asian culture emphasizing authority, design there often takes a backseat according to an industry insider. Designers would rather please their superiors than have strong opinions or wild visions and because of this, Nokia would have had an edge. Scandinavian design principles emphasize clear lines and practicality, he says.

Nokia could have also taken full advantage of its brand within the Android world. Taking away the negative aura of Windows Phone and lack of applications affecting the image, Nokia's brand would have helped to overtake Samsung. It would have been able to differentiate.

Nokia had a house full of very capable open-source coders released from MeeGo, ready to create their own UI on top of Android. Nokia maps were better than Google's; the camera functions better than what the competitors had. What more would you have needed?

However, there was a justifiable concern that, with Android, Nokia would be just another hardware manufacturer. That ended up happening regardless.

Former Apple and HP executive Jean-Louis Gassée put it brilliantly. In his mind, Nokia would have brought gorgeous phone designs to Android and by combining ovi.com applications and services with the existing Android offering, people would have said Nokia has joined a

winner. Quite a different image, considering the alternative of binding yourself to a widely hated software giant.

One Nokia board-level executive says Android was never properly studied. It could have been customized way more than was stated by Elop. This executive also notes, rightly so, that there was practically no way to do any customization on top of the Windows Phone user interface. Poignantly, in June 2014—after the phones business was already sold to Microsoft—Nokia published a software called Z Launcher. It was basically Nokia’s own UI and user experience on top of Android. The answer to the question “Why this was done?” was revealing—because it was possible.

MeeGo Phones Would Have Gotten To Market Too Slowly

One interviewee with first-hand knowledge of the matter says this argument is as stupid as it gets. Many people agree. You get as many products out as you have product programs initiated and executed.

Elop adopted this thinking from Kai Öistämö and Jo Harlow. In their communication to Elop at the beginning of January 2011 it stated that “with the current speed”, Nokia would have three MeeGo phones out by the year 2014. No doubt, this was true. But you have to consider the phrase “with the current speed”. In reality, Nokia could have brought MeeGo phones to the market faster and with a broader selection than the Lumia offering.

Why?

We go back to technology. As said before, MeeGo had been implemented on top of two chipsets. Additionally, in the summer of 2010, contact was made with the chipset vendor ST-Ericsson. The target was to develop an inexpensive but powerful foundation for MeeGo. An employee involved in the project is certain that the resulting features and usability would have been on par with Android. That would have meant three chipset vendors for MeeGo. Windows Phone was confined to one chipset, which limited product variety.

The strongest counter-argument to Elop is the N9 phone running the MeeGo OS. It would have been easy to create variants. After all, the

first two Lumia phones were basically the same device with two different housings, based on the N9 chipset.

According to the financial analyst Sami Sarkamies, it's not at all clear whether Windows was chosen objectively. Justifications are hard to verify and arguments changed within six months. Among the wrong assumptions was, for example, the thinking that the MeeGo upgrade release cycle of six months would be too slow compared to Lumia. Also wrong was the assumption that MeeGo would have fewer languages available. According to a MeeGo team member, there would have been 42 languages available from day one. Windows had less.

When talking about MeeGo, what was often forgotten was that it also worked in laptops, vehicle consoles, smartphones and alarm clocks, hence making the ecosystem broader than just phones. MeeGo was compatible with multiple gaming platforms. Also compatible with Android.

Lumia phones, due to the shortcomings of Windows, had a lot more limitations compared to MeeGo. With Windows Phone you could not have as big displays as with Android. It also limited the maximum amount of pixels for the camera. And as you'll find out in the following chapters, only in connection to the new strategy did Nokia find out how half-baked Windows Phone was. According to one estimate, it was a year behind MeeGo. An example: MeeGo was working on a device with a full QWERTY keyboard. Windows Phone still didn't support that.

With MeeGo you would have had a broader selection of phones compared to Lumia. Absolutely. Delivered to the customer at least as fast as Lumia phones. For sure, MeeGo was late. But it's wrong to assume that it would have never gotten ready.

Nokia and Microsoft Have a Special Relationship

If on February 11, 2011, you would have asked Hugh Brogan, a Brit, whether Nokia made a good or a bad deal the answer would have been swift. Bad.

Brogan was an Elop of his time. He had gotten a great proposal from Microsoft in 2001. Windows phones were on their way to the market and Microsoft wanted Brogan's company Sendo to make them. Brogan was excited: Windows for mobile phones, supported by the Microsoft

marketing budget. Phones would be on sale August 2001, exclusively with Sendo. They had a special relationship with Microsoft. Brilliant!

Pretty soon Microsoft announced that the software was not ready yet. To speed things up, Sendo stepped in with implementation and took a loan from Microsoft.

Two weeks before the public launch, Brogan's and Sendo's worlds collapsed. Orange, a mobile network provider, announced a Windows phone made by HTC, a Taiwanese manufacturer. Brogan understood that Microsoft had given HTC all the fixes and additional implementations made by Sendo. According to Brogan, Microsoft had only wanted to bankrupt Sendo and highjack the knowhow that would become their property according to the contracts. Sendo turned to Nokia and started manufacturing Symbian phones, but filed for bankruptcy in 2005.

Not many companies have as bad a reputation as Nokia's new partner had. Microsoft was founded by Bill Gates and Paul Allen in 1975. It claimed its fame by taking over the operating system market for personal computers in the 1980s. MS-DOS, which later evolved into Windows with different versions, became the de facto standard of personal computers. Microsoft went public in 1986, creating three new billionaires and 12,000 millionaires out of its employees. The 1990s was a time of expansion for Microsoft and it has made multiple big acquisitions along the way.

Gates is still the biggest individual shareholder with about five percent ownership. Steve Ballmer, who in January 2000 started as the CEO, is a close second with about four percent of the shares. Ballmer started at Microsoft in 1980 and was the 30th employee to join the company.

When Microsoft's position in the market was close to a monopoly, they took advantage of the status. Forcing Windows OS users to use Microsoft's own internet browser and media player are among the issues that were under government investigation, and there have been accusations, lawsuits, and judgements. Microsoft's disregard of the laws even forced the EU commission to issue a fine for not complying with the EU ruling in a case related to fair competition. Wikipedia has its own page dedicated to critique against Microsoft. They have been

scolded regarding the treatment of sexual minorities, unfair license practices and shady acquisitions.

Following the purchase of Nokia, a list with a headline “In memoriam: A list of Microsoft’s former strategic telecom partners” appeared on the internet. In July, 2006, Steve Ballmer was sitting in front of the press with the CEO of Nortel, Mike Zivirovski, laughing at the iPhone. The two companies were to create business solutions for mobile networks together. Two years later Nortel went bankrupt. LG of South Korea signed a multiyear agreement in 2009 promising to use Windows Phone OS as their primary platform. There was to be 50 different phone models brought to market. They quickly gave up and moved to Android. In the year 2000, Microsoft had made a similar alliance with Ericsson, with similar results.

Microsoft has of course also acted in positive ways at times. When Steve Jobs returned to lead Apple in 1997, the company was in shambles. They were bleeding money, the products were a mishmash and there was no focus. Gates stepped in to help. He invested \$150 million into Apple and the two companies announced a broad partnership program. Microsoft Explorer became the default internet browser for Macintosh; Microsoft Office was made available for Macs and Microsoft promised the development of other programs too. The injection of cash brought peace of mind for Jobs, and the rest is history: In May, 2010, Apple overtook Microsoft when measured by market capitalization. There were of course some alternative motives related to the investment. Microsoft settled some patent disagreements and expanded the market for Microsoft Office. Microsoft has since sold its share of Apple.

At the time of the decision related to Nokia, Microsoft seemed like an untrustworthy and selfish partner. The special relationship promoted by Elop was more a subject of fear than joy. Nokia had no guarantees of this special relationship working out. A bit of number crunching didn’t help. The two companies had equal amount of revenue in 2010, but Microsoft’s profit was 15.2 billion euros (\$20.4 billion) compared to that of 2.3 billion euros (\$3.1 billion) for Nokia. Market capitalization of Nokia was 26 billion euros (\$35), which was 15% of that of Microsoft. Microsoft had 30 billion euros (\$40 billion) of cash in the bank and in the context of Windows, Windows Phone was just a sideshow. There was only one guarantee for the special relationship: Stephen Elop, the person.

What about the earlier cooperations with Microsoft? What could we tell from history?

First, Symbian mobile phones with Microsoft Office support were supposed to come to the market during 2010. Ominous silence surrounded the project. Elop and Öistämö had not been able to make the cooperation work on schedule. Nobody knew this at the time, but Office appeared in Symbian phones for the first time only in April 2012.

With Windows Phone, Nokia Could Innovate

At this point we evoke the help of hindsight. What could Nokia have innovated during the Microsoft cooperation?

Better cameras than the competition? Nope. The monster camera with 42 megapixels was done with Symbian.

Advanced camera and photo applications? Yes. Why not create those within Android?

Wireless charging? Yes. Nokia was the first one to bring to market a properly working version of a phone with wireless charging in Lumia 920. It was based on an industry standard, so competition was quick to catch up. As a sales argument, wireless charging turned out to be a bad one, so Nokia has since moved to providing it as an accessory rather than part of the phone itself.

Location services? Yes. With this, Elop was absolutely on the money. But you could have had your own maps also with Android.

What about other Nokia-specific applications and system updates? These were things already done once with Symbian. Not exactly innovation.

Anything else?

Not really. Innovation was limited to navigation, and those results were provided to end customers free of charge. And yes, it was a differentiating factor.

Former Nokia director Christian Lindholm summed it up well in Digitoday, an online publication, in the summer of 2013. According to

him, the mobile phones industry as a whole was in a state of standstill due to the disappearance of an innovation factory called Nokia. The Android camp was silent, products were selling without much need for new inventions. People we interviewed put it like this: All the innovation done with Microsoft could have been done with Android too.

Nokia-Microsoft is the Best Ecosystem for Network Providers

Considering this statement, Nokia came in at a good time. There was a market for the third ecosystem. Network providers liked Nokia-Microsoft and when Nokia adjusted its operations all the more to their liking, this argument holds water even in hindsight.

Elop had been making his rounds with network providers before choosing Windows Phone and as stated earlier, MeeGo was left without needed support. According to the information coming from sources at the Nokia board level, the attitude towards Windows Phone was similar. A third ecosystem was welcomed, but the network providers were not willing to help it succeed. It was up to Nokia and Microsoft.

Later in this book, we'll find out that many of the international network providers were against Windows Phone from day one. It was seen as starting from too far behind the competition. Scepticism was taking over. The operator billing function touted by Elop had lost its value since Apple and Google had already gotten to the credit card information of the customer. In developing countries where credit cards were not so prevalent, this argument was more valid.

And when it comes to the possibility of network providers having their own sections in the Microsoft application store—it didn't matter. Chances of making money with that were next to nothing.

In hindsight, most network providers agree they were delusional from the start. The third ecosystem was not really needed. Why? We'll get to that later.

Don't get this wrong. Some of the network providers did support, also financially, the birth of a third ecosystem. However, the majority of international network providers, while hoping for Nokia to succeed, didn't consider that believable. Multiple manufacturers had already

tried Windows Phone, it was known but no longer seen as even a decent differentiating factor.

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13. The catastrophe called Symbian

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February 3, 2011 was a wet and rainy day in southern Finland. It was nearly freezing. The steady stream of icy rain was fading away to a drizzle towards the evening. It had been almost four and a half months since Stephen Elop started.

Human resources manager Salla Jämsä remembers well how the employees were invited to the AB cafeteria [12] at Nokia House, and how the email stated that the event was mandatory for all invitees. The cafeteria was closed the whole day, and a stage was built especially for the event on the west side of the lobby. It was nearly one o'clock in the afternoon. Not all of the 5,000 employees working in Nokia House were there, but even so, there didn't seem to be enough oxygen in the air for everyone. The doors were covered by security, and everybody was repeatedly reminded about turning off their cameras—no recording of the event was allowed.

Jämsä remembers the speech clearly. “He started by building on how he's covered all these continents. And spoken with hundreds of people. He seemed to be speaking honestly, but I felt that he was being provocative. That how could things possibly be so bad, all of a sudden. I didn't get the sense that he was putting us down, disparaging our work. He was constantly referring to the market situation.”

Elop gave a serious and straight-faced presentation, according to Jämsä. No tears, no laughter. Very neutral. “When he introduced the parable of the burning platform, I thought he might jump off the stage. I thought, maybe that's why they built the stage. Well, he didn't jump.”

About half an hour later, the speech was over, and so was the event. Jämsä recalls somebody with a good hunch of Elop's plans retorting, I told you so. Otherwise, nobody had a sense of how vast the consequences of such a short event would be. When the internally

published memo on the speech was leaked, an avalanche was set in motion.

The main parts of the memo are as follows. [13]

Hello there,

There is a pertinent story about a man who was working on an oil platform in the North Sea. He woke up one night from a loud explosion, which suddenly set his entire oil platform on fire. In mere moments, he was surrounded by flames. Through the smoke and heat, he barely made his way out of the chaos to the platform's edge. When he looked down over the edge, all he could see were the dark, cold, foreboding Atlantic waters.

As the fire approached him, the man had mere seconds to react. He could stand on the platform, and inevitably be consumed by the burning flames. Or, he could plunge 30 meters in to the freezing waters. The man was standing upon a "burning platform," and he needed to make a choice.

He decided to jump. It was unexpected. In ordinary circumstances, the man would never consider plunging into icy waters. But these were not ordinary times—his platform was on fire. The man survived the fall and the waters. After he was rescued, he noted that a "burning platform" caused a radical change in his behaviour.

We too, are standing on a "burning platform," and we must decide how we are going to change our behaviour.

Over the past few months, I've shared with you what I've heard from our shareholders, operators, developers, suppliers and from you. Today, I'm going to share what I've learned and what I have come to believe.

I have learned that we are standing on a burning platform.

[...] For example, there is intense heat coming from our competitors, more rapidly than we ever expected. Apple disrupted the market by redefining the smartphone and attracting developers to a closed, but very powerful ecosystem.

In 2008, Apple's market share in the \$300+ price range was 25 percent; by 2010 it escalated to 61 percent. They are enjoying a tremendous growth trajectory with a 78 percent earnings growth year over year in Q4 2010. Apple demonstrated that if designed well, consumers would buy a high-priced phone with a great experience and developers would build applications. They changed the game, and today, Apple owns the high-end range.

And then, there is Android. In about two years, Android created a platform that attracts application developers, service providers and hardware manufacturers. Android came in at the high-end, they are now winning the mid-range, and quickly they are going downstream to phones under €100. Google has become a gravitational force, drawing much of the industry's innovation to its core.

Let's not forget about the low-end price range. In 2008, MediaTek supplied complete reference designs for phone chipsets, which enabled manufacturers in the Shenzhen region of China to produce phones at an unbelievable pace. By some accounts, this ecosystem now produces more than one third of the phones sold globally—taking share from us in emerging markets.

While competitors poured flames on our market share, what happened at Nokia? We fell behind, we missed big trends, and we lost time. [...] The first iPhone shipped in 2007, and we still don't have a product that is close to their experience. Android came on the scene just over 2 years ago, and this week they took our leadership position in smartphone volumes. Unbelievable.

We have some brilliant sources of innovation inside Nokia, but we are not bringing it to market fast enough. We thought MeeGo would be a platform

for winning high-end smartphones. However, at this rate, by the end of 2011, we might have only one MeeGo product in the market.

At the midrange, we have Symbian. It has proven to be non-competitive in leading markets like North America. Additionally, Symbian is proving to be an increasingly difficult environment in which to develop to meet the continuously expanding consumer requirements, leading to slowness in product development and also creating a disadvantage when we seek to take advantage of new hardware platforms. [...] Chinese OEMs are cranking out a device much faster than, as one Nokia employee said only partially in jest, “the time that it takes us to polish a PowerPoint presentation.”

[...]

The battle of devices has now become a war of ecosystems, where ecosystems include not only the hardware and software of the device, but developers, applications, ecommerce, advertising, search, social applications, location-based services, unified communications and many other things.

[...]

How did we get to this point? Why did we fall behind when the world around us evolved?

This is what I have been trying to understand. I believe at least some of it has been due to our attitude inside Nokia. We poured gasoline on our own burning platform. I believe we have lacked accountability and leadership to align and direct the company through these disruptive times. We had a series of misses. We haven't been delivering innovation fast enough. We're not collaborating internally.

Nokia, our platform is burning.

We are working on a path forward—a path to rebuild our market leadership. When we share the new strategy on February 11, it will be a huge effort to transform our company. But, I believe that together, we can face the challenges ahead of us. Together, we can choose to define our future.

The burning platform, upon which the man found himself, caused the man to shift his behaviour, and take a bold and brave step into an uncertain future. He was able to tell his story. Now, we have a great opportunity to do the same.

Stephen.

The parable is old and much used. It was created by the change management guru Daryl Conner in his book *Managing at the Speed of Change* in 1992. In 1988, he had been looking for a metaphor for the kind of commitment you need to manage change. The news came on the TV. There had been an accident. The oil-drilling platform Piper Alfa, off the coast of Scotland, had exploded and 167 people had died.

One of the survivors—there were 61—was interviewed at the hospital. They asked Superintendent Andrew Mochan why he took that potentially fatal 100 foot (30 meters) leap into the sea. Without hesitating he answered, “It was either jump or fry.” Conner understood that Mochan had chosen between certain death and probable death. Change managers need to commit to their decisions with similar determination. There is no looking back. Major change needs to be driven through with the force of certain death behind them. No matter how scary the change feels.

This story made its way to Harvard Business School and the McKinsey canon, and took on a life of its own. Consultants use it to describe the severity of the starting situation. The best-known use is from Harvard Professor John P. Kotter’s 8-step process for leading change. The first step is to know there is a need for change, and create a sense of urgency—your platform is on fire. If people believe it is possible to go back to how things were, change will never happen. Actually, creating a sense of emergency on an Elopian scale was not a part of Conner’s original thinking. Conner says that he has learned to live with this—as long as

the situation isn't made out to be worse than it is. Conner has also stated that the situation does not need to be catastrophic to ensure commitment. Today, they say that the burning platform metaphor should be used with caution. Your jump into the sea is motivated by fear and anxiety, that are negative traits in a company culture. The basic rule is: Don't ignite the flames, just notice if they are there.

The pivotal question about Elop's speech is, was the picture he painted about the situation at Nokia accurate, or was it exaggeratedly bad? After the speech, the flames were roaring, in any case—in that sense it doesn't matter whether they were there before the speech or not.

The timing of the speech was extraordinarily dramatic. Elop held his speech a few days before the board meeting where the decision about the future smartphone platform was to be made. Because the CEO had just vilified Nokia's main products, there was no plausible going back. And because the speech fanned the flames aboard the platform to new heights, there was no time to reopen the negotiations with Google. Even though the board had in effect already chosen to go with Windows Phone, in hindsight the CEO played the board for fools and tied their hands. After the Burning Platform speech, switching to Windows Phone was the only choice the board could make.

The board saw the memo as a gross miscalculation. This wasn't the only source of friction between Elop and the board during his first months as CEO. Many board members felt that Elop was making decisions too independently and not keeping the board informed. A CEO does not need to clear internal messages with the board, but in this case the message was too volatile to have been delivered without the input of the board. The chairman Jorma Ollila conveyed a load of bitter feedback to Elop on this score.

What about giving him the boot? Should they have fired Elop? There was no serious conversation on that point. The timing would have been impossible. The new CEO was just turning the course of the ship Nokia, and was the guarantor for the deal with Microsoft. They had started, and were in the middle of, a massive change. Everybody is replaceable, but firing Elop would have led to an unpredictable uproar and great uncertainty about the direction of the company. Switching CEOs would also not un-say the speech. The products had been trashed, and that was that. What's done is done.

There was some support for the speech in the boardroom, too. The company should be aware of the crisis it is in. Also, Ollila defended Elop to outsiders. “The memo was an excellent wakeup call to our personnel. I, too, have used that metaphor”, Ollila said on the financial TV show *A-Plus*, airing on the Finnish TV channel Yle.

A noted expert on corporate governance feels that Ollila was in a key role for whether matters moved forward according to Finnish best practices or not. A controversial speech such as the Burning Platform should have been first approved by the board. As this had apparently not happened, our expert pinpoints the key question to be, whether Elop had consulted Ollila about the speech, or not.

“The chairman of the board is in a crucial role, as he is in charge of implementing the decisions in practice. If Elop had Ollila’s backing for his speech, it can be said to have followed the guidelines of corporate governance, even if the rest of the board was left in the dark.”, our expert evaluates the situation.

There is no certainty on the matter, but it seems as if the speech came as a surprise to Ollila. If that is the case, Elop certainly broke the Finnish guidelines for good governance. That the board made its final decision about the platform as a rubber stamp formality one day before the announcement, was normal according to our expert, but only as long as the process had been conducted with open discussions and good guidance. This had apparently been the case at Nokia.

The board was surprised again a few days later. When the choice of Windows Phone as the platform for smart phones was announced, Elop also let out that Symbian would be dropped after a transition period of a few years. There had been a lot of discussion in the board about how to publish this news. Elop had made clear his opinion, that they should publish the fact that Nokia will be using only one smartphone platform, Windows Phone, in the future. Many others raised the objection that communicating the choice of one platform over others has risks. The network providers might draw some conclusions about the fate of Symbian.

Even people outside the board tried to change Elop’s mind. A person who had seen the draft of the press release told us that they tried to get some changes done. They felt that the role of Symbian living side-by-

side with Windows Phone should have been played up. There should have been a strong message of how Symbian will be developed further and that it will continue to be competitive while the other platform is being driven in. The crucial message, according to our source, was that the platforms were to co-exist, that a continuum was being built, with complementing parts.

When the shutdown of Symbian was finally reported, part of the board was surprised at how it was done. A person involved tells us that there had been an intense exchange about the contents of the press conference. The drafts that he saw had no mention of the shutdown of Symbian, or the goal of selling 150 million more Symbian devices. “The final call about how the message would be communicated, was probably made by Stephen alone”, was his judgement as an insider.

The situation was infernal. Elop had vilified the current Nokia offering. Almost in the same breath, he had reported that they would be driven down, but that no replacement models were yet forthcoming. According to Salla Jämsä, the personnel realized within a few weeks, that a horrible error had been made in their corporate communications. Symbian was done for. Panic did not set in, according to her, but disappointment and depression became the reigning emotions. A quiet grief, a very Finnish reaction. “In some other country, there might have been riots. On the other hand, everyone had believed that we had to take on an outsider. That no Finn, say Vanjoki, could’ve done that, when they’d have so much heart in it. We did think that this solution was the only possible one.”

The sales team realized they’d run up against the challenge of their lives. They had to sell 150 million outdated phones. The number caused some raised eyebrows, as the forecasts of devices to be sold had been reasonably accurate before. The responsible department had perhaps been blinded. The numbers had perhaps been crunched based on the old, growth period methods, even though the market share had been dwindling rapidly. A new theory started to take over: Perhaps it wasn’t a forecast, so much as a goal. When you tell a salesman to sell a hundred phones, he’ll do his best to sell a hundred phones. If you tell him, sell 150 phones, he’ll try even harder. This is what was guessed to be Elop’s logic.

The company tried to soothe those who doubted them. Jo Harlow, in charge of the Smartphones unit, opined that consumers don't really follow the news. Change would be slow. Decisions would be made based on what's available in the store.

Harlow hit the nail on its head, but it was the wrong nail. Retailers make the call on who's king in the stores. And they stopped buying Symbian. The CEO of a European network provider describes how Nokia salespeople came around a few weeks after the speech, and tried to convince them that business would continue as usual.

"We wondered, what bush these guys have stuck their heads in. Elop's mistake was completely obvious and ate billions of euros from Nokia. Nobody wanted Symbian phones anymore", the CEO said.

Another director of a European telecoms network provider described meeting a Nokia sales team a few days after Elop's speech. "They looked completely lost. I've never been in such a horrible meeting. Some were late, some may be hung over. They showed the new models unveiled at the congress, but joked about whether they were any good. They didn't even try to hide their disappointment. I said, we'd better just go, that's how bad it was", the director told us. "All of the network providers had large purchase commitments and the plans were laid based on them. The commitments were immediately opened for re-negotiation. That we're not going to buy these, even though we did commit to buying. Everybody backed out, which of course destroyed the revenues."

A well-known stock analyst told us of several discussions he had during that spring with various sales managers from Nokia. They described their emotions as deep shock. Symbian died within a week due to the top global network providers getting scared. Any normal CEO would have said that the company will continue to back Symbian heavily, that it will be a part of the low-end range of devices, that we have a host of wonderful plans for Symbian. The normal sales pitch, that nobody necessarily believes, but that is a mandatory part of business as usual.

The leadership did what they could. Elop gave his assurance that investments would continue, and that the phone upgrades would be available up until 2016. In April, the new version of the platform, called Symbian Anna, was released, in addition to two new phone

models. In August, the struggle continued. The platform's new Belle version was released, without the word Symbian in its name. Finally, the platform started to look like it should have looked years ago. There were three new phone models, too. After the network providers withdrew their orders, the sales team started focusing on business clients. The story was that businesses would prefer to stay with their old systems, as long as Nokia kept up the support for updates.

Time passed Nokia by, in any case. In January–March 2011, the Nokia market share in smartphones dropped by 5 percentage points to 27.7%. In the final quarter of that year, when the first Lumia device came on the market, the Symbian share in smartphones was 11.7%. It took only a year for the market leader to drop to third place in market share. The Android market share had jumped to 50.9 percent.

Nokia's own actions played a part in the dramatic drop. A well-known stock analyst's evaluation of the situation was, "Symbian wasn't given a fighting chance to keep up sales, because they made only a few different devices on it. In a way, they were trying to force Nokia enthusiasts to wait for the Windows phones".

In April 2011, Nokia announced that they were letting 4,000 people go and at the same outsourcing the development and maintenance of the Symbian platform to Accenture. 2,800 people would move to Accenture. Harlow used flowery language in describing their reasoning. According to her, the collaboration served to demonstrate "our ongoing investment to serve our Symbian customers" and "also shows our commitment to provide our Symbian employees with potential new career opportunities".

Accenture and Nokia described how they would chart the possibilities for training and new career opportunities for the employees. In June 2011 the transfer size was still estimated at 2,800 people. In the end, the transfer included 2,300 employees, 1,200 of which worked in Finland. The rest had found other positions within Nokia or had resigned. Four months after starting the work, Accenture confirmed that they would wish to let go a large amount of the former Nokians. They were offered voluntary severance packages. A package could amount to 15 months of pay.

The Union of Professional Engineers in Finland was quick to find fault with the outsourcing deal. It was thought that Nokia had transferred their social responsibilities to Accenture. In June 2012 the union estimated that about half of the employees transferred to Accenture had left. The consulting firm, according to the union, treated its employees unfairly and was pressuring them to accept worse terms for their work contracts. At the same time Accenture was looking for new employees and bragging about how much work they had available. The union described the situation as oddly strange.

In October 2012, Accenture announced that they were firing over 300 employees and that they were re-evaluating the future of their Oulu office. Pertti Porokari from the Union of Professional Engineers in Finland wondered whether Nokia hadn't just outsourced the firing of these employees to Accenture. A few months later, the Oulu office was doomed. 275 people were fired, and 46 were sent on unpaid leave. The remnants of Nokians were slowly weeded out, and Accenture has announced layoffs afterward, too.

A source outside of Accenture believed that the company had tarnished their reputation against their will. They were in earnest, and truly believed they'd have work for these engineers. Nokia had promised them contracts on Symbian and also Windows Phone, and the IT industry was constantly calling for more employees. Accenture was banking on getting high-performing resources for their own massive IT projects, too. Symbian engineers would be used to the appropriate tools, and would be reasonably suited to the upcoming projects. So as the need for Symbian resources would dwindle, people would move to other tasks, and also naturally some employees would leave of their own accord or retire.

The cost of the Nokia-Accenture deal was never published. The Finnish branch of Accenture doubled their turnover in 2012 to half a billion euros (\$670 million), and more than doubled their profit to 15.5 million euros (\$20 million). In the following year, their turnover shrank by several dozen percent. The deal with Nokia had taken several scenarios into consideration, so it was never renegotiated.

The impact on Accenture's income remains unclear, because as a multinational corporation they transfer gains between countries.

After the Lumias hit the stores, Nokia continued to struggle ahead with the Symbian line-up. The results were depressing. In February 2012, the market share of Symbian was 8.7 percent. By the end of the year, it was 1.2 percent. Nokia's blindness to what people were looking for at the time can be seen for instance in the release of the Nokia 700 in August 2011. They marketed it as the smallest device ever released with a full touch screen. Only a few months later, Samsung came out with the huge screened Samsung Note and was pushing Galaxy models with ever increasing screen sizes.

Nokia's old work horse was able to leave the stage with style. The last Symbian model was the Nokia 808 PureView, that had a 41-megapixel camera.

Immediately, the device was dubbed 'the monster camera phone'. Engineers Eero Salmelin and Juha Alakarhu had been working on it for five years. The device revolutionized imaging technology. With a massive number of pixels, you could digitally zoom the image without loss in image quality. The resolution of the images was shocking. To keep the file size of the pictures reasonable, the camera combined pixels, further improving picture quality.

The device was a sensation when it was launched at the Barcelona Mobile World Congress in February 2011, and was rewarded as the best new release of the congress.

Why put the monster camera on a Symbian device?

The PureView had a chipset selected by Nokia, a Nokia-built sensor for taking photos, and Nokia's own software, that couldn't be just embedded in a Windows Phone. Microsoft did start thinking of the required changes immediately after the cooperation was announced, but the amount of work needed turned out to be greater than anticipated. Nokia decided to release the PureView first on a Symbian phone to create positive hype for future devices. They succeeded: Nokia was making headlines across the world, and in a positive light for a change.

The last Symbian phones left Nokia factories in the summer of 2013.

The goal of 150 million devices sold was not met. The real number ended up as just under 100 million. Now, Symbian is dead and buried.

Stores have no Symbian devices on their shelves, and Nokia has not accepted new Symbian apps in their app store since the beginning of 2014. Any existing Symbian apps may not be updated.

For Salla Jämsä, the effects of Elop's speech became concrete quickly. She moved to a new position supporting the people being laid off. In the fall of 2011 Jämsä knew that her time at Nokia was coming to an end. There would have been work to do in HR, but she was rapidly losing interest. In September 2012, she made her decision: She would leave Nokia to start her own business by making use of the support Nokia was offering to departing employees proposing to start new companies, and is now a partner at the executive search company Transearch.

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Our interviewees told us how they had often wondered why Elop made this mistake. Some think that he was naïve enough to believe the speech would remain a secret. Others think he leaked it on purpose.

The former is hard to believe. From a company the size of Nokia, soured by bitterness due to layoffs, the memo was inevitably leaked. Elop could not be stupid enough to imagine that it would stay internal, and it didn't seem as if there was any serious attempt to keep it internal, either. Even though employees were forbidden to record the speech, one Nokian described seeing a video of the speech where someone in the front row was obviously videoing the speech on their mobile. Obviously, the ban was not enforced.

The most likely explanations center around inexperience. Elop's work history was from sales of enterprise devices and software. Business-to-business sales have long cycles. Clients can be told that we are working on a new product that will be ready in a year or two. Network business works like that. In consumer businesses, the buyer needs to be convinced of the superiority of the product every day. Elop underestimated or was completely unaware of the strength of consumer rejection of a product.

"I ran into the speech first in an online discussion, and assumed it was a hoax. I thought it couldn't be true", recounts a representative of a major shareholder of Nokia.

An often-recounted explanation of the Burning Platform is Microsoft. According to that theory, Microsoft forced Nokia to reveal the full extent of the cooperation immediately, so that Windows Phone would fix its reputation. The wildest speculations suggest that Nokia got a promise of payment for this. We've not received any confirmation to these rumors, but neither do we have information that would discount them. Some offer the explanation that Nokia needed to get their Symbian expenses down quickly. Elop might also have wanted to disperse a Symbian clique within Nokia, that would have been resisting renewal.

The best guess is likely the simplest, though. Elop wanted to push for speed. He was forcing decisions forward with his characteristic need for progress toward a goal rather than stopping to consider barriers or consequences. Elop himself defended his speech in the spring of 2012. The transformation caused by the new strategy was huge, and would touch thousands of employees. It had to be published with a bang, as the story would have leaked in any case, when job descriptions started changing. He said that he had understood that there was no other option than a rapid change of course. The personnel needed to understand the depth of the crisis.

The speech also reflected Elop's goal to open the culture of Nokia. He wanted to tell it like it is. He has wondered whether the breadth of the publicity caused by his speech wasn't due to this. For once, a leader of a corporation was brave enough to speak without the gloss of marketing speak. For many, the speech was proof that Elop was able to look at things as they are, and was ready to make drastic changes. Some feel that the memo was proof that Elop was the right man to save Nokia from the sea.

"The message really hit home for me. I thought, now we finally have a clear direction, and finally a leader, that takes responsibility for the whole mess.", recalls a former salesman.

One developer working in R&D describes having been thrilled after reading the memo on the intranet. "The text was absolutely spot on. Only after my buddy, at the coffee table, pointed out the possibility of the memo leaking to the press, I realized the risk. My guess is that Elop didn't realize that the memo might spread outside the company. He

told us, in this other event, how he always believed the best of everyone. I think he just trusted people too much.”

The same goes, according to this developer, for an internal video where Elop was showing off the first Lumia phone. Only after that, too, was leaked, did Elop stop telling the employees about new things.

A member of the board doesn't agree. He believes that Elop leaked the speech on purpose. The board had gone over the basic elements of the speech, and agreed on the analysis of the situation. He didn't think it was naïve to suppose the speech would stay internal. Any leaks from Nokia were usually about new phone models. The culture was to have discussions with the personnel on even the most sensitive issues. Based on this, he finds it to be unlikely that the Burning Platform memo had been leaked against Elop's will.

The majority of the speech was undeniably true, and the memo was only one factor in the Symbian catastrophe. This point of view is supported by looking at the relative changes in market share. The memo's effects can be seen only in the numbers of April–June 2011. The market share dropped by 33% (so not percentage points) during that period. Before that, the share had been dropping by about 15 percent per quarter. By the last two quarters of 2012, the percentage drop had gone back to usual, at first 13% and then 7%.

Most of the analysts and Nokia's highest leadership still agree. The Burning Platform was a huge mistake. It would have been possible to reveal the shutdown of Symbian once there was an option on the market, when the Lumia phones were already available in stores. The speech and information released on the Capital Markets Day removed all possibility for a reasonable transition period. Nearing on the grotesque, in July 2013, the European Association of Communication Directors (EACD) gave Elop the European Communication Award for “outstanding communications achievements on a European level”. The argument was that Stephen Elop is recognized for his direct and transparent communication style, and the proof was the Burning Platform memo.

In 2011, that award was in the unforeseeable future, and cut no ice with anyone, but everyone in Finland knew what the Burning Platform

had achieved: The Lumias were needed fast. And they needed to be good.

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[12] The Nokia headquarters campus in the Keilaniemi district of Espoo, known as Nokia House at the time, comprises three buildings, called AB, CD and FG.

[13] The full Burning Platform memo that was initially released on the Nokia intranet, was soon published by multiple sources, including Engagdget.

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14. The MeeGo swansong

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Superlatives were abound even though many knew that the device was going to be the one and only MeeGo phone from Nokia. The Nokia N9, introduced in June 2011, did raise expectations on a completely new level.

“I have not been as impressed with any new Nokia product over the last five years”, says a well-known analyst.

Relief was the general feeling after the introduction. Despite all its problems, Nokia was still capable of creating competitive devices. So elegant that one could imagine the new phone competing against the iPhone. The design was a triumph of Marko Ahtisaari who was the design chief at Nokia. Ahtisaari had started as head of product design in 2009 and employees felt that he had introduced a new spirit in the design work. Being a Finn, Ahtisaari knew the Nokia organization and could communicate efficiently across the organization and inside his own team, so design aspirations by the design team were now more often implemented than in the past. The design team had also sensed Elop’s arrival, although the N9 design had been born before he arrived. Nokia of the Kallasvuori times had been focusing on internet and

navigation services design, and now with Elop in charge the focus of the design work and brand building was back on phones.

Many feel that the N9 is the most beautiful Nokia phone ever made, and the general impression was that it completely renewed the what and how a Nokia device looked and felt.

The design work for the N9 started for the first time from the user experience instead of the technical specifications. Earlier Nokia had been developing new phones based on engineering and technical capabilities. In the end the design had been added on top of the technology. The goal with MeeGo was to revise this way of working since Nokia knew it absolutely had to differentiate from its competitors. There was almost an infinite number of black touchscreen smartphones on the market.

A senior design leader in Finland judges this as a success. The beautiful design language was emphasized by the sharp edges and the harmonious aspect ratio of the device. The N9 felt good in one's hand because of the design elegance, device proportions, and finishing details. It felt like the first-time holder's own phone. The design leader especially appreciates the color design choices. The device cover was colored-through polycarbonate, available in black but also in the more radical cyan and magenta.

The color design was influenced also by non-aesthetic reasons. The design language and color selection of the N9 was difficult to copy in large volumes. The phone body was milled from a single piece of polycarbonate instead of being assembled in the traditional way from separate front and back covers. This allowed Nokia to make the N9 into such a solid and finished-looking device, and thinner too.

The wow effect at the introduction was emphasized by the lack of any leaks before the introduction. A member of the project team describes how all internal test users had to report their test phones' visible identification codes into an internal system that would have allowed Nokia to match any possible leaked images with the test phone users. This very rigorous discipline was dictated top-down after Elop had outlined the urge to shorten the time between the new phones' announcement and general availability.

A director who had worked at Nokia praised Elop for changing the company's engineering-driven mindset and raising design questions to the executive board level. Previously, the user experience had been compromised by technology issues. All possible technical features had been added to new phone models no matter if they were needed or not. In comparison, a design-led company such as Apple had always understood the importance of user experience and the slim and stylish design.

Later, the N9 design language was copied to Lumia phones across the board. Nokia wanted both the inexpensive and premium Lumia models to carry a unified design language to raise consumers' interest to go and try a new and unfamiliar mobile operating system.

But what about the software? At the end it was also about the software. Was MeeGo better than Android? Would it have had a chance to beat the Windows Phone?

At least the N9 software was promising. N9 was a pure touchscreen device since there were no physical keys on the front face at all. It was all about swiping with your finger. When you swiped your finger across the edge of the screen you moved from an application to the desktop. Applications running in the device were visible on one desktop as open windows and this made it easier to switch from one application to another. One of the three desktops was reserved for social media and messaging with contacts. Good ideas and innovations were plentiful in MeeGo.

The software was also robust. It did not crash or hang like Symbian did at the end.

Reception towards the N9 and MeeGo was still contradictory. It took time to learn how to use the phone. One could pick up a new iPhone and start to use it immediately. MeeGo was not this intuitive, normally people do not just start swiping with their fingers across the screen. Was the learning curve short enough or too long; opinions were floating around. Some felt that MeeGo was more complicated for novice users than what the Windows Phone was. One analyst's verdict summarized the N9 by stating that it will only interest a narrow niche segment.

Enthusiasts were committed, however: This would have been the right baseline for the future smartphones of Nokia.

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The history of N9 illustrates the decision-making vacuum at Nokia before Elop came in. The device was created relatively fast after Elop had announced that the one MeeGo device project will be completed. Developers belonging to the project said that the back-and-forth stopped immediately now that there was a clear goal with the work.

MeeGo had been suffering from an unclear direction setting inside Nokia for several years. This was because of the internal power play with the Symbian team and delays caused by personnel changes. One member of the Nokia Group Executive Board said that MeeGo was a “terribly great project but it was contaminated with Symbian, the old way of working was injected into MeeGo.” The developers had been sidetracked and more people had been added to the project. A better option would have been to continue with a smaller development team because it was known to be the best way to create something new. The Nokia executive thinks that the worst mistake was made in 2008 when Symbian and MeeGo were put in the same organization and a gigantic Devices and Services unit was formed. From the Kallasvuo times there were multiple overlapping user interface development projects at Nokia. Similar solutions had been under development both in the Enterprise unit working on business phones and in the Multimedia unit working on other expensive phones.

The MeeGo user interface development began from high-flying theories that tried to model human behavior, different personalities and society, and connections between these. The goal was to support natural human behavioral patterns instead of forcing people to comply with the technology. The original plan was to develop just one top-notch MeeGo smartphone that would then be renewed annually just like Apple was doing with the iPhone. The result was disappointing; the user interface was very complicated and it was seen to resemble Symbian.

In late 2009 when Ahtisaari had started as the new head of design the developers were told that the new leaders did not understand the high-flying concept so it was scrapped. Simplicity became the new mantra. The new MeeGo home view was a simple launchpad and the

application user interfaces were simplified forcefully. The end result was yet another disappointment. It was seen to be too much like the main competitors Android and iOS. Faith in MeeGo's competitiveness was eroding and people felt that Linux and open source would not be relevant sales arguments towards consumers.

A breakthrough was made in August 2010. The new concept idea was based on swiping gestures and a working prototype was built in a couple of days. Starting from the first conceptual images people started to believe they have a winning formula in their hands. The only thing missing was to build the product and get it in the hands of consumers as fast as possible. At the same time Anssi Vanjoki was building his strategy and MeeGo was in a key role. In the Vanjoki vision MeeGo would become the flagship of the new Nokia. There was strong faith in MeeGo among the Nokia leadership, and this was amplified by a media event in August in Oulu, Finland. Rich Green, the Nokia CTO, and an executive from Intel were prominently demonstrating the fruits of the MeeGo collaboration to media representatives.

However, a major mistake had been made at Nokia. It still remains unclear who did it and why. It had to do with the previously mentioned collaboration with Intel. The new operating system needed strong ecosystem partners across the industry. In addition, Nokia wanted to steer the microprocessor hardware technology development because the archrival Samsung had that expertise in-house, and Nokia felt this to be a key competitive advantage. Despite Intel's power management problems inherited from the PC world, Nokia's technologists felt that those can be resolved. One person later commented that Intel had been really anxious to start the collaboration. Of their competitors Texas Instruments was in a worse condition and negotiations with Qualcomm were not progressing. Therefore Intel.

There was a dramatic handicap in the Intel chipset, however. The new LTE (long-term evolution) cellular technology was growing rapidly in the US and the Intel chips did not yet support the technology. LTE was one of the 4th-generation cellular technologies, commonly known as 4G. 4G and LTE allow faster communication speeds and thus offer a better internet experience when mobile.

This delay and the lack of 4G were derailing MeeGo. Nokia had initially chosen to use the Texas Instruments' chipset in MeeGo and that was

getting outdated while competitors were starting to use the next generation chipsets from Qualcomm. Intel was also lacking an inexpensive technical platform to compete against the cheap Android devices.

When Elop came to Nokia he was told that Intel was a difficult partner to deal with. He did not believe in MeeGo despite the pressure from the Intel side so he made the well-known decision, backed by the concerns from the network providers and from the unclarities looming around the MeeGo ecosystem. The N9 would become the MeeGo swansong, no matter how great the product or the user interface would be.

Who was then behind the Intel collaboration decision? There's two views into this. Some say it was Alberto Torres, the person responsible for MeeGo in the Nokia Group Executive Board. Some say the most active person was Kai Öistämö, backed by Anssi Vanjoki. The ones who were opposing the collaboration were arguing that Nokia would have to pay an immense price in the form of slower progress in MeeGo. Olli-Pekka Kallasvuo landed in the pro-Intel camp because he wanted to tell the world good news of MeeGo's progress. It was felt that MeeGo got more credibility when Intel was backing it.

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When the N9 was introduced in the Nokia headquarters on June 21, 2011, many felt that the phone had already been aborted. The abortion had been done in the sales channel. Nokia was in a financial crisis and there was no marketing budget for the phone. The phone was practically denied any chance of success.

The first N9 phones arrived in the stores in October. Because the plan was to start selling the first Lumia phones in a month or two, the role of the N9 was to fill this gap. The first Lumias were reserved for the most important customers and biggest network providers so the N9 was then the offering for the remaining customers. The N9 and the first Lumia phones were sold in different countries because the first Lumias supported only 30 languages. As one example, there was no Russian language support in the Lumias, so Nokia was selling the N9 in Russia. Also Finland—the most loyal Nokia market—was selling the N9 first. The strategy to sell the phones in different countries was a planned one so that consumers would not be able to compare the phones next to

each other. Also the marketing and communication were different. The Lumias were promoted in all possible means and the N9 was practically muted.

It had been only in the beginning of February 2011 when Ramon T. Llamas, the analyst from IDC had suggested that Nokia should start selling the MeeGo smartphones on the most important smartphone market in the world, in the US.

The N9 became an awkward pain point to Elop. Critics liked the phone but Nokia could not promote it because there was a fear that it would dilute the success of the Lumia phones. It looked like the success of the N9 came as a surprise to Elop. It would have been difficult to imagine how consumers would be interested in a device that was a dead end with a limited supply of applications. When Elop had been asked in London why anyone would buy the first and the last MeeGo phone, the man with a flu had responded: “I guess you just answered your own question.”

Why did Elop then launch the N9? There are probably two reasons. First there was a need to fill the gap caused by the Lumias becoming available only later, and possibly also the agreements with Intel may have required Nokia to complete one product. There could have been also some more human rationale. He wanted to reward the MeeGo team who had been working on the platform and product for years. Some say that the plan was to show how bad MeeGo was compared to Lumia but this speculation can easily be dismissed. One director who worked in MeeGo believes that Elop wanted to keep MeeGo alive also to retain the best talent working for Nokia instead of them fleeing right away to competitors to work on similar products.

In the light of MeeGo's pre-defined destiny it was actually selling decently. With very low marketing effort it was sold in the 2nd tier countries with a couple of million units. People who purchased the N9 were more like open source enthusiasts or technology lovers than average consumers. The first Lumias were obviously to sell much better.

Certain markets like the Baltic countries used the N9 to replace missing Lumias in the marketing campaigns on the fly. When the local Nokia teams realized that they won't get the Lumia phones in 2011 as promised but only in the beginning of 2012, marketing messages

towards the local network providers were changed from the promise of the Windows dreamworld to MeeGo and the “future disruption” that was the N9 slogan.

In Finland the N9 managed to create quite a frenzy. This was about technological and business patriotism and joy of Nokia launching a modern and competitive smartphone after a long time. Also outside Finland many said that the N9 was the best phone Nokia had ever created. Sami Aavikko, an executive of the Finnish network provider DNA, said that there was a “noticeable fuss” around the N9. He further continued that in case Nokia had decided to continue with MeeGo and invest in its marketing and further development, the smartphone world could be different now.

Robin Lindahl was responsible of Nokia’s global network provider sales. He said that network providers were interested in taking the MeeGo phone in their smartphone range without real evidence of the potential of the new platform. The N9 got rave reviews from partners all over the world, including India and China. Network providers still trusted Nokia and believed that a third smartphone ecosystem could be built around MeeGo. Linux inside was intriguing and the design and features of the phone were competitive. The interest towards MeeGo on the network providers’ side did fall flat after the Windows Phone strategy was announced, however. Some network providers did take the N9 in their stores but only because the product was of high quality and there was demand for it. Even in Finland the fuss around the phone faded away when people realized it would be the only MeeGo phone. For the average consumer the transition from one operating system to another is a big change that requires a lot of learning.

Retrospectively it is always easy to state what the chosen path should have been. Based on what it possessed, MeeGo would have had the capabilities to re-initiate growth at Nokia—this is what we heard from tens of ex-Nokians who worked with MeeGo and also partners such as network providers. The most obvious proof point is the enthusiasm the N9 was received with; it was greeted with more positivism in the industry and by opinion leaders than the Lumia phones. The design was new and the open operating system was new, and the operating system seemed to be more approachable to developers than what Symbian had been or what Windows would become.

“Nokia should have played the MeeGo card to the end”, says an earlier MeeGo director. “It was typical at Nokia to keep on executing one strategy at a time, first Symbian, then Windows Phone. Therefore MeeGo was never considered a truly viable alternative.”

The MeeGo director says that the overall investment in MeeGo was so small in the Nokia scale that Elop did not shut down the operation because of money. The ramp-down was strategic by nature. In the eyes of Microsoft, MeeGo was impossible also because of the Intel partnership. It was not acceptable for Nokia to engage in a strategic collaboration with another large technology player. The director believes that MeeGo was portrayed to Elop in the maximum negative manner.

According to a manager who worked in MeeGo, Elop was given false information of the scalability capabilities of MeeGo. One example of the false information was that MeeGo would not have been able to deliver as many different phone variants as the network providers were requesting. The manager pointed out that the schedule estimates for new model introductions were skewed because of the Symbian history. It was far slower to further develop Symbian than what the situation was with MeeGo, he continues. Also the MeeGo director feels certain that MeeGo would have been scalable enough to power as many phone models as Windows. This was not about the development team, he believes; given the standard Nokia impossible mission with triple marketing budget and one year to go, they would have tried at least.

According to another MeeGo Director, Jussi Hurmola, no roadblocks had been identified to stop MeeGo, if Nokia had decided to invest in MeeGo and reform itself around the new strategy.

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The MeeGo partner ecosystem came to a halt after the Nokia announcement to switch to Windows. Developers, other device manufacturers, network providers and media content producers fled away. The ex-MeeGo team from Nokia established a new smartphone and software company called Jolla.

A director who worked for MeeGo feels that there would have been markets for MeeGo phones. As an example, he believes that some

Chinese network provider would have been eager to distribute MeeGo phones when given exclusivity. Network providers were very favorable towards Nokia due to the long and mutually beneficial business history.

The Nokia plan was to make MeeGo the primary smartphone platform of the company by 2013 and consequently use Symbian in some lower price point devices, says a former MeeGo manager. However, Nokia's own Asha device range and the sub-100 euro Android phones did fill that market segment. The manager points out that Symbian was sequentially renewed over the course of several years to build enough time for MeeGo to get mature enough. Time ran out, however. Elop as the new CEO did not see enough business potential in MeeGo especially when no single network provider was willing to market it as a flagship product. Launching the N9 was an expensive exercise for those network providers who decided to range it. When a network provider decides to invest in the marketing a phone with a new operating system, with the relevant productization and technical adaptations in its network, it is expecting continuity in the product range.

Carolina Milanesi is an analyst who has been following Nokia for several years. She believes the crucial mistake at Nokia was to cling to Symbian for too long. The end result could have been different if the Symbian ramp-down had begun in already early 2010 and all development and marketing investment shifted to MeeGo. She believes that through this development the MeeGo ecosystem could have had a critical mass of applications in 2011. Many people who were interviewed for the book reminded that MeeGo could have come also with Android application support—even the later Jolla incarnation of MeeGo has been able to run Android applications. MeeGo with Android compatibility would have tackled the big problem Nokia was facing: Too few applications.

A person in the MeeGo middle management believes that the momentum of the N9 was so strong that Nokia should have doubled the MeeGo marketing budget and should have forgotten Windows. Jukka Taskinen, an ex-Nokia person said that the N9 was deprived of high-volume sales success because the product was not marketed on big markets like Germany and the U.K. Taskinen believes that the N9 was deliberately kept out from the most important countries because it would have had outshined the Lumia 800. A member of the Nokia Group Executive Board feels that bringing the N9 to the markets in the

winter of 2010 would have been a good choice for Nokia. An analyst who had been following Nokia for a long time can see no rational reasons behind the MeeGo killing. Nokia's research and development budget was so big when Elop started that the MeeGo investment could have had a chance to continue. The analyst is further pointing out that MeeGo was a "cult success": It had its enthusiastic group of followers. A manager who worked for MeeGo believes that the common technology platform would have eased component availability that had been a problem at Nokia: "With another device manufacturer, MeeGo would have had a completely different success. A big reason behind the growth of Android is that it is being built on top of a reference hardware platform. Practically all hardware vendors supplying cameras, displays, and other components are part of the Android ecosystem. They work by default for Android. And when you have a well-tested Android operating system, it becomes very easy to build a phone. The same could have happened to MeeGo."

Not everyone was a believer, though. Ross Rubin, the analyst, said that it would have been difficult and immensely expensive to build the MeeGo ecosystem. As a proof he points out Hewlett-Packard and Blackberry who went through very difficult times when building their ecosystems. Most of the people interviewed for this book said that the reason to kill MeeGo was that it would not have been possible to build a compelling ecosystem that could have competed against Android and iOS, in a reasonable amount of time. Enthusiastic developers and consumers did exist, but they were not enough.

One person reported Elop being very nervous when he met with the MeeGo team to articulate the reasoning why he had decided to stop the project. Elop was a fluent speaker as usual but his voice was trembling—maybe he knew that the technical argumentation would not work with this audience. The MeeGo team did not embarrass the CEO, however. With stoic calmness they listened to the information sharing.

To Intel it was a bitter loss to realize that Nokia would bail out of MeeGo. In November 2011 Director Patrick Bliemer spoke about the disappointment in an interview and said that Intel would continue to further evolve MeeGo into Tizen with Samsung.

The MeeGo developers at Nokia were relatively optimistic after the N9 swansong. Some were transferring to work on Meltemi (see chapter

15) and others were expecting to find new jobs outside Nokia. Competitors had hired the best experts right away after the Windows strategy had been communicated. In May Intel announced they will establish R&D centers in Espoo and Tampere in Finland. Intel was recruiting MeeGo experts with full speed. The Ministry of Economic Affairs and Employment in Finland was anticipating that Intel would be hiring hundreds of developers. That was obviously not going to compensate for the 1400 soon to be unemployed Symbian and MeeGo developers Nokia was planning to expel.

In addition to the mass layoffs planned at Nokia there were about 2,000 software engineers to be expelled from subcontractor companies who had worked for Nokia. One of these companies was Ixonos.

In May 2011 there was a nervous man sitting in an office in Herttoniemi, a suburb in Eastern Helsinki. Kari Happonen, the CEO of Ixonos, looked like the last couple of months had been a rocky ride. Nokia had been the largest single customer of Ixonos. Statutory negotiations were ongoing and the estimated layoffs would affect about 100 people. Ixonos had 1200 employees in total and 800 of these were in Finland. Ixonos had already been ramping down some work and the company now had empty office facilities. Happonen did not expect Microsoft to invest in developing the ex-Nokia ecosystem in the same way Nokia had done. In Eastern Finland a software engineering company called Weego had been optimized to serve the needs of Nokia MeeGo. 80 percent of the company employees were working in Nokia projects. Some of the Weego people were even working in Nokia premises. The CEO of Weego, Pasi Ollikainen, said in an interview that the Windows strategy decision was a massive surprise from Nokia and not many could have been able to anticipate it. The savior of Weego was their Android and iPhone expertise. The small Finnish software engineering house found a new source for growth from developing smart TV applications for Samsung.

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The bloodline of MeeGo continued in Jolla that was established in 2011. Jolla is a company formed by the ex-Nokia chief software engineer Marc Dillon and some other ex-Nokians from the N9 development team. Thanks to the open source nature of the MeeGo software, Jolla was able to start utilizing the main components of

MeeGo for free. Things were proceeding fast. Jolla started to develop their own smartphones with the Jolla brand. In November 2011 Jolla announced the Sailfish operating system.

The Jolla phone shows what MeeGo could have become. The user interface has been further developed and it is substantially more logical than what the N9 was. The Jolla phone has been developed by some tens of software developers and one can imagine what MeeGo could have become without the never-ending hassle, indecisiveness and Intel slowing things down.

In a way Jolla is also answering the ecosystem fears that were plaguing MeeGo. The free Android ecosystem that has grown next to the Google-controlled Android could have been the lifeline of MeeGo. Android applications could have been made portable with reasonable effort to the N9 and this would have guaranteed enough applications. Therefore the likelihood of the pure independent MeeGo ecosystem will remain a mystery. One cannot say it was completely impossible because of for example the Chinese ZTE and Korean LG were interested in MeeGo.

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Amidst all the speculative praise one must acknowledge some facts. For the first, Intel has continued to struggle with power management issues with its 4G chipsets. The time to wait for a working solution would have been long.

Also the most prominent heir of MeeGo, Tizen, remains close to square one. It has been used in accessories like Google Gear but very few smartphones have been announced based on Tizen. Last but not least, if the markets were too crowded for a new platform driven together by Microsoft and Nokia, how could Nokia have established a new platform on its own?

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15. Secrets of Meltemi

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It was June 2011 in the Northern Finnish city of Oulu. An awaiting atmosphere prevailed at the Elektroniikkatie 10 research and development center. An executive of the Mobile Phones unit, Antti Vasara, had come from headquarters to talk about upcoming changes in Oulu.

Vasara started with the good news, that Oulu's R&D center would not be closed down. Those present started to applaud, with cheerful looks on their faces. Then came the bad news. Symbian and MeeGo development in Oulu would stop completely. Joy was replaced by shock. Suddenly, 1,100 employees in Oulu were under threat of being fired. Then Vasara continued with some surprising news. A new unit would be established in Oulu, which would save most of those under threat.

That unit became one of the biggest secrets during Elop's era at Nokia. Nokia has never confirmed that it existed and still does not. It has been very difficult to get any information about the project, as many of those involved declined to comment. We got the impression that Nokia still wants to keep their employees' lips sealed.

Why would it be that way? First, let us see what was under the hood of the project called Meltemi.

Meltemi started as a research project back in 2010, during Olli-Pekka Kallasvuo's management. The idea was to build a new basic phone platform, as the old workhorse S40 was becoming outdated. The project, or at least its predecessor, was already ongoing when Stephen Elop stepped in, and approximately 70 employees were wrestling with it. The project rose like a rocket on Elop's agenda at the end of spring 2011, as management realized that Windows phones could not be built at a low enough cost to compete against the surge of cheap Android models.

Mary McDowell, who was responsible for the Mobile Phones unit, got the lead for the assignment. The goal was to generate a new category between the Asha basic phones and the Lumia smartphones. The price in this category would be approximately 100 euros (\$140), which would be cheaper than Android devices at the time, and would eventually replace the S40. The target was to reach the goal in one year.

First, 250 employees in Oulu were transferred to the Meltemi project. Some of them had earlier worked with Symbian, and some with MeeGo. The group eagerly started to work with their new assignment. New engineers joined the work little by little, and eventually 500 people were working on the project in Oulu. In addition to Oulu, the R&D centre in Ulm, Germany was enlisted to the project. The idea was simple. The goal was to create a device that could be classified as a smartphone, but which had as its key selling point an attractive user experience, instead of relying on an ecosystem. The focus was on social media and a few preinstalled applications. Of course, one should also be able to install additional applications. The N9 applications should work on Meltemi as such, and thus would be part of the Qt ecosystem.

But what was Elop's logic? Why did he kill MeeGo—the pillar holding up Qt strategy—in 2011, but continue developing Meltemi?

Meltemi was the foundation of the “Next Billion” strategy, to get the next billion people to use the mobile internet, by conquering people still without a mobile phone in emerging markets. According to an extreme interpretation N9 was just a prologue to Meltemi, created to generate the applications that Meltemi required. However, this time Elop advanced in radio silence. He had learned his lesson after the Burning Platform speech. The sales of Asha devices would not be cannibalized by saying that something better was on the way. The project was kept secret even within the company.

As the work proceeded, a few technical decisions were made quickly. The phones would be built upon new hardware, including graphics acceleration, and that 128 MB of memory would need to be sufficient. As opposed to the N9 there would not be multitasking, with only one application running at a time. Applications would need to start up in less than one second.

Meltemi needed to succeed at almost any cost. An employee from the project said that even traveling was less tightly regulated, compared to the rest of the company. It was calculated that a day trip to Oslo or a couple of days in Ulm would save a week's worth of e-mail negotiations.

The schedule still started to break down in the fall of 2011. One cause to that was the design team being located in London. One developer described how the design department was able to generate user

interface ideas that were graphically attractive, but at the same time the direction kept continuously changing. At the end of 2011, the first version of user interface resembled the graphical looks of Windows Phone. The font was white and thin on a black background, and the elements on the display were text, rather than buttons to be pressed. The lower left hand corner had a “back” arrow, similar to Windows Phone. N9-like icons replaced the Windows tiles. In the spring, N9-like swipes were added to the user interface. This version didn’t live for long either. The third draft was very similar to the user interface of N9. The interface was touch based, with no hard keys. One could open notifications (such as incoming messages) from the upper edge, similar to Android. Nokia’s maps, music service and video calls would be included. At that stage product development told the design team that this had be the final plan, if they wanted anything to be finished, said one person involved with the assignment.

Another aspect delaying the project was the new hardware. There were issues adapting the software to it. Calls, browsing and WiFi started to work on the device only in the beginning of 2012. Not at the same time in multitasking mode, but overall on the same device.

At the end of 2011, management understood that development needed to gain speed. The most crucial people working on Meltemi in different cities flew to Nokia’s R&D center in Ulm, Germany. The goal was to make a giant leap, to pull people together, to have communications flowing without breaks. Nokia had booked an entire hotel in Ulm to accommodate the people involved. Approximately 50 people were continuously present, with participants changing all the time. The intermediate goals of the three-month camp at the end of January and February were just about reached, and Mary McDowell was seen onsite encouraging employees. At the end of March, when the camp ended, a tough fact had to be faced. Even though many aspects had advanced, such as the delay when launching applications, the readiness target had not been reached.

The first phone model, codenamed Clipper, had been cancelled during the project. It was designed as a sibling to the cheapest Lumia, the 610. The devices resembled each other, but Clipper and its display were smaller. Clipper was replaced by codenames Goa and Zhora. Their role models were Lumia 820 and 920, and they also were smaller than their role models.

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In addition to Meltemi being a secret, there was even a bigger secret inside the project, one that has been kept unrevealed to the public until these days.

The idea was splendid. As the iPad conquered developed markets, Nokia would take the corresponding market in developing countries. A small but high quality tablet would be built, and it would endure dust and moisture. The main markets would be Russia and China. Instead of small phone stores, the tablet would be sold in the giant electronic stores in China.

The Meltemi tablet advanced far. The display was 7 inches, and the price was planned to be 250 euros (\$330). The consumer reaction was tested with a half-ready demo device. The device was given to test consumers, and it was revealed little by little that the device would come out with the Nokia brand name. How much would they pay for the device? Consumers were so tired with cheap Androids that they replied they would pay 350 euros (\$465) for the device. The reception compared to the price planned for the device was so good that the tablet would have been a shock to the Chinese low cost manufacturers, estimated one person involved. The tablet would have run all Android applications. Even some iPad applications would have worked. In addition, country specific applications would have been built for Russia and China.

Within the Nokia organization the Meltemi tablet project took a different path than the phones. Chief Technology Officer Henry Tirri led the project, to ensure a time-to-market as fast as possible. The project was due to be transferred to Mary McDowell in the fall of 2012, when it was time for discussions with the sales channel.

However, the days of Meltemi came to an end already before that. The unfortunate project became squeezed, when the pricing of Android phones dropped ultra low in the hands of Chinese low-cost manufacturers, and a Lumia close to the price range of Meltemi was created in cooperation with Microsoft. Teams were asked, in the beginning of May 2012, whether they could promise Meltemi to be ready by the end of the year. One developer tells us that their team's response was that it is possible, but do not expect anything before that.

Meltemi means a dry wind blowing from the North across the Aegean Sea during the summer. The group was hit by it in June 2012. One morning, when people came to work, they noticed the Meltemi wikis and source code were closed. Some realized that executives had been absent from project meetings for a couple of weeks.

“We concluded that only bad interpretations can be made in this situation”, a software developer recalls.

During the day, head office informed that the project was going to be killed. They gave three reasons.

The product did not come out fast enough.

Lumia phones could soon be built cheap enough.

There was no marketing budget. All the investments will be focused to Lumia.

The final stroke was Nokia’s financial collapse. The Meltemi teams were told that Nokia did not have the financial means to do marketing for S40, Lumia, and Meltemi devices at the same time. According to one employee, waking up to the need of marketing funds excessively late illustrates the panic mode and shortsightedness of the Meltemi assignment. The reason is likely simple: The costs of bringing Meltemi to market, and especially the required marketing investments, would have hit Nokia’s cash assets too hard.

As Meltemi did not officially exist, it could not be officially cancelled. Nokia formulated in their release, that going forward, they would focus on S30 and S40 basic phones, and Lumia and Asha smartphones. You had to read between the lines that a third option had been dropped. In a press conference, when asked about Meltemi, Elop replied that he has never confirmed a project with such a name, but that Nokia has had to cease some development initiatives. It was said that the R&D center in Ulm, Germany, would be closed down, which gave the final confirmation that Meltemi was dead. “This was a slap in the face. Nobody assumed that the entire center with 730 people would be closed down. At the end of last year, new employees were still hired to the R&D center”, said Ulrike Kleinebrahm from the workers’ union IG Metall.

The Meltemi people were devastated. The project was in the final stretch, the completion was in sight. The products were far in development, and had been presented to the distribution channels. Elop said one of the reasons for stopping development was that they had received bad feedback from the target customers. One employee involved assures that it was in fact the opposite. Employees would have understood if the closure had taken place three months earlier, when rearrangements were done in Ulm, and the phones had technical issues. Three months later those problems had been overcome. It was difficult to understand the slaughtering of a nearly ready product. The frustration burst out in a LinkedIn group. The group carried the name MPD Alumni (Meltemi Product Development).

“I thought we mattered. What a naïve thought! Trust—melted. Joy—melted. Passion towards Nokia—melted. I have no clue how to get it back”, one commented.

However, the opinions on the Meltemi readiness stage varied. Many used the expression: “Almost ready”. According to them, the products could have been brought to the market very quickly. These views appear colored by bitterness. According to one reliable view, Meltemi was two to three weeks away from a phase where it would have been eligible for “use on a daily basis”. The term means that Nokia employees could have tested using Meltemi phones as their main devices. The stage is reached when the phone stays on in most cases for the entire day, and the most important functionalities are available. It is still a long way to sales readiness. Meltemi devices used to cut calls after approximately one minute when the project was halted. The application startup time was on average three seconds, a long way from the one second target.

The internal ending event of Meltemi was on June 14, 2012. The event was streamed to Nokia sites across the globe. Elop revealed what the development of Meltemi cost per month.

“I wish I had taken some notes”, recalls one who was there. “The sum was most likely many millions of euros per month. The project had grown into psychotic dimensions. For example, when a team was released from MeeGo we may have been asked that here’s a team, would you have some use for it?”

Some think that the goal of the Meltemi project was impossible to attain from the beginning. Even though Meltemi was built upon some assets from MeeGo, at the end the Meltemi team had to build a new operating system from scratch. Thus, it was not a slimmer version of MeeGo, but rather its own platform, built on the Android core. There was so much work involved that the original estimate turned out to be too small.

Still, the timing for Nokia to obtain low-cost smartphones to compete with Android phones was only half a year away. It is a completely different story how consumers would have reacted to them. Carolina Milanesi, an analyst that has followed Nokia for a long time, thinks that the prices of Meltemi devices, 70–140 euros (\$94–188) for smartphones and 250 euros (\$335) for tablets, would have been too high for developing markets. Android had got Asians accustomed to ultra-low-cost devices.

According to Daniel Chung, who was responsible for Nokia's network provider relationships in China, the Chinese network providers took the stance that Meltemi pricing could not have competed with local Android devices, which gave consumers more functionality and applications against a smaller financial investment.

Meltemi development swallowed 50–100 million euros (\$63–126 million) according to a rough estimate. At the same time, employees were taken through a rough ride. Only a few months before Meltemi, Elop had announced that MeeGo people would be transferred to reinvent the future disruption of the mobile device world. The MeeGo people that were expecting shiny new assignments were driven into a dead end for a second time. Maybe that is why the project is still officially a secret. Meltemi is difficult for its former employees as well. If you search the keywords Meltemi and Nokia on LinkedIn you can find approximately twenty hits. The rest use euphemisms for that stage of their career.

Had the project succeeded, the name Meltemi would have remained unknown to the wider public. It had a new Asian name under work, like Asha, as the markets were assumed to be in Asia. Meltemi belongs to the group of working names such as MeeGo's two versions Harmattan and Fremantle. Harmattan is a trade wind present in Western Africa. Fremantle—or more specifically Fremantle Doctor—occurs in the

western coastal regions of Australia during the summer, and cools down the heat in afternoons.

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16. Towards the first Lumia

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The cooperation between Nokia and the new partner began with traveling, partying, and presents. Microsoft's Windows Phone employees gathered at Daman's Tavern in Redmond to celebrate the most important deal of their history. The *AllThingsD* website, focusing on digital technology news, reported that toasts were made with a drink called "The Noble Finn". Ingredients: Finlandia vodka, Chartreuse liqueur, soda water, sugar, and lemon juice drained with reindeer antlers.

In March 2011, Windows Phone engineers arrived in Finland, led by Terry Myerson. The teams got to know each other by snowshoeing and in the sauna, after which the Yanks were made to roll in the snow naked. The next day they transitioned to business at the Salo factory.

Within weeks and months, the cooperation settled to its established ways. One of these involved Iceland. The direct flight to Reykjavik is about the same from Redmond as it is from Helsinki. The leaders met often at the state-owned Culture House, a stone's throw from Höfði, where Ronald Reagan and Mikhail Gorbachev had met for their famous meeting of 1986.

At the Nokia end, Jo Harlow, who had been nominated to lead the smartphone business, bore the greatest responsibility for the cooperation. She had been given ten months—the first Nokia Windows phone was to be on the market before the year's end. The schedule was twice as fast as what was customary at Nokia.

Harlow had arrived at Nokia in 2003. Before taking the responsibility for smartphones, she had led the marketing of mobile phones in North America, marketing worldwide, and she was the responsible for the Symbian phone business. She had made it through two organizational changes under Olli-Pekka Kallasvuo. This trusted player, also under

Elop, had captained the Duke University basketball team in North Carolina in the 1980s, and had graduated with a bachelor's degree majoring in psychology. Before Nokia, she had held leading positions in sales and marketing at Reebok, known for their sports products, and at Procter & Gamble, famous for their consumer goods.

Some twenty work pairs were created as the basis of cooperation. The idea was to make people working in similar roles at either company responsible for progress. These work pairs were set up in sales, product development, and marketing, among others.

Harlow was paired with Myerson. The common denominator was found quickly. Myerson had graduated from Duke seven years after Harlow. Nokia employees presented each with an E7 phone decorated with the Duke logo.

Kai Öistämö's counterpart was Andy Lees. Öistämö has recounted how he virtually lived with Lees as the deal was taking shape. At that time, the contacts might come any time of the day, because Lees was vacationing in Hawaii and Öistämö in Italy. As the deal progressed, the contacts became only weekly.

Marko Ahtisaari's partner in Redmond was Albert Shum. Shum, having started at Microsoft after Nike, created the basic features of the Windows Phone user interface, among others the appearance based on tiles. The pair exchanged ideas, and started to focus on future product launches. The target was to make the device and the software work together as if they were one and the same.

Teamwork was made easier by video conferences that were held 5 to 10 times a week. In addition, Nokia transferred a director, Waldemar Sakalus, to Seattle to handle the Microsoft relationship and to divide the product development tasks among five Nokia locations: San Diego, Beijing, Salo, Tampere, and Taiwan. A Microsoft alum Kevin Shields was hired to investigate what Nokia could, on its own, build on top of Windows Phone.

Based on information leaked to public domain, the alliance started to resemble a match made in heaven. The world's best phone hardware manufacturer and the world's best software house were working together. Network providers, developers, and technology buffs were

keen to see what this common effort would produce. Belief in success started to arise.

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The reality behind celebratory speeches and common acquiescence presented another face. A Nokia employee belonging to the Markets unit remembers the shock he experienced two weeks after the public launch of the cooperation, as he saw the list of the features of Windows Phone 7. The list looked much different than he had anticipated. The most drastic surprise was in the language support. The engineer remembers thinking that pages were missing in the document when he saw the languages supported. But they weren't missing. Microsoft had concentrated on North America and Europe with Windows Phone, where the expectation was to elevate the status to that of an expensive enterprise phone. Nokia, on the other hand, was working globally. It wanted the phones everywhere. The engineer also understood that in addition to the languages, leading network providers such as Vodafone, Orange, Telefonica, and T-Mobile required more than what the list of features had on offer. Windows Phone was very closed. Application interfaces, with which network providers could integrate their music services into the system, for example, were missing. There was a new problem facing Nokia that already had been called condescending: They would need to respond to network providers saying "thank you for your wishlist, but Microsoft does what it does and the feature will come when it will".

They had gone from the frying pan to the fire, to the curse of a closed software platform.

Microsoft's interest in adding languages was minuscule at first, and Redmond balked at offers to help. According to Microsoft, language support was so deep within the code that letting Nokians to work on it would have revealed too much of the code.

New inadequacies emerged continually. There was no support for the front camera that was necessary for video calls. Multimedia (MMS) messages did not work according to standard, and when a Nokian called about this to the US, it was felt as if the other end did not even understand what an MMS message is and why it should conform to standard. It was difficult to create custom ringtones. There was work to

do in country-specific requirements. Many countries set very detailed requirements on phones. If these weren't met, it was futile to even try.

“We began to wonder whether anyone had researched the Windows Phone on a practical level before the agreement was signed—and realized that nobody had,” one Nokian recounts his team's thoughts.

The board woke up quickly to notice the same problems. Windows Phone turned out to be less complete than what had been understood. A person present in the first workshops between Microsoft and Nokia top leadership teams tells us how only at this stage it was realized that it was simply difficult to integrate a camera with Windows Phone. The pixel count allowed by Windows Phone was limited.

Only at this stage it was also revealed that the Windows Phone could not be adapted to an entry phone category in the manner that Nokia had envisioned. When making the operating system choice, there had been estimates to be able to reach about a hundred euro (\$130) price range.

It began to strongly look as if the contract had been reached hastily—and the homework had been done skimpily. In addition to languages, the Nokia leadership team was surprised by the deficiencies in multitasking. And, how would it be with Microsoft's widespread business applications, such as the text processing program Word, and the presentation software PowerPoint: Would they be integrable into Nokia's upcoming phones?

There were at least some improvements on the way. There was a new version of Windows Phone in the works that would be known as Mango, or Windows Phone 7.5.

Even with the deficiencies in the platform, Microsoft reassured Nokia quickly about their software skills. An employee from the Markets unit recalls how quickly in the corridor chatter people started to comment that now they were in fact dealing with a software house. The software was of high quality, it was ready, made with care, and there were fewer bugs as compared to Nokia's own products. The code was even revered. Versions appeared on time, and their content corresponded to the promises made.

Windows Phone only accepted one chipset as its basis, but luckily it happened to be the same on which Nokia was building the American version of its N9 model. Within a couple of months, Windows Phone had been made to run on Nokia hardware, and under three months of making the cooperation public, Elop was bragging about walking around with a phone in his pocket. The development was running, according to Elop, faster than ever before in Nokia.

The worrying was, however, continuing among the operatives. A Nokian remembers how fast he had realized that it was difficult to get requests through with Microsoft, because the Windows Phone team was so small. He estimated that when Symbian had six times the number of people as compared to S40, the Windows Phone team had fewer people than the S40 team.

A member of the leadership team reiterates this: “The cooperation was sold to us with the argument that Nokia has a strong position and that it can influence the development. This proved to be hard. The requests never got through. Microsoft had their own ways of working. Flexibility wasn’t one of their strong points.”

There was shared understanding at least on a more general level. Microsoft alleged to have changed their priorities to serve Nokia over other Windows Phone manufacturers. Myerson wasn’t shy to say that the workload was weighted in Nokia’s favor in relation to Nokia’s effort on the Windows Phone.

If Nokia had faced surprises in the beginning of the cooperation, these also came Microsoft’s way. Nokia had been silent in the negotiations on their camera innovations. When the Microsoft team heard about the 41 megapixel PureView technology, its importance was understood immediately: “Wow, what a cool thing!”

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About a month after making the cooperation public, Elop told the news agency *Reuters* that the phones were progressing at a good pace. At the same time, he responded to the speculations that Microsoft might purchase Nokia.

“To the extent that a partnership has been formed around what they’re really interested in, then what would an acquisition bring other than a good year of antitrust investigation, huge turmoil, delays?? We didn’t even broach the possibility of an acquisition with Steve (Ballmer),” he said.

On April 21, 2011, Nokia and Microsoft finally announced that the cooperation agreement had been signed. The contract, hundreds of pages in length, spelled out, in addition to financial matters, which individual technical items belonged to which party. There were very few changes made to the guidelines drawn in February. According to Öistämö, the signing was a great milestone, but even more than this, he was glad of the concrete progress made by the cooperation. The Windows Phone Mango version was already being tested on Nokia devices. Mango was too far along for Nokia to have any influence on it before the agreement. The new version seemed set to bring about many improvements Nokia had requested. Lees concurred and stated that the companies now knew very accurately which part of the code belonged to Microsoft and which to Nokia. It was said that the cooperation was more about having agreed on common ways of working than about what Nokia can or cannot require from Windows Phone.

The sales of the upcoming phones to the network providers was in a good shape during this time. Typically, a network provider needs to know the future plans of the manufacturers about 12 months ahead of time, which means that in the case of the Windows phones, the timescale had to be scrunched. Thanks to N9, Nokia had a likeness mockup to show already at a very early phase, and the Windows Phone screen grid appearance was also widely known. A leader involved in the sales says that the reception was entirely different than if Microsoft had been selling their phones by themselves. “Network providers knew, in fact, that when Nokia is involved, the possibilities are completely different. They believed in Nokia’s capabilities in hardware. They thought that if Nokia gets free hands on the hardware side, and the platform is made to work as it had been made to believe, it’s now or never that Windows will make a breakthrough in phones.”

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On May 10, 2011, Nokia received a blow under the belt from its new partner. Microsoft announced the purchase of the internet phone

company Skype for almost six billion euros (\$8.5 billion).

The deal was poison to Nokia's dreams about a network-provider-friendly ecosystem and showed where they stood with respect to their relationship with Microsoft. Nokia's interests did not weigh when bigger wheels started to turn. Skype was a thorn in the flesh for network providers, because internet phone calls ate into their voice call revenue. Providers weren't making a profit selling Windows Phones if it was too easy to make internet-based phone calls on them.

Network providers did understand that internet-based phone calls were the future. That is why they were developing their own services to compete with Skype. There was even a new kind of a phone call in the works, multimedia phone call (IMS) that differed from internet phone calls at least in one respect; the standard had a built-in possibility for billing calls.

Nokia had to hold back in dealing with network providers after the Skype deal. "We cannot tailor your call solutions as part of our operating system. This role is reserved for and only for Skype." According to someone who had worked for the Markets unit, the world's second largest network provider, Vodafone, in particular sent a clear message along the lines of "if our solution cannot be configured on equal terms with others, we will not sell these devices."

Nokia was careful not to criticize its partner in public. Elop admitted the problem only a year later when he revealed that network providers shunned Lumias because of Skype.

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However, the journey of these two companies on two sides of a fence with different company cultures gradually started to progress. During the spring and summer they communicated that they were ahead of schedules. At least the launch of one common phone model within the year was still within the timeline. The communiqués given in conjunction of the signing of the agreement led one to believe that the first priority would be in the speed of market entry. The device would be very similar to other Windows Phones.

This emphasis felt more correct, day by day. While Nokia and Microsoft were dancing their mutual minuets, the smartphone market was forging fast ahead. The Symbian catastrophe had wrecked the value chain of many distributors. The biggest network provider customers were Vodafone, Telefonica, T-Mobile, and China Mobile. Especially the Europeans reacted quickly. A director who liaised with network providers admits directly that Nokia had to stomp the prices and network providers were required to subsidize the sales of phones. A phone languishing in the warehouse needed to sell within two months, and half a year was a long time in this fast-paced market.

A dirty wake was forming also in Asia. One Nokia salesperson says that for instance in India Nokia had been selling about 10 million phones quarterly. The average stock was for about 45 days, i.e. five million phones. As one phone was priced around \$50, the remaining supply in the hands of the distributors was substantial. Many distributors suffered great losses in forced sale events, and many of these were wholly dependent on Nokia. Many felt betrayed.

Independent retailers in China quickly abandoned Symbian. Network providers reacted more slowly. According to a director from the sales unit, China declined slower than the rest of Asia because the local network technology deviated from the standard. Foreign competitors had a harder time entering this market, especially since the two largest network providers were Nokia-friendly. But when the train started rolling, it was difficult to stop. “China Mobile is the world’s largest network provider and it was the most important seller of Symbian. It started to support Chinese manufacturers. Device makers such as Huawei, ZTE, and Lenovo got a head start to an immense growth. The situation was changing incredibly fast after this,” says a respected stock market analyst.

The sinking Symbian started to become a real problem. Nokia issued a startling market warning on the last day in May. The revenue in April–June would be substantially lower than expected. The formulation of the reasons for this was interesting. According to the release “the situation has been made weaker by the competitive dynamics and market trends across multiple price categories, particularly in China and Europe, as well as a product mix shift towards devices with lower average selling prices and lower gross margins. In addition, pricing

tactics by Nokia and certain competitors have made the situation more difficult.”

The word ‘Symbian’ was not even mentioned. [14] On top of everything, Nokia announced that because the forecast of the second quarter had changed substantially, it will no longer publish targets for the whole year.

At least there were savings in the making. Layoffs would result in savings of about a billion euros (\$1.35 billion) annually from 2013 and onwards. Elop estimated that these savings had materialized faster and more than expected. If it qualifies as a merit, Elop had in fact gotten rid of personnel from the company effectively.

Analysts made quick calculations: The entire Nokia group had become loss-making, also the cash flow had turned negative. The market panicked. The share price went down 18 percent. At the same time, Nokia lost its top spot in the Helsinki stock exchange to Nordea. Investors described Nokia’s situation as incomprehensible, because the beginning of the year had developed reasonably well, and the annual meeting in the beginning of May had had a positive vibe to it. The release of the day got the nickname “the horrendous Nokia upset”.

The reason for this upset was very visible on the retail shelves around the world. Android phones filled the shelves vacated by Symbian phones that retailers had moved aside. Network providers were fond of Android, because it was available for a variety of price categories. For example in India and in China, a sizable chunk of buyers look for phones costing below a hundred euros (\$135). The range of Android phones just made this mark, and they offered so many features for such a price that their demand skyrocketed. The Chinese budget device manufacturers and Samsung captured the game.

Operators still wanted to remain in touch with Nokia. Nokia still wanted to stay in the game because the position of Apple was evoking fear.

A leader with a Finnish network provider says that Apple was much more arrogant toward network providers than what Nokia had been. It was not uncommon for heated calls at odd hours to come from Apple’s London office. The topics were such as the missing helicopter at an iPhone launch event. The network providers had no say in the pricing

of iPhones or in the sales and marketing actions. Apple only offered “take it or leave it” deals.

The difference with regard to other vendors was huge. Nokia was, compared to Apple, a domesticated business partner. Even Google was not as irritating as Apple, although it was the sovereign leader in the Android world.

But: The network providers feared Google. It had begun to tighten the contract terms. Google had become the unknown card in the phone game, so there was goodwill toward Nokia despite the Symbian catastrophe. Many network providers had a long track record of making good business with Nokia, which still dominated the feature phone market.

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The choice of Windows Phone as the platform resulted in a mass exodus among developers, at first. This choice upset many, as Nokia had been an eager advocate of open source software. Nokia had recently marketed Qt, and many had invested in Qt training and certifications. A strong community had formed around MeeGo, and Symbian had been changed into an open source platform.

The credibility vanished. Developers were faced with a dilemma: Why build Symbian applications when the market fell from under the platform? Why build Windows Phone applications when there was no market? Microsoft was also burdened by old sins. Developers had been required to change their tools during the last ten years many times over. “The experience was much more bitter than that with Symbian developers,” estimated a renowned stock analyst. “Among Symbian developers, the work was a continuous uphill battle, but a developer working with Microsoft’s mobile platform often fell flat hard. In addition to having to learn the new tools, they had to rewrite their programs.”

In the light of the past with Microsoft, and due to the prevailing uncertainty, the solution was obvious: They moved elsewhere. The number one choice so far had been Apple. While the second choice had previously been either Symbian or Android, it was now Android. A

developer is usually able to port their application to two or three platforms, so Windows Phone was sidelined.

An experienced Finnish developer recalls that this hangover had, however, passed quickly. “The cold hard truth was that the Windows Phone tools were even better than Qt. And the code was brilliant. What you could do worked like a charm, and the set had been chosen so that all essential functions were there,” he told us.

The sandbox was, however, crowded, the developer recounts. There were a lot of things missing that you could have realized with Apple or Android. For example game engines could not be ported from the outside, they had to be coded anew. The investment expected from developers was remarkably high compared to expected revenue. “The platform was not incomplete, as much as insufficient. What was there was excellent, but half of what was supposed to be there, was missing,” the developer describes.

The grand picture was as follows. Passionate Symbian and MeeGo developers switched en masse over to Android. But Windows Phone received increasing interest. New entrants from among PC and enterprise developers embraced it. Only those who didn’t understand the need to jump ship continued with Symbian.

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Elop performed a cunning trick in August 2011. He appeared in Singapore Communasia Communications Symposium and instructed the audience to put down their cameras and not to take pictures with their phones, as he was about to show something confidential. From his pocket emerged a device which, despite everything, was the prototype of the first Nokia Windows Phone. The British newspaper *Guardian* remarked aptly: Elop could not have asked the audience any more clearly to photograph at that moment. *Guardian* also wondered how it was possible that a photo from the event that began to circulate was apparently professionally shot, on a tripod.

The prototype had in fact been named: Sea Ray. The appearance was observed to be a direct copy of the N9. A camera button, mandated by Windows Phone, had appeared at the side, and the flash on the rear cover had been placed differently. The camera was identical to that in

the N9, and it would have eight megapixels. The operating system was the new Microsoft Phone Mango version. There were no Nokia-specific apps visible in the prototype devices.

In August, Elop met with the board. Elop drove his train with continually more steam, and announced that the phone family should get a name. The groundwork had been done, two hundred suggestions had been sifted, and a shortlist of the best options was presented to the board to review. Elop told *Reuters* how the board had been about to fall into a familiar trap once again, asking for more time, as there seemed to be no common favorite. Elop had wondered why they should wait until the following week, or the next month. The decision could just as well be made on the spot.

And so the name was born. In one day.

Lumia. A Latin-sounding play on the Finnish word for snow. Had been in use as a Finnish surname since the end of the 1600s. Evokes impressions of light in English. As to whence and by whom the name was brought to the board, the etymology is silent.

Before the choice, it emerged that in Spanish—the language in the important South American market for Nokia—the word “lumia” had an esoteric slang meaning of “prostitute”, but only in archaic forms of Spanish influenced by Roman languages. This was not a hindrance. According to consumer studies, 60 percent of Spanish speakers took the name positively. The first impressions were more related to *light* and *style*. Of course, the media had a field day when the reference to the side meaning was found in Spanish dictionaries. They neglected to mention that this meaning was archaic, rare and only used in slang to begin with.

Besides, it was in good company. In South China, “Peugeot” translates to the same meaning as “Lumia” in Spanish.

Many Finns in those days wanted to believe in Nokia. The always positive foreign minister Alexander Stubb tweeted on August 12, 2011:

| @alexstubb August 12

Meeting w/ #Nokia CEO #StephenElop this morning. A fantastic guy. Watch Nokia bounce back with his energy and commitment. Exciting stuff!

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The great news in the beginning of the fall was the Google-Motorola deal. In mid August, the Android powerhouse announced that it would purchase Motorola's phone business for 8.8 billion euros (\$12.5 billion). The rationale, according to Google, was the patent portfolio. This did not prevent disquiet: It was feared that Google would start to favor Motorola within Android.

According to Elop, his first reaction to this was relief. "The very first reaction I had was very clearly the importance of the third ecosystem and the importance of the partnership that we announced on February 11, it is more clear than ever before" Elop said referring to the Microsoft-Nokia alliance in competition against Android.

"My second thought was that If I happened to be someone who was an Android manufacturer or an operator, or anyone with a stake in that environment, I would be picking up my phone and calling certain executives at Google and say 'I see signs of danger ahead,'" Elop said anticipating the disbanding of the Android camp.

In the beginning of September, the Windows Phone started to be a reality. Joe Marini, working at Microsoft, tweeted that he had received Nokia's Mango phone to try out. He described it as handy, having a solid feel, good camera, and responsive UI. He said he would have liked a larger screen. He gave an overall rating of 8/10.

This was all promising. But: Nokia's market share in smartphones had dropped to 15 percent.

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[14] Looking at the May 31 stock exchange release by Nokia, this statement is wrong, as the release states: "Nokia is continuing to invest to bring new innovative capabilities to its Symbian line up."

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17. The Lumia journey

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October 26, 2011. This was the day the mobile phone business had been waiting for already a long while. Nokia was to launch their new Lumia smartphones. The London congress center was packed with hundreds of technology reporters, bloggers, and analysts. The screens of laptops and iPads glowed in the dark, the sense of anticipation was palpable. Soon they would see what Nokia's Windows strategy meant in practice.

Elop stepped on the stage. When the picture of the Lumia 800 smartphone was projected on the screen, the three thousand strong audience burst into applause. The reaction illustrated the feelings: Nokia finally brought forward something that might bring the top position back. Elop was like a fresh father emerging from the birth ward, saying: "I am so excited to introduce you to the new Nokia Lumia 800."

The applause quieted down, the listeners waited for the lowdown. Elop said that the Lumia 800 was "a simply elegant phone that brings a gentler structure to mobility." According to him, every detail of the design was paid attention to. Every detail left out received just as much consideration as those included.

After the speeches, the audience was allowed to try out the new devices. The event hall was full of tables with new Lumias. Nokia employees clad in blue shirts presented the features of the devices with smiling faces. Lumia 800 drew the biggest buzz. Bloggers and reporters stood in line to be able to try out and photograph the novelty and to publish their verdicts as fast as possible. Apart from the design, the price of the new Nokias were of interest. Lumia 800 cost 420 euros (\$580), whereas the newest iPhone was double that. The cheaper Lumia 720 was only 270 euros (\$375): It was meant to compete with Android. The most striking feature of Lumias was their color. They were available in blue, red, and black, when the competition was in black, white, or grey. Lumias did not have really new features. Nokia Drive car navigation was an old Nokia application, but the music service had new features.

A patriotic wave of pride filled the chest of the Finnish reporter. At last, Nokia had a phone with a working operating system for the mass market. With a device like this, it was possible to start reaching the customer abreast with iPhones and Android phones.

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Initial comments in the media were cautiously enthusiastic. The design and features of the Lumias, such as the camera and maps, were praised. According to analyst Carolina Milanesi, this was a top achievement within 8 months. She was not convinced with the name, but as a product, the Lumia was positive. Especially interesting, to Milanesi, was the price. Another British analyst, Ben Wood, described the situation as follows: “From a complete catastrophe to a real change in strategy, resulting in two fine products.”

At the press conference, it was announced that in October the Lumias would go on sale in six big European countries. After this, the sales would be extended to India, Russia, and Indonesia. The actual gauntlet would be faced the next year, when the Lumia would be launched on the American market. The analysts reminded that to make a breakthrough with Lumias, Nokia had to make it in the United States. There resided the most important financiers, innovators, and opinion makers in the mobile business. The fare presented in London was still pretty light. Milanesi remarked that before going to the United States, Nokia needed to improve, because the full support of American network providers was a necessity.

Sales of the phones started in the most important countries in Europe in November 2011. From January to March, the sales exceeded two million.

This number was not too bad considering the numbers available from similar competitors. Apple launched the first iPhone in the summer of 2007. Within the first three months, it sold about three million units. The robust growth in sales only began a year later, in the fall of 2008. Samsung also had about a year’s delay before the demand of their Android phone started to climb.

Nokia thus had hope. They only needed to get more Lumia models to sell and to evangelize Windows to customers. For Lumias, the difficulty

factor was in the explosive growth in the sales of smartphones. The market research company Strategy Analytics estimated that in 2012 the sales of smartphones would grow 33 percent, to 650 million units. Nokia had to hurry up if it were to retain its market share.

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On January 10, 2012, Nokians prepared to show their best effort at CES (Consumer Electronics Show) in Las Vegas. This giant consumer electronics fair was an annual event where vendors presented their wares aimed at the American market. The day was important for Nokia. Winning at CES was a must to open the American market. On Monday night Finnish time, Nokia organized a press conference where the new top model Lumia 900 was shown. The phone was for sale exclusively by AT&T. On the outside, the phone resembled the Lumia 800 sold in Europe, but it had a larger display, a better battery, and a camera on both sides of the phone for video calls. Lumia 900 was the first 4G phone from Nokia in the US.

After a couple of weeks, Microsoft published their annual figures. CEO Steve Ballmer bragged about the “company’s own phones”. Ballmer meant the Lumia 900 that was chosen as the best phone in CES. The CEO never even mentioned Nokia by name.

The march of the Lumias moved on. On February 27, Nokia presented another smartphone. This was the cheapest Lumia so far, 610, with the price tag of 189 euros (\$250). Jo Harlow, in charge of the smartphones, believed that the company to reach a wider market with a more affordable device. To make this possible, Microsoft had relinquished the Windows Phone hardware requirements. This model had half the memory of former Lumias and a new version of Windows Phone called Tango that was aimed at cheaper hardware. Because of the reduced memory, only a part of Microsoft Marketplace applications worked on the phone.

It was still a fact that a smartphone costing almost 200 euros (\$270) was an impossibility for the greater part of people on the globe. Nokia was facing a big problem: It would need to launch phones at below 100 euros (\$130), fast. This was not possible because of Microsoft’s hardware requirements. Nokia was permitted, by Microsoft, to equip only the most expensive Lumias with Windows Phone. The software

company wanted to ensure that the consumers would see Windows phones as equals to iPhone and Samsung Galaxy top models. Microsoft believed that this image would not have formed if Nokia were to sell hundred-euro Lumias. Windows would not have, in the beginning, worked technically in the cheapest models. For Nokia, this limitation was bad. With only the most expensive smart phones, it was not possible to generate enough sales to replace the Symbian business.

On Nokia's biggest market, in China, Elop put all his personal charm at stake. According to a person having worked in a top position in marketing in China, Elop's relationships with Chinese network providers were good. These were also grounded in former successful Symbian business in China. In March 2012, Elop shook hands with China Telecom CEO Wang in a flashy ceremony. With this handshake, the sales push began to get the first Nokia Windows Phone on the world's largest growth phone market. The Chinese government supported the transformation to use the local standards TD-SCDMA and TD-LTE. Symbian phones did not use these technologies, but Nokia was able to compensate the dwindling Symbian market with TD-SCDMA-based Windows Phones. Elop admitted that it would take time to launch Lumias with Chinese technology. The Chinese government had another goal: Network providers were encouraged to develop their pricing models as well as their profitability targets in the direction to make the Chinese start using low-cost smartphones. This goal did not align with Nokia's interests.

In March, Nokia also signed a Lumia deal with China Mobile. The state-owned China Mobile is the world's largest network provider while China Telecom China's third-largest. Lumia had already a presence on China Telecom's website, even though the sales had not yet begun. At the end of March there were more news on cooperation: China Unicom would also start selling Lumias. Elop believed Lumias will be able to differentiate, because the groundwork with Chinese partners had been long in the works. The spearheads were maps and Microsoft's software which would differentiate Lumias from iPhones and Androids. The situation looked good from Nokia's standpoint: It was still ahead of Samsung in China. Even though Nokia's turnover in the world's most populous country had dropped 18 percent due to Androids, its market share was still 12.7 percent, whereas Samsung's was 12.2 percent.

In April 2012, the news threw cold water on the enthusiasm. Nokia issued a profit warning and published shocking figures from the first quarter: The loss was 260 million euros (\$347 million). According to the media, Chinese network providers' interest in Lumias was slim. The reason was Android.

At the end of the month, Nokia published the quarterly report and concurrently announced that the sales in China had collapsed. At the beginning of the year, only 9.2 million phones had been sold, compared to the 23.9 million in the previous year. Elop defended by pointing out that the Chinese government had a strong home preference. The Chinese network providers bundled local manufacturers' phones with low-cost call plans. According to Elop, during the last few weeks, every feature phone sold in China had been domestic. He also mentioned pressure from another direction: The Chinese bulk manufacturers such as ZTE had started to sell their brand worldwide. They would bring competition outside of China as well.

There were setbacks in the United States as well. Nokia had to disclose a software bug in Lumia 900 that can cut off data transfer. The company offered a \$100 rebate to the affected customers via their phone bill. This bug was a blow to Nokia's campaign in such a vulnerable stage.

By the summer of 2012 Elop had had enough. The leaders responsible for the Lumia launch, Niklas Savander and Jerri DeVard had to go. Elop was, however, happy with the actions taken in the United States. This was manifested in the region lead Chris Weber's promotion to be the executive responsible for sales and marketing, and a member of the group executive board. Elop considered Weber to have done well, despite the difficult starting position.

Nokia had been highly popular in North America during 1999–2000. Nokia mobiles had been forerunners in technology and design. Owners of the Nokia candy bar phones with their embedded antennas had received looks of admiration from Americans with their old fashioned whip antenna Motorolas. Nokia's phones had sold like hotcakes at the turn of the century and the its market share had been over 50 percent. In 2001, the market share had started to decline. The reason was that Nokia could not offer CDMA phones to network providers because Nokia had become fallen out with Qualcomm.

Qualcomm was a thorn on Nokia's side. Almost a four-letter word, if you asked the Nokians.

The home base of Qualcomm, founded in 1985, was in San Diego, California. Its main products were components for mobile phones, data transfer standards, and satellite positioning systems. Qualcomm had sold its own mobile phone manufacturing base to the Japanese Kyocera and focused on making money with the technologies it owned. The mode of operation of this American company had been unscrupulous. It had exclusive rights to the CDMA technology it had developed. That technology had become the prevailing mobile data communication technology in the US. In Europe, the chosen standard was GSM.

Nokia did use Qualcomm's chipsets at one time, but the contract had terminated in 2005. [15] Negotiations for the renewal of the licence contract pitted two giants against each other: Nokia was at the pinnacle of its success and Qualcomm had acquired an unambiguously solid position in the American mobile ecosystem. The contract had not been renewed, and the companies had ended up in a three-year patent war. When the dispute was resolved in October 2008, Nokia paid a one-time fee of \$2.29 billion to Qualcomm for the patent contract.

An even larger payment was to come. Quarreling with Qualcomm, Nokia had fundamentally slowed its entry to the 4G market in the United States. Verizon, one of the country's largest network providers, had invested heavily in CDMA networks and cooperated closely with Qualcomm. Nokia was left out of this game, and the CDMA device manufacturer spot had been taken by Samsung. The foundations for the future success of the Korean company in the United States had now been laid. Nokia had also succeeded in ruining its relationship with another large American provider. Nokia had been AT&T's main supplier, but messed up its relationship. AT&T had wanted Nokia to tailor their offering by implementing AT&T-exclusive features. Nokia declined because it wished the phones to be unambiguously Nokian and because of the added cost of tailoring. Other manufacturers succumbed to the demands of the American network providers.

In 2011, Nokia's market share in the United States was zero. Network providers retained the memory of its antics from years back. It entered the 4G business with a remarkable headwind, and American consumers hadn't even heard of Nokia. The situation was made worse

by the choice of Windows Phone, out of all the world's operating systems. Network providers had been fed up with Microsoft's forced feeding of Windows during the last ten years.

The reality is that in the United States, a new phone model only enters the market at behest of the network provider.

In the spring of 2012, Nokia began a gigantic advertising campaign with AT&T for Lumia 900. AT&T had invested a record \$160 million in the campaign. American television viewers were inundated with 30-second Lumia spots at primetime. The advertising spots had been purchased from all large networks: NBC, CBS, and ABC. There is no more expensive way to advertise a phone, worldwide. And the pounding of the impression in American minds was unrelentless: The rapper Nicki Minaj rose up in New York's Times Square to promote Lumia 900. Later, another problematic mega brand used Minaj in their rescue attempt, the market share loser in American soft drink market, Pepsi. The campaign did have an effect. The sales figures in 2013 looked much prettier. The three-month sales volume almost doubled compared to the year before, from 1.1 million to 2.1 million.

This was an important milestone to Elop. He had to be able to show the Nokia board as well as the shareholders that it was possible to succeed in America.

This fortune was, however, short-lived. The American providers are not known for their patience. A new phone is allowed at most six months by the network providers. If the device isn't selling, it will be dropped from the selection or its sales price will be lowered. The Lumia American sales might have looked great from the Finnish vantage point, as the starting point had been zero. From the network provider's viewpoint, the sales of two million pieces were modest. The same numbers were attained by marginal players such as Sony and Kyocera. In July, the Wall Street Journal reported that AT&T had started to sell Lumia 900 at half the price. You could now buy the phone at \$44.90 on a two-year call plan whereas its price earlier had been \$99.90. The call plan in question is a normal American sales tactic, where the network provider entices the consumer to commit to a data-intensive smartphone.

This action tarnished the Lumia price image: In the future, they would be even more difficult to sell at a high price.

Though Nokia was struggling with its sales on the featherweight range, it had a couple of major trump cards. It had its reputation as the former king of the mobile phone business, and it still had its abilities as a device manufacturer. Together with the king of software business, Microsoft, it could be able to grow as a counterweight to Apple and Android that had become too strong from the perspective of network providers. This was the line of reasoning with the American operators in 2012.

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One of the contract items in the Windows cooperation was the investments in marketing. According to estimates, Nokia and Microsoft were planning a ca. 500 million euro (\$667 million) push in the marketing of Lumia phones in the United States. Microsoft was offering Nokia a spot as a so called prime device manufacturer. The software company, however, insisted that the upcoming Lumia 920 phone would be marketed in the US as “Windows” and not as “Lumia”. Elop did not budge. The Lumia name would not be sacrificed. Nokia had worked long to build the brand and many good properties were associated with the name. Nokia declined to campaign together, and Microsoft took HTC on its side. In the fall of 2012 the American market witnessed a Windows Phone campaign, but its poster boy was a HTC phone.

On September 5, Nokia held a press conference, this time in New York. The newest Lumias 920 and 820 were on display, and they worked on the Windows 8 operating system. Elop presented the camera technology of the 920 in news stories and TV spots enthusiastically. According to Elop, photos taken with the phone were of much better quality than those taken with e. g. Samsung Galaxy S3. Nokia was highlighting its biggest asset, to which it had invested tens of million dollars to develop.

Nokia was also vocal about their maps. The consumer was not, however, buying phones on the basis of a camera or the maps. The decision to buy was usually brand-based. In 2012, the iPhone fervor was at its hottest.

The biggest gap in the Nokia Lumia 920 was still in apps. You couldn’t get Spotify, Hipstamatic, or the newest Rovio games to run on it. Lumia 920 got a mild press reception. Even though the phone was on par with

competitors in terms of its technical specifications and its usability, it was not revolutionary enough to rise above the crowd, according to comments. The expectations of the buyers had become unreasonable. Anything less than a revolution was too little.

On the same day as Lumia 920 was launched in New York, Nokia released a video on Youtube, featuring the optical image stabilizer of the new phone. The video showed a young woman riding a bicycle. In one scene on the video, Lumia's optical image stabilization technology was in use, while another scene had been filmed without the stabilizer. The video gave an impression that it had been shot with the new Lumia device. Technology bloggers got interested and started to dig in. It turned out that the woman on the bicycle had been filmed by a professional camera crew riding in a van. The next day, Nokia issued an apology: "This was not filmed with Lumia 920. At least not yet. We apologize for the confusion we created." According to Nokia's communications department, the idea with the video was to simulate how image stabilizing can improve image quality.

The situation was extremely embarrassing for Nokia.

Nokia's own marketing blunder destroyed the most important sales argument for the new flagship smartphone. A scapegoat had to be found. Elop launched an internal investigation of what had happened. Ilari Nurmi, responsible for smartphones strategy and marketing, was chosen to be the guilty one. Nurmi left the company without making any noise, like the norm is in situations like this. He confirmed over email to the news agency Reuters that he had left Nokia, but did not mention if this was because of his own initiative. Nokia did not comment on this.

Worrisome news arrived from China in September. China Mobile had chosen Lumia phones in its range and now they indicated they would also start selling the iPhone. China Telecom and China Unicom had been selling the iPhone already for one year and now they were about to start selling the Samsung flagship phone, Galaxy S3. Smartphone competition in China was now in full speed.

Nokia's phone business decline in China continued in October. The revenue fell nearly 80 percent year-on-year, by about one billion euros (\$1.3 billion). The fall was due to the collapse of Symbian smartphone

sales and worse than anticipated demand for Lumia phones. A year earlier, China had been the best market for Nokia. Now it had fallen into second-to-last place after North America. Also in October, new price reductions were announced in the United States. The prices were reduced before the products were on the shelves. Best Buy had taken pre-orders for Lumia 920 for 115 euros (\$149). The phone was bundled with a wireless plan by AT&T. Sales of Lumia 920 began on the major European markets in October: France, UK, and Germany. In November the sales started in Australia, Asia, the Middle East, and the United States.

It looked like the Lumia sales were a continuous roller coaster. When hundreds of millions of dollars were spent in marketing campaigns, sales numbers were good for a couple of months. After six months of launching, the momentum had usually vanished and Lumias disappeared from the minds of consumers. Especially in the United States, there was some major fluctuation in Lumia sales due to the network providers' advertising campaigns affecting consumers' purchasing decisions. And this fluctuation was showing no signs of cooling down. Towards the end of 2012, a fleet of new Windows Phone 8 phones were coming to the market. The Windows Phone 8X by HTC was already in stores and the Ativ S by Samsung was soon to become available. Lumia 920 did not have too many advantages against these: It had a good camera and a low price. The new Lumia was 200 euros (\$250) cheaper than the latest iPhone 5.

Then, finally: Solid ground under the feet. Or at least it looked like that.

In November, Lumia 920 pre-sales began in the Amazon online store in China—and the phone was sold out in half an hour! This was highly encouraging for the actual shipments that were planned to start after Christmas. The price for Lumia 920 was 450 euros (\$580) in China, 200 euros (\$258) less than in Finland. Although the price was still high for the Chinese, there was interest towards the product. Lumia 920's different color variants had also taken the four top spots on the pre-order list of the large online store Expansys China. The Samsung Galaxy Note II took the fifth position on the list that indicated how many consumers wanted to buy the products. More good news arrived in December: China Mobile started to sell the TD-SCDMA version of the Lumia 920.

Good news was coming also from the US. The black and white variants of the Lumia 920 were the most popular phones with AT&T. The AT&T top ten list of phones actually had four Lumia 920 color variants. The Nokia share price rose by nine percent in Helsinki and six percent in the United States.

Also in Germany, Lumia 920 was selling well. It looked like the Germans had forgotten the shutdown of the Nokia factory in Bochum in 2008.

Elop was full of hope in the interview with the Finnish newspaper *Helsingin Sanomat*. He said that the mobile phone industry is going through a major transformation that will help to improve Nokia's position. More and more consumers were beginning to look for an alternative to Android. The CEO said: "We are at this very moment in a very important phase in renewing our strategy. We are launching important feature phones and smartphones to the market. I can assure you that Nokia is doing the best work right now in a long time."

Was this just a temporary frenzy or was the smartphone business finally making some sustainable progress?

The company share price indicated the latter—the price had doubled over the last six months.

Steve Ballmer of Microsoft was sharing more good news when he announced at the Microsoft annual general meeting that Windows phones were selling four times more than a year ago. While Windows accounted still only for a few percent of the global smartphone market, the direction was right. Stumbling competitors were not a bad thing either. Samsung had difficulties with ramping up their own Windows phone Ativ S due to a component shortage. The iPhone 5 was suffering in Europe because the phone worked only in two LTE networks. The Lumia phones operated in more than 20 European LTE networks. For those customers who appreciated the fastest possible network speed, 4G compatibility was a decisive factor.

Also some network provider representatives joined the crowds of Lumia supporters. Nokia was said to have returned as a pioneer in the mobile industry and changed from a follower to an innovator again. In addition to the camera innovations people were pointing out the

augmented reality features in Lumia phones that combine mapping and virtual imaging.

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January 2013.

It was cold and dark. Nokia announced its annual financial results. Despite all the good estimates and mentions on the lists of the most popular phones, the Lumia sales had eventually turned into a disappointment: A mere 4.4 million phones had been sold from October to December. During the same period Apple had sold 47.8 million iPhones. The Nokia smartphone unit had been making a loss for the full previous year. It was also worrying that distributors had exceptionally high volumes of Nokia phones in their warehouses. In light of the market share figures, Nokia's situation was catastrophic. The research firm Strategy Analytics stated that Nokia's share of the smartphones market was only six percent. Apple and Android had captured 92 percent of the market.

Billboards by the streets of Beijing urged consumers to celebrate the New Year with the Lumia 920T. However, many Chinese retailers had nothing to sell. China Mobile, the biggest network provider in China, accused Nokia for the lack of devices: They had received only a third of the volumes they had ordered. The news agency Bloomberg quoted China Mobile saying that Nokia's production was slow and did not meet the demand. Missing the Chinese New Year—the best shopping season of the year—was a pivotal mistake by Nokia in a situation where their market share on the Chinese smartphones market was already less than one percent.

On February 25, 2013, mobile people across the world convened in Barcelona for their annual trade show.

Nokia introduced four new phone models at the Mobile World Congress. Head of marketing Chris Weber was raving about Nokia for the first time having a complete portfolio of phones running Windows Phone 8. The global market share of Windows Phone smartphones was three percent but Weber was bravely defending the chosen path. What was more important than big advertising campaigns was to make phones that would not let down the consumer. He had to say this

because the marketing budget was already gone. There was no money in the bank any longer. Despair started to be visible. Weber said: “Many have asked if this year will become a turning point for us. Our answer is that the most important thing now is to maintain focus and grasp the opportunities ahead.”

The comment was interesting, considering that Elop had been saying for two years that Nokia is going through a year of transformation. Now it sounded that the belief in the turnaround was shaking in the company. No wonder, as the market share continued to plummet and there was still no cheap enough smartphone on the market. Nokia introduced the Lumia 520 in Barcelona and while it was the cheapest model of the range at 139 euros (\$180), it was no match for the cheapest Android phones.

The media circus continued. On July 11, 2013, journalists and bloggers were invited by Nokia to New York. The familiar figure walked to the stage. Information had already leaked on the internet that Nokia would be introducing a new camera phone. Microsoft engineers had finally been able to integrate the Symbian PureView monster camera in Windows Phone. The Lumia 1020 had not only the 41 megapixel camera, but also a optical image stabilization, and wide-angle optics by Zeiss. Elop boasted of Nokia reinventing the camera zoom. The CEO with his assistants demoed a picture of a needle in a haystack, the SLR-level [16] long exposure time and showed a sailing video that had been shot at sea. AT&T would start selling the phone in the United States.

Yet another camera whose features had been honed into perfection.

Would the buyers of the phone appreciate such perfectionism? Nokia was the only phone manufacturer making a big number of high-end cameras. Samsung and Apple did not invest into super cameras.

The analyst Arthur C. Clarke of the research company IDC was singing praise for the Lumia 1020's image and sound quality: “This device is breaking the boundaries of magic.” Clarke, however, did also state that the smartphone race will not be won with high-quality images and sound: “Nokia's lead will not be enough to overcome their competitors in the eyes of consumers.” Trends did not support Nokia either—the new instant photography craze was not about image quality at all. Popular imaging applications, such as Instagram, were deliberately

decreasing the image quality. Especially young people liked the foggy and sepia-tone images they were posting on Twitter and Facebook. And there was no Instagram for Lumia.

The media wondered why a super camera was needed. The online magazine *Business Insider* wrote that the Lumia 1020 will “Almost Certainly Be A Dud”. *Business Insider* pointed out that the new phone is to a great extent same as the Lumia 920 that was already on the market. The site wrote that the phone “is only useful for people who need to work with giant, poster-sized images.”

The sales of Lumia 1020 were also hampered by the economic downturn. Consumers postponed the purchase of a new phone or preferred a cheaper smartphone. Many felt that the Lumia 1020 was priced too high. With a two-year service contract the price was \$300, or about 230 euros. At the same time the iPhone and Galaxy S were sold for \$199. The lowest price for the iPhone 5 was \$128. The journalist Marguerite Reardon of *CNET* summarized: “If the camera quality is truly superior to that of other devices out there, then I’d say consider the Lumia 1020. Keep in mind it’s about \$100 more expensive, even with a two-year AT&T service contract, than the other top-selling smartphones.”

One hundred dollars was a huge price difference in the economic downturn.

On July 18, 2013, Nokia published their interim report. Elop said that the low-end Lumia 520 had started strongly in China, France, India, Thailand, United Kingdom, United States, and Vietnam. During the period from April to June the Lumia sales were 7.4 million, which was the highest quarterly Lumia sales ever. Elop said that the sales volume indicated the growing positive development of the Windows Phone ecosystem. Another piece of good news was that the big Spanish network provider, Telefónica, had chosen the Lumia 1020 in their device range.

Despite the CEO’s nice words, the reality was harsh. The smartphone unit had just made a loss of 32 million euros (\$42 million). However, the situation had improved in one year—12 months earlier the phones unit had made a loss of 364 million euros (\$444 million) in the same period. The phone business had now cemented itself as the element

driving down the Nokia bottom line. Elop admitted that the Lumia pricing had been a really tight call. Competitors like Samsung were selling their flagship models with aggressive campaigns. The average selling price of Nokia's smartphones had already dropped from the beginning of the year from 191 euros (\$252) to 157 euros (\$206). This indicated that the bulk of the Lumia sales were lower price point models.

The website GSMarena released their most interesting phones list at the end of July. Lumia 1020 was second after Samsung Galaxy S4. The list had been made based on how many online search hits the phones had received. An interesting detail was that the inexpensive Nokia Asha 501 was on the third place.

At the end of July, Nokia released another Lumia device. The Lumia 625 equipped with a large 4.7-inch screen cost 220 euros (\$292). The device seemed to answer the two pain points in the Lumia range: Consumers wanted big displays for a cheaper price. The device was specifically targeted at the emerging markets. Lumia 625 did not raise as much interest in the global media as Lumia 1020, but the research firm Strategy Analytics said that the 625 would be selling well, since the price was right.

More good news were announced in the late summer. Windows Phone was making progress on the smartphone market.

In some countries the market share was already in double digits. The growth had been the fastest in France and the UK, with a market share of nine per cent. However, Southern Europe was still struggling with recession, and the Lumia market share was dropping. The share of Windows Phone had fallen in Italy and Spain. In those countries Android phones had taken a firm grasp of the markets due to their price. Android phones had a 70 percent market share in Europe and Apple had 18.5 percent. In the United States, Windows Phone had not made any progress despite all the marketing efforts—it had only four percent of the US smartphone market. Android accounted for 51.5 and Apple 42.5 percent. But the speed of Windows was still accelerating in the United States. Products were launched faster than before. Lumia phones began to be available in multiple price categories. The new Windows Phone 8 software upgrade enabled making cheaper yet more powerful phones. Nokia people also felt that marketing was better than

before: Both the Microsoft and AT&T advertising campaigns were in line with Nokia's own marketing messages.

In August the technology news site *TechCrunch* wrote that Nokia's market share in Windows Phone device had increased to 87 percent. Samsung and HTC were left in the dust. *TechCrunch* predicted that the other Windows phone makers will soon be leaving the market.

The monopoly situation had never been the goal of Nokia. Since announcing the Windows Phone strategy, Elop had emphasized that Nokia wants to promote the entire ecosystem. The demise of the other manufacturers was at odds with this plan. At worst, the Lumia strategy now seemed to be progressing like Symbian had done: It was launched as the industry standard but the dominance of Nokia was driving the other competitors away and eventually the whole Symbian fell in Nokia's arms. *TechCrunch* also pointed out that Nokia's position towards Microsoft was becoming dangerous. The only device manufacturer may easily be acquired by the platform vendor. By buying Nokia, Microsoft would gain control over the entire ecosystem.

Nokia has not released any Lumia total sales numbers nor separate sales figures that could be summed together.

By combining multiple sources, we have come to the conclusion that between November 2011 and April 23, 2014, approximately 52 million Lumia smartphones running the Windows Phone operating system were sold.

It takes two months for Samsung to sell this number of smartphones.

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[15] According to a former Nokia CDMA team member in San Diego, California, all CDMA phones (IS95 and CDMA2000) developed by Nokia before the 2005 Qualcomm contractual dispute were using Nokia chipsets, developed by Nokia and manufactured by Texas Instruments. Some CDMA phones with Qualcomm chipsets were developed by Original Device Manufacturers (ODM) for Nokia and sold on certain markets, but these were completely designed and developed by the ODM partners with Nokia logo added on top.

[16] *Single-Lens Reflex camera.*

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18. The long wait for the tablet

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All along, the idea of the cooperation between Nokia and Microsoft was to extend beyond phones. The iPad tablet revolution had left Microsoft out in the cold and both sides saw advantages in the situation. If Microsoft's forthcoming counterattack were to succeed, Nokia would be able to ride along. And Stephen Elop started to hint about a tablet soon after choosing the Windows Phone operating system. In April 2011 he informed the public of his plans. "There are now over 200 different tablets on the marketplace, and only one of them is doing really well. I don't want to be the 201st tablet on the market that you can't tell from all of the others. We have to take a uniquely Nokia perspective. We could take advantage of Microsoft technology and software, and build a Windows-oriented tablet, or we could do things with some of the other software assets that we have. Our team right now is assessing what's the right tablet strategy for Nokia."

The press was quick to reach conclusions. Windows 7? Unlikely. MeeGo? Unlikely. The next Windows version, rumored to be suitable for touch. Probable.

Microsoft and Nokia had cooperated on computers before. In 2008, the computer market was shaken by a new phenomenon when people wanted to buy smaller and cheaper portable devices. Netbooks became the fastest growing market segment. Their product philosophy was a small screen and a stripped-down bare bones structure. The focus was on using the internet—so, often there was no hard disc, CD or DVD drives.

The most common operating system was Linux. In the first half of 2008, only 10 percent of netbooks used Windows.

At the same time the market exploded: During 2008 11.4 million netbooks were sold, this was 30 times more than the year before. The PC operating systems giant was between a rock and a hard place.

Netbooks were eating into the sales of Windows laptops. Should they protect old revenue sources or run after new ones?

True to its history, Microsoft went for protectionism. It refused to sell Windows XP to all netbooks or kept the license too expensive. However, netbook screens quickly got larger and more features were requested, and Microsoft got its own quickly.

Nokia stepped into the picture in 2009. It announced the plan to bring a Windows based netbook called Nokia Booklet 3G to market. The device caused confusion from the start. Why did Nokia suddenly pursue the computer market? Why was it based on Windows, its competitor in mobile phones? And after all: What was Nokia going to achieve with the device?

Nokia Booklet was beautiful and handy, but expensive and its performance mediocre. Sales were poor, as expected. The timing was poor, too. Market share of netbooks was at its peak in early 2010 and started to dwindle fast with the tablet revolution. In short: The device didn't differentiate itself from others and it came out at the wrong time.

According to Elop's statements in 2011, the mistakes of Nokia 3G Booklet would not be repeated in the new Microsoft cooperation. But how?

A director who worked with Nokia Design says that there were several tablet projects in circulation. Among these was the previously mentioned Meltemi tablet, which Elop probably referred to when mentioning Nokia's own software assets. He hinted that there was also ongoing work around Windows itself, that is, Windows 7.

However, the most natural choice from the start was Windows 8, Microsoft's response to iPad. With it, Nokia could reinvent the tablet, create a completely new kind of device around it. Head of product design Marko Ahtisaari said in the spring of 2012 that he spent about a third of his work hours on a tablet. The unique device that Elop called for, Ahtisaari said, was work in progress. The mantra was *heads up*. Usage in both smartphones and tablets should be easier than tapping icons, eyes glued to the screen. According to Ahtisaari, voice would play a role in it.

A director who worked with Nokia's design unit says that the *heads up* slogan was misunderstood for something groundbreaking, a user interface such as Google Glass. It was, in his view, about a general principle of larger screens, the large and easy-to-hit Windows 8 tiles, controlling the music player with buttons on the device without having to take the device out of the pocket, and similar small improvements that lessened the need to squint at the screen.

Elop thus hinted at a forthcoming tablet. In March 2012, it was announced that a tablet based on Windows 8 would be launched in the last quarter of the year and the Taiwanese firm Compal Electronics was selected as the manufacturer. Even the size of the first batch was known: 200,000 units.

In June 2012, the roof caved in on Nokia. Microsoft announced its plans to launch two tablets of its own, called Surface RT and Surface Pro.

According to a source in Nokia's Board of Directors, the announcement was as big a surprise to Nokia as it was to all other Microsoft partners. In Nokia's plans for the future, it would bring out the Windows 8 tablet at around the same time as the first Windows Phone 8 and then it would concentrate on the Meltemi tablet.

After Microsoft's Surface announcement, the Windows tablet vanished quickly from Nokia's plans.

To understand the harshness of this blow, one needs to remember Microsoft's strategy at that time. It was almost completely based on software. The most significant Microsoft-branded hardware was the game console Xbox. The rest were accessories like computer keyboards. The change in strategy was a shock to PC manufacturers, because Microsoft suddenly became their competitor. What about Nokia? Even worse. If Microsoft started to manufacture tablets based on its own software, how soon before the same would happen in phones?

Furthermore in summer 2012, Nokia's special status as Microsoft's partner was just writing on paper. The tablet strategy would have to be built from scratch.

Nokia decided to wait. Since they had the opportunity to do so, they would first wait to see how Surface tablets and other manufacturers'

Windows tablets would sell. In the fall of 2012, the decision to wait seemed to have been a wise move. Surface tablets quickly turned out to be a disaster for Microsoft. Their sales started at the end of October 2012 and were poor from the beginning. Surface RT, based on their own Windows 8 applications, was a particular disappointment. The basic reason was familiar: There were few Windows 8 applications, even fewer than Windows Phone applications.

In June 2013, Microsoft had to make a \$900 million write-off for its Surface stock, which was one of the reasons for Steve Ballmer's resignation/dismissal. According to market rumors, 3–5 million Surface tablets were stocked, and during the eight month period, only 1.7 million had been sold. For comparison: In November, Apple had sold 3 million iPads in 3 days, and 57 million during the whole time that Surface was on the market. However, the runaway winner was Android tablets. During July–September 2012, iPad's market share dropped for the first time below 50%.

Nokia continued to wait.

In October 2013, the waiting came to an end. The phones division had been sold to Microsoft a couple of months earlier, but now the time was seen to be right. One could think the timing strange, because Surface and the Lumia tablet would compete fiercely against each other, despite the fact that soon, they would both be under the same roof.

According to Elop, Microsoft had nevertheless approved the launch and knew about it before the purchase of the phone business. Microsoft had seen—and still saw—that the device would differentiate itself enough from Surface tablets.

The Lumia 2520 tablet was based on the second generation of Windows 8. Elop's hyperbole turned out to be just empty rhetoric. In reality, only three things distinguished Lumia 2520 from Surface tablets: LTE connectivity, a better processor and an additional battery in one keyboard version.

Analysis is easy in hindsight. Microsoft was the worst option for Nokia's tablet strategy. As it stepped into the world of the Windows Phone, Nokia was the last of the large mobile phone manufacturers without a tablet. And above all: Application development for Windows phones and Windows tablets were two different worlds. Microsoft had, in fact,

chosen a different strategy than its competitors. For Apple and Google, smartphones and tablets were cut from the same tree. They had the same operating system, the only difference was screen size. An application created for the phone was used in the tablet as such. And if one knew how to use the phone, using the tablet was child's play. Microsoft drew the line in a different place. The crowning idea of Windows 8 was unifying the user experience on PCs and tablets. As explained in the beginning of this chapter with netbooks, the most important thing for the company was to protect its old bread and butter. PC users had to find it easy to switch to tablets—or even better, PCs and tablets could be morphed into the same device.

Because it chose Microsoft, Nokia was dropped off from this game. Tablets became a lost opportunity for Nokia, and a big one at that. During 2012, 116 million tablets were sold. 46 percent of those ran on Android. In 2013, 195 million devices were sold, meaning a 68 percent growth. Android's market share had increased to 62 percent. The share of Windows tablets was a meager 2.1 percent.

Similarly, the response to Samsung's large screen Note smartphones came late. The first two large screen Lumias were launched in Abu Dhabi at the same time as the first tablet—a couple of months after the decision to sell off the phones business.

Why so late? Because at first, Windows Phone 8 didn't support large enough screens. And even if it did, tile sizes were uncomfortable. The third row of tiles and support for large screens became available for Windows Phone 8 with its third update in October 2013.

To top this all off, Nokia had to recall 30,000 Lumia tablet chargers for repair or replacement. The charger, manufactured by a subcontractor and sold with the device in eight countries, could give its user an electric shock. Using of the charger was to be stopped immediately.

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19. The next billion

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Mary McDowell had a difficult task ahead of her at the ExCel exhibition center in London. It was September 14, 2010. During the next thirty minutes she had to convince journalists, analysts and bloggers on the awesome future of Nokia feature phones, while they were distracted by other topics: The recently appointed Chief Executive Officer Stephen Elop, who had not shown up yet; Anssi Vanjoki, who was set to leave the company, but had once again captivated his audience like a rock star; MeeGo, which had not been mentioned at all; and Symbian and its potential improvements.

McDowell had the responsibility for leading Nokia's cash cow: Feature phones. They were supporting Nokia, even as smartphones were underperforming. She talked about Nokia's tough new goal: Mobile internet would be brought within the reach of the next billion consumers. McDowell said: "Nokia is proud of bringing the internet and mobile devices to people in every corner of the world. If the internet is the great equalizer, mobile is the great enabler."

In 2010, the foundation of Nokia's business consisted of devices priced at a few tens of euros (\$30–50), with which one could make calls, send text messages, and use simple web services. Thanks to efficient production, feature phones yielded larger profit margins to Nokia than smartphones. The amazing efficiency was based on the S40 operating system, which had been introduced in 1999. Nokia conquered the world with S40. It was made possible because the system could be tailored at a low cost to mobile network providers operating in different regions. By 2012, Nokia sold 1.5 billion S40 devices across the world.

McDowell, a 46 year old American, had studied computer science at the University of Illinois. She had worked at Compaq and Hewlett-Packard before joining Nokia in 2004. She was appointed directly to the Group Executive Board, where she was the only woman. First, she led the Enterprise Solutions unit, responsible for phones targeted at business customers. In 2008, McDowell was appointed Chief Development Officer, and in summer 2010, Executive Vice President of Mobile Phones. McDowell retained her position as the leader of the Mobile Phones unit also when Elop started as CEO. Even though the market share of Nokia's feature phones had slightly declined, McDowell's unit was making a reasonable profit, and had promising growth opportunities. When Elop announced his new strategy in February

2011, bringing the mobile internet to a billion new users was an important part of it.

The race among the giants was, however, tightening. In January 2011, Eric Schmidt, the CEO of Google, wrote in *Harvard Business Review*: “As I think about Google’s strategic initiatives in 2011, I realize they’re all about mobile... But to realize that vision, Google needs to do some serious spadework on three fronts. First, we must focus on developing the underlying fast networks (generally called LTE)... Second, we must attend to the development of mobile money... Third, we want to increase the availability of inexpensive smartphones in the poorest parts of the world”

Fast networks. Mobile money. Inexpensive smartphones. The article was a direct provocation aimed at Nokia.

Speculations on the restructuring in the mobile phone business landscape heated up. Would Google buy Nokia’s mobile phone business, or even the entire company? When Nokia gave a profit warning in May 2011, due to the Symbian catastrophe, feature phones were still making a profit. In August, Nokia’s mobile phone market share had collapsed from 30.3% to 22.8%. Nokia was still the largest manufacturer in the world, in terms of volume. It had shipped 97.9 million units in the second half, whereas Samsung had shipped 69.8 million phones.

In September, Nokia announced that its feature phone production in Europe would come to its end. The factory in Cluj, Romania, would be closed down by the end of the year. Henceforth, inexpensive phones would be manufactured in Asia, as their markets were there. In addition to the factories in China and India, a new factory would be built in Vietnam. A person who worked in Nokia Communications remembers having seen Elop unusually nervous in Cluj. Elop spoke to the factory staff via an interpreter. The audience, who had heard about the termination, were naturally hostile. The mobile phones business still looked promising: In the same month Niklas Savander, the executive responsible for the sales and marketing of devices, estimated that the demand for feature phones was on the rise.

The most significant markets for Nokia’s mobile phones were in India. Nokia made a critical mistake in bringing dual-SIM phones late to the

market. According to Ramashish Ray, who was responsible for retail sales in India, Nokia was two years late: “Slow reaction to market reality, leadership bureaucracy and the diffusion of the decision making to too many forums”, Ray lists the reasons for the delay of the dual-SIM phones.

Dual-SIM devices became wildly popular in India, as they allowed several people to share a single device. In addition, patchy network coverage could be improved by using SIM cards of two different network providers. Nokia announced its first dual-SIM phone in August 2010, and shipped 18 million of them to sales points during the third quarter of 2011. This was larger than Apple’s global iPhone sales during the same period. Typical to Nokia, volumes were great, but competitors moved even faster. Samsung had time to fill the Indian market with its own dual-SIM phones right under Nokia’s nose.

Nokia Money was also popular in India. The project began when Olli-Pekka Kallasvuo was at the helm. The goal was to develop a simple payment solution to inexpensive mobile phones, and thus enable the disadvantaged in developing countries to become users of financial services. Out of the 6.6 billion people in the world, only one billion had bank accounts back then, whereas four billion were mobile phone users. In the Indian countryside, for example, cash transfers were made through couriers carrying piles of cash. Payments using mobile phones would bring money transfers to the present day. Mary McDowell had acted as the godmother for the project, which raised great expectations. More than a hundred people were developing the service. Obopay, an American company developing mobile payment applications, was involved in the project. Nokia Money was one of the fastest growing mobile services at Nokia. Tens of thousands of financial service agents were selling it to consumers.

Elop spoke about Nokia Money in excited tones still in the beginning of 2011. A person who worked with Nokia Money in Oulu in Northern Finland remembers how feelings were conflicted when other Oulu Nokians were brought to the slaughterhouse at the former premises of the butcher house Atria to be notified about their layoffs, while at the same time, Nokia Money was presented as exemplary.

The hype was short-lived. The interviewee was negotiating the launch of the service in South-East Asia in summer 2011, when he got a call

from the headquarters: Come home. Nokia Money would be ramped down. According to the interviewee, Nokia Money became a victim of a strategic choice, i.e. focusing on smartphones and shortsighted cost cuts. The added value from Nokia Money could not be proven as fast as Elop's penny-watching watchdogs would have liked. He reminds that it is easy to calculate that WiFi adds 25 cents of value to the mobile phone, but determining the value-add for a service is much more complicated.

Later, Nokia Money continued its life in a company called Mobile Mistral Oyj. Sports Tracker, an application that later became a success, had been carved out in the same way earlier.

London, October 26, 2011. Asha phones were presented to the audience at Nokia World. Asha is a Sanskrit word for hope. Asha was indeed the planned means to get to the next billion mobile internet users. Asha was supposed to have all the goodies that a consumer in developing markets could want: A five-megapixel camera, touch screen and full QWERTY keyboard. Dual-SIM. Music player and a battery lasting 52 hours.

The price of an Asha varied between 60 and 115 euros (\$75–150). They were more expensive than the cheapest Nokia feature phones, but clearly more affordable than smartphones. In terms of features, they were similar to smartphones. Nokia again tried its recipe for success: Slightly more reliable and more stylish phones compared to competitors, and features that should appeal to an Indian or Chinese consumer.

At the same event, Nokia also announced their cooperation with Rovio. It was an attempt to inject some strength into the flagging S40 platform with the Angry Birds game. It was also included on Asha devices. Rovio's marketing director Peter Vesterbacka said he believed that the growth of Angry Birds will accelerate along with S40. At the London press conference, Elop emphasized how hard it was to implement a sophisticated design at massive volumes. It certainly was, but could the consumer appreciate the effort?

Nokia had had a strong foothold in India for a long time. Hopping on to a bus at Delhi airport in the early 2000s, the most common ringtone one heard was the Nokia tune. Nokia leaders got an audience with the

minister of telecommunications with one phone call. Nokia had been one of the best-known foreign brands in India. The situation started to change in 2010. Nokia tune became increasingly rare in Delhi each year. Nokia offered Asha feature phones at the price of a cheap Android smartphone, which was a lost cause from the beginning. Samsung's Rex basic phones were disrupting from the other end of the price range, as their price-quality ratio was perceived to be better than Asha's. Until then, Nokia's low-end devices had brought retailers large volumes and commissions. But now the rising Android manufacturers one-upped them. Samsung spent significantly more on marketing and lubricating retailers. Indian phone manufacturers saved on components and software, and the quality varied a lot, whereas Nokia emphasized quality to the bitter end. When the going got tough, the nice kid did not make the grade anymore.

February 27, 2012. At Mobile World Congress in Barcelona, Nokia presented three new Asha models and two new Lumia smartphones. Nokia's share price dropped almost six percent on the Helsinki stock exchange. Nokia's new models did not convince investors.

In April of the same year, Nokia announced the results of the first quarter. It was a sad read. The most crushing news came from China: The revenue of mobile phones had dropped by 70%. The S40 models did not please the Chinese too much.

Magnus Rehle, a former analyst with the Nordic network provider Telia-Sonera, said that the problem in China was the inability to attract small application developers. The phone must have global services such as Facebook and Twitter, but also needs local apps. The game is lost without them. Another mistake in China, according to Rehle, was spreading the efforts over too many fronts. There was demand for affordable smartphones, but Nokia pushed feature phones to the market. Nokia brand as such still had a lot of value in China. Rehle believes that had Nokia sold affordable smartphones equipped with relevant applications under its brand, and not Ashas disguised as smartphones, there would have been a guaranteed demand.

On an investor call related to the quarterly review, Elop bravely reiterated that experiences with Asha were encouraging. He promised that Nokia would invest significantly in the research and development of feature phones. Chief Financial Officer Timo Ihamuotila assured that

Nokia's profitability in feature phones would remain competitive. The management did what they could to reassure investors, who were losing their last hope with Nokia.

June 2012. Layoff of 10,000 Nokia employees. Mary McDowell had to leave, too. Her role as head of Mobile Phones was filled by Timo Toikkanen, 46. Toikkanen, a lawyer by education, had led Nokia's business in Hong Kong, China, Middle East and Africa. Previously, he had been responsible for strategic operations and business development. In Hong Kong, he had served as the chairman of the Finnish Chamber of Commerce in Hong Kong, as the vice-chairman of the European Chamber of Commerce, and as a member of the Executive Committee of the Hong Kong Wireless Technology Industry Association. He was networked deep into the Asian business elite.

Operational leaders had now been changed. However, more radical measures were needed, as the situation had become unbearable.

Nokia was still missing a smartphone priced at under 100 euros (\$130). Something had to be done. In September 2012, Nokia presented a new model: The Asha 309. At the same time, Nokia announced that Ashas equipped with a touch screen were smartphones from then onwards. Nokia's official Conversations blog said: "The new devices offer a fluid 'swipe' user interface and an open environment for third-party app development—characteristics that have earned the complete Asha Touch range full smartphone classification from global market research companies and analysts such as GfK and IDC."

The view was well justified from a technical point-of-view: The new Asha models had maps, a touch screen, WiFi, internet radio, an improved browser and Facebook and Twitter applications. If the popular Ashas would really be considered as smartphones, it would revolutionize the market shares. The smart Ashas could get Nokia back into the major league, at least on paper.

The announcement still smelled fishy. Would consumers buy it?

In October 2012, Nokia announced its third quarter results. Asha sales were strong. Sales of feature phones had increased by three million units in three months, even though Wall Street had expected a decline. The position in developing markets looked good, for a change. Many old competitors, such as Motorola and Sony Ericsson, had entirely

abandoned the production of cheap mobile phones. Nokia faced local competitors, such as Spice and Micromax in India, which had products of lower quality than Nokia had. Nokia was bringing its maps services to cheaper models, which could squeeze competitors even further. Even Europeans suffering from a downturn were buying Nokia's cheap models, which was positive as well. The ten percent increase in Nokia's European sales volumes was a testament to this.

"Nokia is back in the game in feature phones", estimated the British analyst Neil Mawston in the Finnish newspaper *Helsingin Sanomat* in November 2012. In the same article, Elop said that Nokia had sold 6.5 million Asha devices during the previous summer. According to Gartner, Nokia was still the second largest mobile phone manufacturer after Samsung. Samsung's market share was 22.9% and Nokia's 19.2%, taking smartphones and feature phones together. The difference was not that great. However, profitability separated Samsung from Nokia. The Korean giant sold both smartphones and cheaper devices evenly, whereas Nokia's sales were mostly cheap phones. Nokia had dropped to a marginal seventh position in smartphones. From July to September, out of the nearly 200 million smartphones sold globally, less than 3 million were Lumia devices. The industry at large did not go along with Nokia's self-imposed decision to classify the more expensive Ashas as smartphones,. As Ashas were built on top of the S40 feature phone platform, most industry analysts had decided to classify them as feature phones.

Worse still, the growth of the mobile phone market had stopped. In the fall, 428 million units were sold, compared to 441 million a year earlier. On top of that, a growing share of the phones sold were cheap smartphones. Those, which Nokia did not have. The price level of phones was declining across the board. If a smartphone would cost 70–100 euros (\$90–130) going forward, Nokia would need to lower the price of its feature phones to 30–60 euros (\$40–80). It would be the final blow to the profit margins.

The Nokia wagon was hurtling down the slope, but Nokians tried to find joy in the smallest achievements. Christmas sales had gone well—in Finland. Asha had become a hit. In addition to the flagship devices, such as iPhone and Lumia, Santa carried cheap phones designed for the Indian market, in his bag. Asha appealed to the youth, because it was preloaded with Angry Birds.

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The tenth of January 2013 was a happy day for the Finnish economy. Nokia issued a positive profit warning. Big headlines made a reappearance in the reports of business journalists. They were truly enjoying being finally able to write positive news on Nokia. The Mobile Phones unit and the Lumia range had beaten expectations. More than 14 million Ashas and Lumias had been sold. Nokia's share price rose by a stunning 16 percent. In a BBC interview, Ian Fogg, an analyst with IHS, estimated that Asha would be one of the winners in the future. Fogg reminded that as much as a third of all phones sold in the world in 2016 would be affordable smartphones. Access to e-mail and internet would be sufficient for a growing segment of the world's population. Only those wanting great gaming capabilities and fast internet connectivity would opt for an expensive smartphone.

The good fortune lasted for two weeks. On January 25, 2013, Nokia reported a barely profitable 2012. The income was entirely due to Nokia Siemens Networks. The device business reported a loss that was nearly as large—700 million euros (\$920 million). Phone sales volumes were still large, 336 million units in the previous year, but profitability had evaporated. The former ruler of the mobile device business still pushed out large volumes, as in the old days, but was no longer bringing money in. The business had turned into a fool's game, which undeniably showed up in the bottom line.

In the days following, the market research firm Strategy Analytics published information on mobile phone producers' market shares. Nokia's share had decreased significantly in both smartphones and feature phones. Samsung had extended its lead as the largest phone maker in the world. The Korean company put on a fantastic performance with their phones: In three months, almost four billion euros (\$5.3 billion). Nokia's phones were loss-making. The leadership of the phone business had moved from Espoo to Seoul, South Korea. There was also a worrying rumor about Apple's affordable iPhone. *Bloomberg* and *Wall Street Journal* wrote that Apple was seriously planning a sub-\$200 iPhone. There was a common belief in the industry, that if this were to happen, there would be severe consequences especially to Nokia, which had a tight cost control, as well as to RIM and HTC. *Gartner* estimated that the mobile phone game during the ongoing year would be tighter than it had been earlier. *Gartner* still believed that Nokia would be able to raise the number of applications and the prices of devices, which would help the company

back on the path of growth. Nokia was after all, still the second largest device manufacturer.

In February 2013, at the Mobile World Congress in Barcelona, Nokia announced Asha 105, priced at 15 euros (\$20). Its predecessor, Nokia 1280, had sold 120 million units worldwide. The low price was a surprise. In terms of quality, Asha would easily beat its similarly priced Chinese competitors. Elop reminded that there were still 2.7 billion people in the world, who did not have a mobile phone. Asha 305, which had been launched the previous summer, was chosen as the best mobile phone of the show. Two other Nokia phones were also candidates to win the prize. Nokia's expertise in feature phones was still valued.

In February, Nokia launched a new dual-SIM device. Asha 310, priced at 100 euros (\$137), would start to sell during the first quarter in Asia, India, Middle East, Africa and Brazil. However, the dual-SIM market was lost. In March, the newspaper *Hindu Business Line* reported that D. Shivakumar was let go. He had been responsible for Nokia's operations in India from 2006 to 2011. In April, market research firm GfK-Nielsen revealed that Samsung had surpassed Nokia in India. Psychologically, it was a heavy piece of news. At its highest, Nokia's market share had been 80 percent. The newspaper *Economic Times of India* estimated that Samsung's overtaking was due to its strong reinforcement of the product portfolio. The Samsung Rex phone had become tremendously popular in India. In the news article, Nokia's former sales director Sunil Dutt wondered how Nokia's fall by the wayside was possible in just six years.

India caused other problems as well. During early 2013, the Indian tax authorities had taken the bookkeeping of the Chennai factory under their magnifying glass. They suspected that Nokia had been avoiding taxes. The newspaper *Hindu Business Line* reported that the unpaid taxes in question amounted to a hundred million euros (\$140 million). The Sriperumbudur factory was located close to the city of Chennai, and for instance, Asha devices were manufactured there. Telecom companies had come under close scrutiny of Indian tax inspectors. For example, the giant network provider Vodafone faced tax payment demands in the range of a billion dollars, based on an acquisition completed years earlier.

April 2013. The first quarterly review threw cold water on shareholders. The profitability in feature phones had finally collapsed. Nokia had sold 55 million mobile phones in the three-month period from January to March, compared to 70 million a year earlier. The forward-looking statements by the management indicated that the problems in feature phones were expected to continue. The sales in China had collapsed already at the beginning of the year, and it seemed that Middle East and Africa would follow. One reason was that the feature phone stock of Asian network providers had grown too large. Consumers increasingly shied away from buying cheap feature phones, instead opting to buy affordable smartphones. Network providers emptied their stock more slowly than before, and did not purchase new devices from Nokia.

Despite everything, Elop was smiling his famous smile in May 2013 in Delhi. Nothing in his appearance revealed the crisis. India was going under. Samsung had invested \$1 billion for marketing Rex in India. Nokia did not have the weapons to respond to such a strike. According to Ramashish Ray, Asha was a decent product, but its fate was to lack the kind of partners in India that Symbian had had. With Symbian volumes, Nokia had been able to get the best players in the business as partners. Along with the collapse in volumes, Nokia had now lost these partners.

Nokia still had an ace up their sleeve. In Delhi, Nokia's gospel was that Asha was not just a phone, but also an operating system that would replace S40. Improving Asha was possible thanks to an acquisition Nokia had made. In November 2011, Nokia had half-secretly acquired the Norwegian software company Smarterphone, which had a product of the same name. According to their marketing, it made all phones smart. The acquisition had become public in the first half of 2012. Now that Ashas had touch screens, they would start to resemble smartphones even more, with the help of Smarterphone. The most important innovation was the swiping technique, which meant that one could use Ashas with the convenient swipe movement familiar from smartphones. The new Asha operating system, based on Smarterphone, became the replacement for both S40 and Meltemi at the same time. Peter Skillman, who had worked on MeeGo and N9, had designed the user interface.

Asha, Nokia's last hope.

In July, Nokia reported their quarterly results as usual. The Nokia group had made a profit of 243 million euros (\$316 million) during the second quarter. The result was clearly better than what the analysts expected. A year earlier, the company had floundered in a loss of 377 million euros (\$479 million). The phone business still looked sad. It had made a loss of 32 million euros (\$42 million), even though the situation had improved from the previous year, which was in the red by 364 million euros (\$462 million). Smartphones were losing money, feature phones barely breaking even. Even though the volumes had not significantly declined, the revenue had collapsed. Phones were dumped at rock-bottom prices.

Elop announced that the Mobile Phones unit would start the statutory negotiations for reducing jobs. Layoffs threatened 440 people working for the unit of which 160 in Finland. The remaining 500 people in Oulu were most afraid. Nokia had tried to move feature phone software development from Oulu to China already for years. Everything else had been transferred already: Mechanics, production and component manufacturing. S40 development had stayed in Oulu for the reason that no programmer in Nokia's R&D site in China wanted to work with an antiquated operating system.

In the investor call, Elop repeated the familiar refrain like a parrot: Significant measures had been taken, stock levels had been lowered, further statutory negotiations for personnel reductions are on the way. The next Ashas would offer a completely new customer experience. But at that stage, it was all too late.

The fall of feature phones was the final nail in the coffin to Nokia's phone business. After that, the only option left was selling the business. Feature phones had supported Nokia through the difficult years, and prevented a complete crisis. As late as in 2011, feature phones brought profits of 1.5 billion euros (\$2 billion). In 2012, it had dropped to half a billion (\$0.7 billion). In 2013, the feature phones barely made a profit, and in 2014, according to estimates, the business will result in heavy losses for Microsoft.

Many interviewees said that Nokia left S40 adrift, despite many efforts. When it still had money to spend, the management focused on smartphones, and under-invested in S40. When the bad years started, the cost cuts were applied first to the feature phone platform. The

interviewees thought that the opposite should have been done: Put all the effort on feature phones once it was noticed that the smartphone game was lost.

Another problem was the price level of affordable devices, which had reached unprecedentedly low levels. According to the Swedish analyst Helena Nordman-Knutson, Nokia was unable to get involved in the fiercest price war, due to its heavy cost structure. The Mobile Phone organization was too expensive to sell phones at a bargain.

Looking at the offering from the point of view of an Indian or Chinese buyer, it was easy to see why Nokia could not compete. In 2012, it was possible to get an Android device by a local manufacturer for even under \$50. With \$50–150 one could purchase a Samsung-like branded Android device with a five-inch high-resolution display, eight megapixel camera, dual-core processor and the versatile Android ecosystem. Nokia's response was the Asha construction built on top of S40, at almost the same price, but with a smaller display, no dual-core processor, and fewer megapixels and applications.

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20. Tough times for Nokia sites

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The news was devastating. Two out of three would lose their jobs. The personnel at Salo factory were invited to an internal info session on February 8, 2012. Production personnel numbering 1,600 were requested to join the session. Everyone had been anxiously waiting for news since the previous fall, and now it was happening. A chapter of Finnish industrial history was about to close: The factory at Salo would cease to manufacture phones and the production would be transferred to Asia. Only a limited crew involved with research and development, as well as smartphone customization would remain in Salo. Ready-made Windows phones would be brought in, onto which Finnish workers would install the software and package the phones.

The announcement was downright humiliating to Salo personnel. Salo was the place where Fjalar Nordell and Lauri Koskinen had launched radio receiver production in 1928. This was where Salora had started

the production of black and white television sets. This was where Mobira had developed and manufactured the first car phones, and Salo had given birth to Cityman, Nokia's first handheld mobile device in 1987. Not to mention the millions and millions of NMT and GSM phones manufactured there.

The info session was understood to be exceptionally grave. After the session, which started at 10 o'clock, the rest of the day was announced to be paid leave, which was totally unheard of.

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What put an end to the Salo factory? Why was Salo no longer profitable?

Salo was the most modern of Nokia's production facilities. The equipment and the production process were top notch. The true strength, however, were the people who had manufactured mobile phones for 25 years. The knowhow and the integrity of the personnel were unparalleled on a global scale. The efficiency of the production was world class. For example, when Lumia 800 and 900 phones were manufactured, there were never any factory-related problems.

According to a director who knew the Salo factory intimately, the problem was the process for designing the production of phones, which was outdated. Salo simply got going with the production slower than the competition. Apple could get started with a production batch of one million phones in one day. In Salo, it took 8 to 12 weeks before similar production figures could be reached. This was not because of the factory, though, according to the director, but because of Nokia's production process was initially planned in 2003–2005 period when it was sufficient to get phones out in smaller batches. The first batch was sold in Europe and then onto Asia.

When Elop joined in 2010, the mentality was largely the same, and Salo was Nokia's Golden Child. The head of production and logistics, Juha Putkiranta, had referred to a new way of working in February 2010. This was piloted in Salo, because the factory was a forerunner in all inventions related to Nokia's material flow. He explained how the market and Nokia's strategy had changed. Smartphones were to be delivered, ready and tailored, to the network providers and large

distributors. The software package would already contain applications and market-specific content, for example, maps. Salo concentrated on manufacturing phones, fast and efficiently, in small batches. Generic large-scale manufacturing, producing components and the setting of the printed circuit boards was centralized to the large factories in Asia. The production cycle needed to be sped up, because customers' plans kept changing all the time.

In September 2010, the future of Salo looked bright. A month earlier, the temporary layoffs for the fall had been called off, and the factory was hiring new staff, because the N8 smartphones were being produced for the Christmas market. The deputy chief employee representative, Marjo Kallio, announced how satisfied she was because the remaining staff in Salo was fully occupied.

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Elop had a major chip on his shoulder with Salo. He understood the symbolic value of the factory and wanted to avoid, to the very end, upsetting Finns in their home territory. After having spent half a year at Nokia, in an internal personnel meeting he assured that Salo factory would remain. Nokia needed more production capacity. The employees were satisfied with the news. Many said Elop's speech had strengthened their faith in the future. Union representatives said they had interpreted the overall sentiment to be such that the personnel could look forward with relative confidence to keeping their jobs.

In April 2011, when Nokia announced the massive layoffs as a result of the Windows strategy, the 3,800 staff at Salo sighed in relief. Executive Vice President of Markets Niklas Savander, announced that manufacturing is a critical competitive advantage in the future business. Salo would remain as a factory manufacturing smartphones, even if the new factory in Vietnam was already in the planning.

When the hammer fell in February 2012 and the layoffs were announced, Elop still highlighted how important the Salo factory was for Nokia: "Despite the reductions that are underway, the Salo factory and the product development done in Salo will continue to play a significant role", he formulated. In hindsight, the statement cannot be said to have been very honest. Internally, Elop had begun to make it clear that phone manufacturing must be made faster. If he had

announced publicly that phone manufacturing in developed countries is no longer profitable, he could have saved face. With the path he took, he managed to both anger the Finns and got a label of goal-oriented, foreign, restructuring man.

All it took was four months before the whole Salo factory was on the kill list. The last 870 workers were made redundant, and the only thing remaining in Salo was the research and development of Lumia phones.

According to a director who knew the factory well, June 14, 2012 was the saddest day of his life. He also remembers the head of production Juha Putkiranta to have been thrown off by the news. “Still, from a purely business angle, it was the right decision. If the phones are not selling, how can you keep up the factory?” The director also estimates that if Nokia had been just a little better off, financially—not even profitable, but if the losses were smaller—and taking into account the strengths of the factory, Salo would have remained a part of the production chain. But the whole production model of Nokia had become old-fashioned. There was simply no money left to keep the factory running. It was Nokia’s largest asset.

The last mobile phone manufactured in Salo was made on Wednesday, July 25, 2012. It was either an N9 or Lumia 800, the chief union representative could not publicly say exactly which.

The city of Salo, once the symbol of Nokia’s growth, had taken its crown jewel for granted all these years. The city elders had built town halls, daycare centers and schools with the tax money, and the influx of people into Salo had been downright chronic. On top of the municipal services, the city had also invested in housing. The tables, however, had already turned a few years earlier, and problems had started to accumulate. Nokia’s downfall manifested itself as increasing health problems. Temporary and permanent layoffs were clearly taking their toll in the demand for health services. Increasing alcohol abuse was visible in the extent of support families needed. Child welfare services could no longer handle all the cases within the statutory time limits.

In January 2012, the city’s Chief Financial Officer, Seppo Juntti, took a very grim view in the local newspaper *Salon Seudun Sanomat*, and stated that he believed the tax income would not turn into a growth path ever again. Nokia’s gradual disappearance was even visible in the

amount of waste. When Nokia Salo factory's waste compactor had been emptied at least daily, now it was emptied only once per month.

In February, Salo town hall hosted a low-spirited information sharing session. Smartphone production at Salo factory would cease. In the information sharing session, there were Finnish minister of economic affairs, Jyri Häkämies, minister of labor, Lauri Ihalainen and city mayor, Antti Rantakokko present. Both Nokia and representatives of the Finnish state expressed their wishes that the mostly female labour force, now made redundant at the Salo factory, could find new employment in social and health services. Häkämies saw potential in bringing IT knowhow into the health and the energy sector. The chances of finding new employment were slim, however. Most of the 500-odd people to be laid off, had no qualifications. The city planned to start a business park into the factory premises left empty by Nokia, in the same way as forestry company UPM had done in Kajaani.

Salo was already identified as a city impacted by industry restructuring. The minister of economic affairs, Jyri Häkämies, said that the Finnish government would start a rescue programme during the same spring to save the Finnish IT sector, because altogether 5,000 IT jobs were disappearing from Finland within the time span of one year, and on top, 1,000 people were made redundant from Nokia Salo factory. As engines to drive the rescue mission, the Finnish state had requested that Nokia, Nokia Siemens Networks and Accenture would join in.

Nokia tried to encourage the people made redundant by saying that on previous rounds, the people who were made redundant had already given birth to 100 new enterprises. This time the situation was different: The majority of people made redundant from Salo factory were women who had no or very little qualifications. Many had worked nowhere else than Nokia.

Nokia, the city of Salo, local work and economic development office, and Yrityssalo, a business incubator owned by the city of Salo, launched an information sharing office in Nokia premises. Regional Centre for Economic Development, ELY-keskus, estimated that most of the people made redundant from Salo, would have to refresh their skills and even retrain into a new profession.

For the mayor Antti Rantakokko, the summer and early fall were spent extinguishing flames in the smoking ruins. After the factory had permanently closed its doors, the city council came together in a crisis meeting at the town hall. At that time, the unemployment rate was estimated to rise to 20 percent. The goal was to create 1,000 new jobs to replace the 2,000 lost Nokia jobs.

It took an additional six months to bring the whole production down. Nokia started selling the Meriniitty facilities in Salo and in October, a pharmaceutical company Orion announced that they would purchase a part of the facilities and start a packaging and logistics center in the premises.

Lumia research and development continued to employ 1,500 staff. In May 2013, the *Nokia Conversations* blog wrote that for example, the new model Lumia 925 was largely designed by them.

The demise of the Nokia factory was a huge blow to Salo. The unemployment rate was 11.3% at the end of 2012. Temporary layoff numbers were up to 3,500. The local work and employment center estimated that unemployment figures would rise to 15.5%. In September 2013, when Nokia announced that they would sell the mobile phones business to Microsoft, Salo representative of senior salaried employers, Mika Paukkeri, frankly stated he was afraid the decision would deliver a death blow to the entire city. At that point in time, Salo had 1,200 employers left. It sounded a bit grotesque when Paukkeri continued to say that the Nokians in Salo still had trust in soon-to-be former CEO Elop.

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Nokia did not manage to bring down Oulu as profoundly as Salo, because the people who were laid off there had higher education levels. When the engine started coughing and finally stopped running, almost completely, the northern university city of Oulu was faced with a different kind of problem: Where and what is the new road to success? Nokia had started a research program together with Oulu University in the beginning of the millennium and the growth had been phenomenal. The northern Shangri-La had experienced the first crack in the veneer only in July 2010, when Nokia announced the sales of the wireless modems business to Japanese Renesas Electronics. 1,100

former Nokians moved to Renesas, 450 of which worked in Oulu. The personnel information sharing session was held in one of the university lecture halls, and the Chief Operations Officer of Renesas, Shinichi Yoshioka, came to the session in person. People transferring from Nokia to Renesas were in shock, but the overall sentiment was relief: Operations would continue with familiar people and nobody would be laid off.

In August 2010, Nokia and Intel established a joint research centre in Oulu. A few dozen researchers were employed there, and this was seen as a sign of Finland still being a potential incubator of high technology. The centre developed 3D mobile applications, and, for example, games, and holograms which were aimed to improve the usability and the user experience of mobile phones. The CTO of Intel, Justin Rattner, and Nokia's CTO, Rich Green, praised the 3D knowhow of the personnel in Oulu. They both saw big potential for this skill in, for example, the clothing industry.

In February 2011, Oulu saw not only a record-breaking cold spell, but also the advisor to Microsoft CEO, Orlando Ayla. The event was held, apparently by chance, a day after Elop had said that Nokia had chosen Windows. In Oulu, people thought that the local IT coalition had a million dollar opportunity to start jointly developing software with Microsoft. The American company was interested in the 3D and cloud applications developed in Oulu. Microsoft hoped that Nokians would train their staff quickly in these fields.

Nokia employed approximately 2,000 staff in Oulu at that point and additionally, 300 IT companies in the region were dependent on Nokia.

On February 21, 2011 Elop made appeasing visits to Tampere and Oulu. The visits were shrouded in secrecy. Elop quickly slipped away from the press in both places. Elop took a private jet to Oulu in the afternoon, quickly got out of the cab and went in by the side door to Nokia's premises in Peltola. Those present in the information sharing session got very little out of the man.

At the end of April, 2011 the big bang came. Symbian and MeeGo development in Oulu would cease, and hundreds of people would be laid off. The development of the basic S30 and S40 phones would remain. Oulu mayor Matti Pennanen bravely commented on Nokia's

decision to outsource Symbian development to Accenture. Pennanen said that the decision would give a chance to develop new business. He emphasized that the knowhow had not disappeared anywhere and now would be the chance to make room for new business.

In June, the next wave of crushing news hit. 500 to 600 jobs would be at risk. The executive vice president of human resources, Juha Äkräs, calmed down Nokians by ensuring that Salo, Oulu, Tampere and capital region would have strategic significance, also in the future.

Elop gave an interview to the Oulu newspaper, *Kaleva*, saying that Nokia would remain in Oulu also in the future. Oulu would be central to the development of feature phones. This statement is interesting when considering how Nokia had already planned to move the development of feature phones to China since 2008. The well-oiled information machinery was rolling away even if the world was crumbling around it.

A rumour started spreading in early August 2012 that Nokia will cut more jobs in Oulu than anticipated. Some of the staff had already reacted by starting their own companies or leaving Nokia. Some 500 were left in the development of feature phones. Jolla, a Finnish phone manufacturer starting business at the same time, announced that they were considering setting up shop in Oulu, and the recruitment event they organized was a success.

In July 2013, the last of Nokia Oulu had to go into statutory negotiations preceding layoffs. The layoffs were targeted at the Mobile Phones unit manufacturing feature phones. The staff were afraid that Nokia operations in Oulu would come to an end.

On September 4, 2013, one day after Nokia had sold the mobile phones business to Microsoft, Ballmer and Elop, who had moved to Microsoft, were doing rounds appeasing the people in Oulu again. After the years of continuous layoff negotiations, the Nokians were not shaken by the newest piece of news. Newspapers commented that Ballmer's and Elop's visit to Oulu was altogether carried out in pleasant atmosphere. The engineers remaining in the North did not lose their calm even at this stage. Everything had been done before, seen before.

Contrary to what happened in Salo, where Nokia left only smoking ruins, the city of Oulu started placing Nokia people in new companies.

Among others, city-owned BusinessOulu and business incubator, Oulun Yritystakomo, took care that laid-off Nokians spent no time crouching on their sofas. Ex-Nokians started dozens and dozens of start-up companies, most of which working with mobile services. The miracle engineers of Oulu were pitched even in Silicon Valley.

Invest in Finland, an organization working for the Finnish ministry of economic affairs and employment, had salesmen traveling the world, advertising that Finland had top experts on offer. Invest in Finland gave praise for the engineers in Oulu—how they would be more loyal to the employer compared to Indian engineers. Oulu's efforts were recognized world-wide. American Intelligent Community Forum listed Oulu as one of the seven most intelligent communities in the world.

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Elop's Nokia shook not only the impacted cities, but also the Finnish national economy. In 2000, Nokia created 4% of the gross domestic product of Finland. The Research Institute of the Finnish Economy ETLA estimated that taking the subcontractors into account, the company's share of GDP was 8%. One quarter of the economic growth of the entire country was attributed to one company.

The figures are staggering. The Economist magazine has listed ten companies that have been exceptionally important to their home countries. For example, according to Economist, Royal Dutch Shell brought 56% of the gross domestic product of Netherlands, and China Mobile attributed 34% of the gross domestic product of Hong Kong. These companies embellish the gross domestic products of their home countries only accounting-wise, because most of their operations are abroad.

When the list is purged of companies registered in certain countries because of technical reasons, there is only one company resembling the case Nokia: Taiwanese electronics manufacturer Hon Hai. Even compared to Hon Hai, there is one essential difference with Nokia. Nokia made 27% of all the patent applications in Finland in 2011, Hon Hai 8% in Taiwan. Also Samsung's position in South Korea is different. The gigantic corporation is one of the biggest companies in the country, but the economic landscape of South Korea is more diverse than that of Finland.

Nokia's share of community income tax was 17% in the best year. Nokia's share of exports was the biggest in the beginning of the millennium, over 20%, much greater than paper, pulp or forestry equipment. In research and development, Nokia rose to the top of Europe in the year of 2008 with a 5.2 billion euros (\$7.6 billion) budget. There were only eight companies worldwide that year that had a research budget of over 5 billion euros. In 2009, Nokia used almost 38% of all the research investment in Finland. At best, Nokia employed 24,500 staff in Finland which was equivalent to 1% of the whole workforce.

By 2012, all indicators had collapsed. Elop's actions had caused massive losses and the value-add provided by Nokia was negative, as was also Nokia's impact on gross domestic product. The company became a dead weight to national economy. The share of exports dropped down to 5–10% and the proportion of Finnish workforce employed by Nokia dropped down to 0.5%.

But during the years of 2001 to 2008, Nokia had contributed 11.3 billion euros (\$16.5 billion) to the Finnish national economy. In recent years, the billions have not been there which has further worsened the Finnish economy, already weakened by the economic downturn. The Research Institute of the Finnish Economy ETLA's research director, Jyri Ali-Yrkkö expresses it clearly. Finland should have done what Norway is doing—put the money in funds, like Norway does with its oil money. On the one hand, Nokia has served as an international business school for thousands of Finns. What is even more remarkable, Nokia people accumulated expertise in the consumer product business, which has traditionally been a weak point for businesses in Finland. The Finns hardened in the global racing fields of the business are now putting their expertise to good use in companies like Rovio.

And finally: In 2013, Nokia's impact on the Finnish national economy returned to black: +0.5%.

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Abroad, Elop's death blows were equally dramatic as in Finland. The first victim was the Cluj factory in Romania. Closing the factory made 2,200 workers redundant. In September 2011, Nokia stated that it was re-evaluating the long term future roles of the Salo factory, as well as

Komarom in Hungary and Reynosa in Mexico, because the poor sales meant that even after closing Romania, Nokia still had over-capacity in production. The factory in Mexico served the American continent, Hungary served Europe with Salo. Both factories were cut, along with 3,000 staff, 2,300 of which were in Hungary. The cuts had a major impact on the labour market both in Hungary and in Slovakia, where approximately 1/3 of Nokia Hungary workers came from.

In Germany, the Meltemi unit employing 700 staff was closed down, and that made the locals angry. Nokia had promised more jobs to Ulm only three months earlier. Nokia's bumpy decision-making was a source of wonder.

Elop also reorganized research and development. The research network, in his opinion, was geographically too widely spread and far inbetween. Because one product or piece of software had been developed in several places, the ax was swung again. The Copenhagen product development center was closed down. In the United Kingdom, the number of sites were cut. In the US, the White Plains office was closed down and operations were centralized to Sunnyvale, California. Windows Phone product development was centralized in Tampere, Salo, Beijing and San Diego.

The list is long and the amount of human suffering is unmeasurable. Nokia could be one of the companies in charge of the biggest layoffs in the world economy in the recent years.

Compared to American-listed companies or Chinese sweatshops, Nokia still took care of the layoffs in an exemplary manner. In 2011, Nokia launched a world-wide program called 'Bridge' to find new work for the people who had been laid off. The initiative for the program came from the executive vice-president for corporate relations and responsibility, Esko Aho. Elop immediately supported the idea. The idea was to soften the blow and it was considered to be a part of Nokia values to support the personnel being made redundant.

The personnel could take one of the five paths. They were re-employment within Nokia, re-employment outside of Nokia, becoming entrepreneurs, take training or "create your own path".

Those opting to set up a start-up could get up to 25,000 euros (\$36,500)/future shareholder in Nokia-funded support with the

maximum amount of support per startup set at 100,000 euros (\$146,000). Those who were laid off got an additional 1–1.5 year's pay as severance pay. Nokia also would guarantee companies' credit accounts in banks. The programme was exceptionally altruistic in the world of business. In an interview with the Finnish newspaper *Taloussanommat*, various employee representative organizations could not remember any company who would have supported the new companies founded by laid-off personnel as much.

Training involved consultation in finding a new job, change coaching, and training in new professions. Nokians also got their own recruitment service which sought suitable work for the laid-off personnel from external companies and offered experts to other companies.

Tens of millions of euros were spent on the Bridge programme.

A study on the Bridge programme published in February 2014 stated that the programme was a success. Altogether 18,000 Nokians were in the scope of the programme, of which 5,000 in Finland. In a year and a half, 70% of them had found new employment. Some 400 startup companies had been created and 550 Nokians were involved in these. Aalto University made a study according to which 43% of the people concurred with the statement: "I have wanted to start my own company for a long time, and now I got the chance." 170 of the new companies were launched in the capital area, over a 100 in Oulu, 80 in Tampere, and 65 in Salo. The most well-known of the startups is Jolla, that could not have been born without the money from the Bridge programme. Half of the new companies are operating in the software industry.

Nokia gets credit not only for the financial support but also for the flexible attitude for the people who were made redundant.

"The most important things was that they encouraged us and did not try to stop us. They could have stopped the launching of the new company by referring to legislation on non-compete clauses or something like that. They were, however, open with us, and we with them, and that is how we were able to continue with MeeGo" states Marc Dillon, one of the founders of Jolla.

Some who chose to the path to entrepreneurship undoubtedly used the possibility for their advantage and bought more time to think about

their future. By the end of 2013, when the financial support ended, most of the companies employed only 1–3 people and some of the companies have undoubtedly ceased to operate. This does not diminish the well-earned value of the Bridge program. Approximately a half of Finnish startups fold during the first three years.

The Bridge program gained fame abroad. The European Commission started exploring, based on the Bridge program, if a similar model could be applied to situations in which people are laid off from other companies in Europe operating in the IT and communications industry, as well as the supply and demand problematics of workforce. Esko Aho took the Bridge program into the curriculum at Harvard University, where he later went to work. The Bridge program is an example of how a major corporation can carry out its social responsibility in massive layoffs.

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21. Nokia spirit evaporates

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Stephen Elop came from a world where a job gives you financial security and status—but nothing beyond that. If you were to tire of your Silicon Valley employer, you would simply walk across the street and join another startup or high-tech company. In comparison, Nokia was more significant for Nokians, as the job market in Finland is so much smaller. There are only a handful of global public companies in Finland, and nearly all of them operate on a business-to-business market. If you got tired of your Nokia job, there was only one other successful international company in Espoo where your talent could be put to good use—the elevator manufacturer Kone. The mental barrier to leave Nokia for industrial companies such as Outotec, Metso or UPM-Kymmene was very high in 2010, and many still believed Nokia would bounce back.

The situation in smaller cities such as Salo and Oulu was even worse. Nokia had practically eliminated all other manufacturing jobs in Salo as any talent in the region flocked to Nokia's 5000-strong campus. Similarly, Nokia was by far the largest employer in Oulu, a northern economic center with a major technical university, and it wasn't

uncommon that a new university graduate starting work at Nokia would continue to work there for over ten years.

One such graduate was Mikko Merihaara. “For many, there were no other practical employment alternatives in Oulu beyond Nokia. There was a clear focus to ensure that the Oulu site would not be lost to competition between other sites, and the desire was always to ensure Oulu was the best site in Finland.”

The life of young Nokians was sweet in the early 2000s. Most employees were in their late 20s and didn’t have families of their own, so it was natural to hang out with colleagues after work. Nokia organized a continual stream of parties and social events for its employees—so much so that you could pick and choose the best events to go to. The company was growing quickly, and spending on business class flights or a Playstation for the break room was not a problem. What more could a young professional hope for?

Salla Jämsä, an HR veteran who worked in many different Nokia units, believes that Nokia’s good team spirit was a result of successful recruiting, and could only recall a few people throughout her Nokia career who were genuinely difficult to work with. Nokia colleagues got along very well, and it was only natural to spend time together after work as well. Nokia was a second home of sorts—people would work, marry, have kids, and then return to work at Nokia. Most importantly, when you worked for Nokia, it was a matter of national pride. Regular middle-class Finnish men and women were designing and making phones that were used all over the world. *Connecting People, from Finland.*

Ville Valtonen, who was head of human resources at Nokia Finland, explains how the management style during the growth years of Nokia gave plenty of freedom and responsibility, and most employees embraced it wholeheartedly. Young professionals were given a lot of responsibility and tangible targets, and they would work very hard to meet them. Work felt meaningful.

Merihaara, also the chief shop steward of the Oulu site, explained how Nokia was favored by students who had gotten through their studies quickly and were eager to make their mark on the world—no further motivation or incentive program was required. Nokia was a world-class

business school for new recruits, as international consumer electronics is a fickle market where few companies survive at the top for very long. In contrast to other Finnish international success stories, Nokia worked in the consumer business. Marketing gurus in the US and UK looked to far-away Finland in awe: Now that's how you build a mobile phone brand.

Nokians had learned how to work with difficult partners. Network providers were notoriously tough customers and negotiators. Managing a mostly Asian subcontracting operation efficiently was an absolutely essential skill when competing in global consumer electronics. The result was that Nokians were actively pursued by headhunters—but most chose to remain, out of loyalty to the company that had given them so much.

Elop realized this slowly. It wouldn't be enough to turn around a faltering phone business. He would have to save the whole nation.

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As Nokia's financial performance weakened, many attempted simply to survive. It wasn't easy for many to find motivation. As early as in 2010, people on the shop floor knew that changes were on their way and fast.

Statutory negotiations upon personnel reductions had become commonplace. The push for cost savings had started in 2008 when the company financial results plummeted after the all-time high results of the year 2007. Investors liked the personnel reductions. For Olli-Pekka Kallasvuo, just like for Jorma Ollila before him, the share price had been the most important success factor so the personnel had to adapt to a constant threat of layoffs. This was a big change in a company that was used to good revenues. Statutory negotiations hampered both the employee spirit and execution. Anyone can imagine how effective an organization can be if it is rebooted 4–5 times a year.

Personnel motivation was also hurt by duplicate work. Suddenly people might have realized that two similar products were about to be launched at the same time. The smartphone development unit in Oulu had been working on a new product and for some reason the program had been delayed by nine months. At the same time the Copenhagen development team was working on a similar product and their progress

was faster. One of the programs had to be killed and usually the axe hit the program that was late. A printed circuit board designer in Oulu recalls how all their product programs were killed over a period of five years. One can imagine how this impacts job motivation.

Program slowdowns and cancellations eventually led to significant loss of job motivation, says Merihaara. The attitude among employees shifted towards feeling that there's no reason to work overtime any longer or stress about one's work. You only did what you were told to because the program would most likely be killed soon anyway .

It felt like the big bosses in Espoo were very far away. The company headquarters could have easily resided in the US. Both Kallasvuo and Ollila had been distant figures so Elop's nomination had not sounded very different. It did not really matter what language the CEO was speaking.

But actually Elop was different. He hopped onto the plane to Oulu fast, came to the R&D unit and took a phone from a test engineer's hands: Can I test this out too? It sounded like Elop was listening to improvement suggestions and was actually acting on the topics people were complaining about. Merihaara is grateful for Elop for this. "Nokia had been managed by a strong top-down culture. Even if we saw how things were on the shop floor, there were no channels to report these to the upper management. Elop was trying to change this. He had built a team with 10–20 plain engineers. They were telling him what is going on in the organization."

Almost every Nokia person interviewed for this book said they were impressed by Elop's abovementioned style to respond to emails personally and quickly. Many said that this felt especially good because Kallasvuo and Ollila had withdrawn into their ivory tower. It sounded like the middle management had felt to be the most detached, so when the new CEO arrived, cheered people up and remembered their names, they were thrilled. Nokia people enjoyed the style of the new CEO, Elop kept the communication channels open and was almost jovial.

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Merihaara received 15,000 emails from Nokia people during his stint as the shop steward during the 2009–2013 period. He has done a

statistical analysis of the emails and the single topic that came up most frequently was the continuous statutory negotiations to reduce headcount. During these four years, the Oulu R&D unit went through statutory negotiations 30 times. “When the Symbian headcount reductions really took off, we had five parallel personnel negotiations ongoing. I guess that was not legal either.”

Product development was stopped by the continuous statutory negotiations. The former shop steward says that from the day the negotiations were announced, projects languished for at least two months. First, people waited for two weeks for the official negotiations to start, then the negotiation period took six weeks, and then it took two weeks to plan how to execute the layoffs. Product development was idling the whole time. Because of the continuous personnel negotiations there was perhaps six months of productive time in a year. “It felt silly to announce statutory negotiations just in case. The understanding was that we had to initiate negotiations even when there was an organizational change that would not have required statutory negotiations.”

Nokia people in Oulu learned to recognize signs of impending statutory negotiations: External recruitment was stopped, future plans became even hazier, project progress information sessions were cancelled, travel restrictions were imposed and project schedules were frozen.

People came to the workplace but did only the bare minimum. They turned a knob or two or built some piece of code so that the next month’s salary was guaranteed. People were no longer submitting internal improvement ideas or filing patent applications. Managers were spending their days finding ways to motivate their team members: Let’s try to finish this task because it’s the only thing giving us hope. Merihaara stresses that it was not about reduced work morale: “We did want to improve the situation and we were looking into ways how this could be done. Some people spent five hours a day into this. We sent probably 10,000 emails to the upper management. Maybe a hundred of those had some impact.”

When projects were lingering, people enjoyed long lunch hours and coffee breaks. People at their desks were surfing job openings or checking their unemployment benefits. People were busy calculating the impact of losing one’s job on the family’s financial situation. Many

were in the middle of building new homes and had children going to daycare.

Sometimes cost savings and the quest for operational efficiency went overboard. The former head of HR Finland Ville Valtonen thinks that efficiency seeking often underestimated the amount of work required by the operational changes. The intent was good but the end result of operational changes often included increased amount of work and thus also higher cost. Some layoffs were also poorly planned. Panic started when Elop announced that R&D costs need to be cut by one billion euros (\$1.3 billion). Teams were terminated, functions were killed. Experts were laid off and later the remaining organization realized that the company was totally lacking this expertise. People who had been laid off were hired back after a couple of months. Some went through the firing and hiring cycle multiple times. Cuts were done based on numbers and not considering what kind of competences the new Nokia will need. When tough choices had to be made between employees, personal preferences or organizational nepotism also came into play. Personal relationships mattered and the closest friends were able to keep their jobs.

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During the earlier growth years, the Nokia culture had been based on teams with strong leaders but a lot of freedom for employees to execute. The team leader had often been from Finland and the team members knew each other over a long period of time. The key progress indicators were clear: More sales, more new products.

After the Windows strategy announcement, the management's attitude towards remote work became more stringent. Individuals and small teams started to be pooled together in the same physical locations. Big teams in two locations were merged to an even larger team in one location. Some people resigned from the company due to these changes since they did not want to move to Oulu or Ulm in Germany. The Beijing office had severe problems with recruiting because few people wanted to move there.

Middle management was one of the first to notice the working climate getting tougher. There were large numbers of Symbian developers because each new Symbian phone required a new tailored variant of

the Symbian software, as described earlier. The traditional divide between hardware and software developers got worse when the budgets became tighter. Symbian developers in Oulu were envious of the MeeGo people being able to choose 12 euro (\$17) microphone components for their smartphones while the Symbian team was asked to change their 0.40 euro (\$0.56) microphone to another component that was five cents cheaper. Bitterness was spreading in the organization.

One middle manager described how mediocrity was spreading among management. Managers were managing upwards: “They were able to look good in the eyes of their own managers but they were not able to manage their own organizations efficiently. The company would have been able to take a totally different course with more competent managers.”

One middle manager from the services business recalls how conflicted it felt in the organization to go through the layoff phase. You saw how a colleague had to go and you were satisfied and happy that you got to keep your own job. People felt they were working on the right things until the guillotine fell on themselves. One person working in the strategy unit described the Nokia of 2010 as North Korea. Propaganda was plentiful. According to an internal joke, the most accurate HR news one could read was from the Helsinki and Salo area newspapers *Helsingin Sanomat* and *Salon Seudun Sanomat*, respectively.

People had conflicting feelings also about Elop. A former director describes how people were astonished when the CEO was walking around in the building and asking people to cheer up—while the burning platform around him was spreading damage. A person who worked in the communications team said that people were also unhappy with Elop bringing in the new style of systematically replacing Finnish managers with Americans and Brits.

Leslie Nakajima, who worked at Nokia during 2007–2012, describes the dramatic changes in the Nokia company culture. She had joined a company full of self-confidence and one that felt more like a family than an employer. The great layoffs destroyed the company spirit known for humanity, solidarity and optimism. Bitterness was the unanimous feeling when Elop fired Nokia employees, sliced the company and received a massive personal bonus at the end. Most of the

shop-floor employees had not received any bonuses over the final Nokia years. Even more insulting was how some of the short-lived Nokia executives like Jerri DeVard received 7-digit bonuses.

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A senior executive from a telecom network provider describes the Nokia company culture developing into something that was exceptionally competitive. Everyone was competing against everyone else and backstabbing each other the best they could. Many noticed how twisted the culture was only after leaving to a “more normal organization” or to a startup company. The network executive thinks that excessive internal competition is no longer normal: If you cannot trust your colleagues any longer and everyone is busy driving only his or her own agenda, the prerequisites for effective execution are simply not there.

Nokia’s employee retention rates used to be high and this had helped in building the Nokia spirit. However, as the industry was changing this soon became an issue. Mikko Merihaara thinks that Nokia made a big mistake when the company did not hire more new people when the business was still going strong. The same teams who had joined Nokia in the early 2000s being under 30 years old were in their positions ten years later. Merihaara’s statistics indicate that only about two percentages of the one thousand Nokia employees in Oulu left the company by their own initiative. This ratio is too low for a company in the need of a continuous renewal.

“We should have hired 10 percent new people all the time. Renewal stopped completely and this just did not happen. The same people who had been designing phones in the early 2000s were still designing phones when the world had changed. The average age in our teams was closer to 40 but we should have had younger people designing phones for young people. We often wondered why we stopped hiring from the outside so that we could rotate the more senior employees in the company or—and a shop steward should not say this—out of the company.”

At the same time new people were joining and old people were leaving Apple and Google—the world’s most talented workforce was available in Silicon Valley. In the Nokia Oulu offices, people did also have talent

but they did not change. The management layers did not change either, and this was noted by the employees as well: “The same executives were simply rotated to relieve them from their earlier responsibilities or when a new initiative was kicked off. Usually a Nokia person was nominated from the organization. It was always the pieces from the same jigsaw puzzle. This is what our people complained about.”

The managerial rotation did introduce its problems too. During five years Merihaara worked in seven different organizations. “After two of these changes I did not know who my manager was. Once I had the annual development discussion with a manager I had never seen before.”

Many other things were noticed on the factory floor level. Employees were worried about the way Nokia was treating the most important customers of the company, the network providers. The worry stemmed from Nokia’s desire to reap maximal margins from every product, says Merihaara. Competitors like Samsung were seen to offer some of their products to network providers with a lower margin depending on the market situation. Merihaara says that this drive towards maximal cost efficiency was a recurring topic in corridor discussions in Oulu but the salary situation also created bad blood between teams and people. The MeeGo project came to an end in the summer of 2011 and when the best developers were leaving the company, some people were offered double salaries to make them stay and start developing Meltemi. People moved officially to the program that was paying a higher salary. Double salaries generally eroded work morale: “It looked like the ones who were offered a double salary were picked randomly. It was not so that the company was paying more for the work in programs that were estimated to bring in higher revenues. You should treat people equally when they are in the same jobs. Your motivation will crash when you are having lunch in the company cafeteria with someone who has the same job as you do but is making a double salary.”

The Nokia bonus system had worked as planned during the good years. When the financial situation in the company changed, the system went haywire as well. People started to receive the best bonuses from programs that were canceled. The second best bonuses were paid in programs that got significantly delayed. Phones that were shipped in time and without defects did not necessarily bring anything for their engineers and designers. According to Merihaara, managers set targets

incorrectly. Even when the times were tough, the goal was to make every program a successful one. Employees with top talent who were hunted for many programs could miss all potential bonuses because of the wrongly defined bonus system while a newcomer received a large bonus just by being lucky to work on some other project.

One Symbian program that was delayed in Tampere once took away all bonuses from the Oulu team. Bonuses that were on their way were often cut because of the Nokia Funding Factor (NFF). NFF was a factor calculated from the company's overall financial performance and despite hard work, good feedback, and great achievements on an individual or team level, a poor NFF could nullify the bonus payment. Incentive targets that were set wrongly led to sub-optimal results, recalls a former Nokia manager: "Many people had wrong incentive targets. They were looking only at their own pay slip, seeing how they can reach their maximum bonus. It was more beneficial for them to work on tasks that were not optimal for the company."

In one project, people had calculated how the total sales could improve with a new service that would support the device business. Then came the next reorganization and the project with the budget and profit and loss responsibility was moved to a new department but the new leaders could not add the service originally developed in the old unit to their own bottom line figures. The service was killed. Many other good products were terminated after they landed in the wrong units in the continuous reorganizations.

What was perhaps the most ironic is that work became a lot easier after an organization had been told that it will be terminated. One MeeGo director recalls how this happened in MeeGo: "We were continuously losing people when they were fired one by one. Our work became easy and efficient after all the changes stopped. The situation was completely different compared to the time when the organization still had some future, and changes were announced every week. It is obvious you face delays when the plan needs to be changed. You need to move people from one task and get new people to another one. Besides, the new people don't yet know their new jobs, and you need to train them for the new context."

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When Elop joined Nokia, the old Nokia sites in the cities of Salo, Tampere, and Oulu had been drifting alone. They were mentally separate from the company headquarters in the city of Espoo. People working in Salo, Oulu, and in Tampere often had their team managers on some other site or even in some other country. The former HR chief Valtonen says that the physical location had gradually become less relevant: The reporting structures were no longer primarily local but global. The sense of belonging to a community had been lost. There were no longer common objectives nor local leaders to tell their troops the what and the why.

“It was a clear goal when Pekka Ala-Pietilä told our team in the early 2000s that we plan to become the world leader. During the later years the direction setting and leading by example would have been specially important. Now that this was missing, the psychological contract you had made between yourself and the employee kind of vanished.”

The feeling of disconnect had been amplified by the failed Nokia company values renewal. The old Nokia values introduced in the 1990s—*Customer satisfaction, Respect for the individual, Continuous learning* and *Achievement*—were changed in 2007 to better reflect the modern times. According to Valtonen, the values of the 1990s had had a great impact. People had implemented them through processes, leadership, and training. For example, respect for the individual truly had meant that team members were respected. The old values had acted as a compass to the Nokia people.

The new values were *Engaging you, Achieving together, and Passion for innovation*. [17] Fine, lofty thoughts with a lot of wisdom baked in. According to Valtonen, the rationale behind the renewed values was good, but the compass was missing and the sea was getting stormier. Many of the interviewees say that the new values did not really speak to them. When problems arose, the motivation to take the resignation package on offer and leave the company grew.

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The mobile phone company has its muscles in sales and marketing, its brain in research and product development. New inventions are born when the researchers are appropriately motivated.

The R&D model was radically changed in 2005. Tero Ojanperä had assumed the responsibility of the Nokia Research Center (NRC) and he had had a strong pressure to turn the downwards-spiraling innovation curve upwards again. At Nokia it had been understood that the mobile phones business cannot be forever profitable. The Research Center was given a mandate to show the rest of the Nokia organization where to go.

In the former Nokia structure, the Research Center had been a long-term research unit that maintained daily communication with the mobile phone product development units. Cooperation was continuous and fruitful. Initiatives came from the R&D units that had better knowledge of consumers' preferences and technical constraints than what the researchers possessed.

After the change, the researchers were required to show the direction to Nokia. Disconnected from the rest of the organization, it was difficult if not impossible. Wordings like “technology transfer” and “bringing innovations into products” were introduced. A new multi-faceted organization was created to achieve the fine-sounding objectives. The Nokia Research Center was entrusted with the development of innovations. It was supported by a newly founded unit whose mission was to productize the potential inventions.

A researcher who worked in the Research Center says that the change was a step into a worse direction. “It did not really ever start to work, I think. Innovations were identified but we kind of tried to push them forward with a rope. There was no traction on the business side. Also, the motivation at NRC deteriorated when people began to wonder how useful they are in the new setup.”

The link to the shop floor—people designing and developing the phones—was cut off. The incentive scheme had been changed so that the goals no longer came from product development but from the Research Center management. The sense of inwardness increased. Layers of bureaucracy had increased by one.

“We who worked in research did not have our own mandate or the ability to create products. We had to look for the people who can create products. Often we were even bounced back with the message that there's no time to work on these kind of irrelevant ideas.”

The researcher thinks that the Research Center restructuring was one possible reason why Nokia started to lose its potential.

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It was hardest for the one who remained as the last person in team. A senior salesperson who had joined the company really young recalls: “2010 was the year when things started to change. Many of those trusted people, who I ranked as the world leaders, left the company. Between 2000 and 2009 no one of such caliber had left and now ten people left in one go. Something must have changed. For me it was tough to be the last of the Mohicans.”

“I really was a small-town boy and I believe carrying the Nokia badge gave me an extra inch or two. Suddenly we were bumping into obstacles for which there were no rational reasons. No travel authorization was granted when you should have gone to fix something. Metrics were changed on the fly.”

Another long-term Nokia employee recalls how the motivation of many at Nokia fell decisively when it was discovered that the Lumia sales were not developing as anticipated. The return to the winning path had felt to be possible because the Lumias received some good ratings in technology blogs and product reviews. Now even the most stubborn believers who had been pushing hard until the end, in the Nokia style, were paralyzed. The culture of doing and executing had survived in Nokia for amazingly long but now people were standing at the edge.

The last drop for the sales executive was the closing of Nokia’s nicely growing online business. He was also baffled because the sales support tool developed for retailers was never launched even though Elop was complaining in public how retailers are not selling the Lumia phones to consumers actively enough. “That was such a political game. But I do not think Elop had a role in this. On the contrary, he was asking for the right things. There were people between Elop and myself who forbade me from coming to a particular decision-making meeting. They blocked us from succeeding. This was very regrettable. That was the point when I finally lost my faith.”

According to the sales executive, many recruitments from abroad failed big time: “Nokia was the pride of Finns but there was no similar driver

for people joining from abroad. Leaders who were hired from the big European countries did not care so much of the interests of Nokia and Finland, while many of the top Finnish executives wanted in their hearts for Nokia and Finland to succeed.”

As always, good performers got the most attention. According to a person in the middle layers of Nokia, the management style was often the “who shouts the loudest”. People with good argumentation skills could override others in internal meetings and get their agenda through even if there was no business rationale. The common denominator for the atmosphere problems was leadership. Many felt that the leadership culture had deteriorated since the early 2000s when they had joined the company. The person in the middle management recalls: “When I started at Nokia, I thought it was well-managed company. The Dream Team was still around although already starting to break down. I kind of joined Nokia because it was an organization with good leadership.”

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In 2010, the employees in Nokia MeeGo thought they have the best Nokia spirit. Despite the fact that the unit had grown to two thousand people, the atmosphere was like in a startup company. People in the Keilaniemi headquarters in Espoo were dressed up in business suits while in the MeeGo house in Helsinki Ruoholahti people wore sandals. Managers were fewer and top coders plentiful. This ratio was correct for work satisfaction and efficiency, at least in the minds of employees.

According to a manager who had worked both in Symbian and in MeeGo, the topmost product developers were undoubtedly on the MeeGo side: “Other teams spent months or a year before they could implement changes to a phone. In Symbian, I could not even go and talk directly to programmers. When I went to speak with a MeeGo developer, the change was done the next day.”

One MeeGo director says that elsewhere in Nokia teams and units were suffering from the boiling frog syndrome: The water is gradually getting hotter and hotter but you get used to it until it’s too late. “Sure, I too could have been able to hit the table with my fist and say that we will do this or I’m out. The situations were insane. In one event in 2010, we were told that we have 60–70 phone models. Someone of us could

have said that this is totally absurd, we must end this. However, by that time there were two different truths: Money was pouring in from all directions even though everyone must have seen that one day this will be over. At that point we should have taken the blow and risk the money making machine. Elop was chosen to end this madness. Pause the game, make the necessary hard decisions.”

Former HR chief Valtonen says that the feeling of responsibility and sincere desire to help were prevalent among the managers who had to lay off their team members. Middle management was in the toughest spot. Middle managers had to execute the layoff decisions made by the top management without having any chance to influence the big picture nor visibility into the future. Peer mentoring was arranged for mid-level leaders to relieve pressure and benchmark their experiences.

The strongest joint efforts to assist in re-employing people who had been laid off were held in the Salo production unit. According to the ex HR chief, people who had decided to shut down the Salo production unit had a sincere desire to retain the function in Salo, until the end. He firmly shoots down any allegations that Salo’s fate had been sealed as soon as Elop started as the new CEO. According to Valtonen, the role and added value of the Salo factory was considered very carefully. The decision to refocus the Salo plant to a customization center for high-end products was made as a result of long consideration. Valtonen reminds that the world was changing fast at that time, and the old plans had to be scrapped in the summer of 2012.

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[17] “*Very human*” was added a bit later as the fourth value.

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22. Why didn’t the Lumias fly?

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Stephen Elop had no idea the dramatic consequences that would follow his decision in February 2011. The Nokia board, who had blessed the

Windows choice did not quite know that the lifeline of the phone business would become totally dependent on the sales of Lumia.

Why didn't Nokia succeed with Lumia? We gather the reasons for this in this chapter.

The Valley of Death Drags On

A “valley of death” is a state a company gets into when business has stagnated and new business is not growing fast enough to compensate for the losses. No other mobile phone manufacturer had tried on a similar scale to move on the fly from a long-standing legacy operating system to a new one. This was a question of how deep and wide the valley of death is.

Fortune had turned its back on Nokia, unfortunately. Windows Phone was chosen at a bad time because a new version was already under development. Windows Phone 7.5 was being replaced in a year or two with Windows 8. Shortly after customers had gotten their hands on brand-new Lumias, they learned that their devices would not get updated to the latest version. Especially when lots of new apps would appear only for Windows Phone 8.

Potential buyers opted to wait for the new version, which slowed crucial market growth.

Did Nokia know beforehand about this discontinuity? Our sources give conflicting information. According to one reliable source, already when they chose Windows Phone, Nokia and Elop knew that Windows Phone 7.5 and Windows Phone 8 are based on different technologies and it is not possible to update from the older version to the newer one. Another equally reliable source was of a different opinion. According to the source, this was unclear even to Microsoft.

In part, this was what Microsoft wanted. Updating would have only been possible with a lot of programming work. Nokia's value and hopes took a back seat when resources were allocated.

This happened at exactly that vulnerable moment when Nokia should have been creating a credible ecosystem together with Microsoft. According to Nordea analyst Sami Sarkamies, the failure with the update cast a shadow over Nokia for a long time. The consumers

started doubting Nokia's ability to bring viable and long-lasting smartphones to the market.

One big reason for the Lumias being late was a shortage of components.

The component business was a merciless world, where old merits mean very little. When Nokia was the market leader, subcontractors had danced to Nokia's drum with very little profit, so that they could get massive orders. Nokia had gotten phone parts and raw materials first, and for a good price.

When Lumia first began, in the eyes of the subcontractors, Nokia had dropped to being a second-class customer.

During Nokia's peak years, big volumes had also attracted network providers. They were prepared to agree to worse terms in order to get Nokia models in their product portfolios. Because of Nokia's position, it was able to operate with negative capital. Money was coming into the account faster than it was going out. The component manufacturers were paid within a three month payment period, while the network providers paid Nokia within a month. External money was unnecessary.

In 2011, that position had been lost, and Nokia could only dream of being able to operate with negative capital. When there was a shortage of components, the Koreans and Americans got their deliveries first. Apple used the power of money: It bought its needed components half a year in advance hand with hard cash. Samsung was able to cut in line because it could guarantee huge volumes. Nokia's position had also weakened because of its financial cutbacks and thus needed to demand very precise agreements with its subcontractors. Component manufacturers preferred to serve Samsung and Apple, from whom they could get money more easily and reliably. Qualcomm was especially a bottleneck for Lumia. There was a constant shortage of the company's chipsets, and the demand caused by Lumia could not be met with satisfactory speed. Other smaller manufacturers, like HTC and Sony were in the same boat. They had to wait too long for components, and the train sped past in the smartphone market.

The possibility of a valley of death was certainly on Elop's mind when he chose Windows Phone. What strengthened the hope for success was

that the best phone manufacturer and the best software company were teamed up in this effort.

However, it is also speculated that Elop did not take the possibility of a death valley sufficiently seriously because Elop's previous experience was in business-to-business settings. There is little need to worry about the consequences because customers are committed for years.

Microsoft didn't keep its promises

Microsoft had failed so many times in the mobile market, that starting cooperation with Nokia was critically important. They painted a rosy picture of the features of Windows Phone and of the speed of development. While working on the agreement, they promised Nokia more than what they could realize.

In the months after the signing, Nokia realized the truth. For example, business apps and adequate data security were missing from the first Lumias. Robin Lindahl, who was responsible for Nokia's network provider relationships, wondered why Microsoft, while developing Windows Phone, concentrated more on competing with Apple and user experience, like increasing the number of apps, instead of going for customers where it would have been easy to get them—competing with Blackberry in the business world.

None of our interviewees believed that Microsoft deliberately deceived Nokia by exaggerating the abilities of Windows Phone. It was a question of bad organization and under-resourcing. Nokia and Microsoft were large technology companies, where things were done in an overlapping manner or even in parallel. Microsoft, with its huge resources, had developed X-Box, Windows, and Windows Phone in parallel. At Nokia, duplicated work was caused by the transition period. Many interviewees claimed that during the Windows cooperation, both companies did unusually large amounts of duplicate work and wasted resources. Too much of Nokia's meager resources were used to patch up the gaps in Windows Phone, nor did Microsoft's resources suffice for everything promised.

The cheap Lumias didn't arrive in time

As noted earlier in this book, in the beginning, Nokia only had permission to install Windows Phone on the most expensive phone

models. Microsoft wanted to ensure that Windows Phone competed in the same price category with iPhone and Samsung Galaxy. Nor would it even have been technically possible to run Windows Phone on cheap models. When Nokia brought the cheap Lumia 520 and Lumia 620 to market, it was too late. There were too few Lumias available and too late.

Network providers compared the offering to Android, where with one operating system, there were devices ranging from under 100 euros (\$135) up to 700 euros (\$950). Nokia had a few expensive Lumia phones, which had a limited number of apps, as well as feature phones, where the apps, user interface, and design were from a whole different world than Lumia.

Suspicion slowed cooperation

Elop was confused by the poor Symbian cooperation at internal events, and in one place, even swore at the teams by name.

When Microsoft came to the sandbox, the game became much more complicated. Figuring out how much could be disclosed to the other company was a matter of daily uncertainty. Things which were obvious to Nokia employees were not obvious to Microsoft employees. For example, the week-view in the calendar, which Finnish users were accustomed to, was an unfamiliar concept in Microsoft. The calendar week-view was not available in the first Lumia phones.

Cooperation was sometimes so difficult that the details were negotiated using lawyers.

Distribution didn't work

For many people, Windows means their work environment, and it was not appealing as a phone brand. When the natural attraction is missing, the importance of the distribution network is emphasized. A less attractive product can be sold if the network provider subsidizes the price.

The largest American network providers AT&T, Verizon, and T-Mobile were of course partners with Nokia on paper. In practice, efforts to sell remained weak nonetheless. The floor-level salespeople in phone stores cared little about Lumia. They recommended iPhone and Samsung,

from which they got nice fat commissions, and which were easy to present to the customers. A person working in Nokia sales boils it down to this: iPhone sold in 30 seconds, because the consumer wanted it. Android sold in 10 minutes, because the consumer had to choose a model. Lumia took 30 minutes, because the consumer had to be told what Windows Phone is, and their prejudices had to be overcome.

During Elop's time, the information systems using which the network providers and other dealers could be in real-time contact with Nokia were ramped down. Through this digital system, retailers would have been able to get quick answers to questions about Lumia, and material to support sales and marketing. According to the person who developed the system, Elop stopped the solution at the worst possible time. Nokia had been able to use that same idea successfully in the US since the year 2000.

In China, China Mobile got Lumia into their portfolio, like in the United States, but only for show. Elop took all the publicity possible from the deal with the world's largest network provider, but in actuality the deal produced only meager results. The phone's presence in China Mobile's huge product portfolio does not mean anything, if the network provider does not target money for marketing, subsidize the price, and instruct the sales staff to sell it.

Nokia also did not have any direct sales channel where it could interact with buyers. The online store, which was built up with great diligence, was also stopped during Elop's time. Elop was afraid that having Nokia's own online store would upset the network providers. In a time where online shopping was becoming the main distribution channel, the decision seemed odd.

In summary: During the sales campaign of Lumia, Nokia had lost direct contact with the consumers, nor was the value chain any longer in Nokia's hands.

Wrong things were done in R&D

In 2011, Nokia was one of the world's top companies in terms of investment in research and development. Even if the profitability had taken a plunge, the R&D budget stayed at the same level as with the previous year. Nokia put a gigantic 6 billion euros (\$8.1 billion) into R&D.

Only Toyota, Samsung, Intel, Microsoft, General Motors, and pharmaceutical companies Novartis, Roche, Pfizer and Merck invested more money into R&D. A comparison by Forbes magazine reminds us that not one of these giant investors are known for their innovative products. Money was used on an astronomical scale without breakthrough inventions. Forbes also reminds us that none of these companies featured on the Fast Company magazine's "50 most innovative for 2012" list, where all the most innovative companies are listed. The frontrunners on the Fast Company list, Apple, Facebook, Google and Amazon, used money with more care on R&D. They did not justify historical programs, like upkeeping long standing research programs. Rather, they invested on-the-fly in solutions that they believe will change the markets. According to Forbes, Nokia and other big investors in research experienced problems with the logic of diminishing returns: When more money is spent in a certain area, then more money is needed in that area to find anything new.

Clayton Christensen refers to the same phenomenon in his book, *The Innovator's Dilemma*. A company that was once successful in an area can easily become a prisoner in that area where profits were previously found. Competitors who are capable of new ways of thinking overtake them.

Application developers failed to get inspired

The media content and services play a decisive role in phones, when the smartphone customer changes their brand or recommends their device to others. For many people, using Facebook, Twitter, LinkedIn, Instagram and other well known apps is enough, but early adopters also require more specialized apps. By the end of 2011, the number of apps had become an intrinsic metric in the competition between ecosystems. Apple's App Store and Android Market had half a million of them, and about 1 billion were downloaded from each of them each month.

In the same period, the Windows Phone Marketplace had 50,000 apps. It is also a huge number, but nothing compared to the competitors. This was a chicken-egg phenomenon. App developers wanted to make apps for phones whose app markets had a lot of downloads. Buyers wanted phones which had lots of apps. In between were the network providers, who wanted to maximize data traffic.

The most embarrassing deficiency of Lumia was the lack of Instagram. At the time of the announcement of Lumia in the fall of 2012, Instagram was the fastest growing social media in the US.

Nokia desperately tried to get app developers excited. Windows Phone did not have enough appeal. Nokia even paid developers. Windows Phone still failed to attract. It was like trying to get blood from a stone.

The marketing was off target

In many people's opinion, Nokia made a mistake by concentrating on selling Lumia in the United States, even if the largest and fastest growing smartphone markets were in China. For Elop, succeeding in the US was an obsession. It was difficult to understand why a little bit of money was invested in the United States, while at the same time a complete collapse was happening in China.

The Lumia flagships came first to the US markets, where Nokia was almost unknown and its possibilities to differentiate were marginal. At the same time, Nokia's most faithful customers in Europe and Asia had to continue waiting for their Lumias.

The advanced camera was given so much glowing praise, even if it wasn't a buying criteria for the customers. Maps had become an assumed part of smartphones. During the time of Chief Marketing Officer Jerri DeVard, Lumia was marketed as "the return of Nokia". Starting from zero is perhaps not something you want to emphasize, when the consumers are wondering if Nokia can do anything right.

Samsung used \$14 billion a year for marketing. That is the GDP of a small country. According to leaders of large European network providers, Samsung's market muscle was overwhelming. According to many assessments, Samsung also used questionable methods to strengthen its market position. There is a phenomenon known as spiff. It refers to money given to retailers. It is considered unethical, and for example, Nokia and Apple are not known to have used this method.

It is estimated that a fifth of a Samsung smartphone's sales price was spiff support. This is, nonetheless, a very well kept secret, so not much public information is found. In the smartphone sector, one talks also about "soft dollars", which are in practice bribes given to phone retailers: T-shirts, coupons, discounts on devices. In developing

markets, these kinds of benefits can have a decisive effect on the sellers, bloggers, and other opinion influencers. In India it is rumored that Samsung had bribed phone sellers to leave Nokia out of their product portfolio.

Nokia did not use enough money for marketing, because there wasn't any money. In Nokia's internal events, CFO Timo Ihamuotila compared Nokia to Spain. Nokians were told that Nokia's chances of getting a reasonably priced loan were weaker than Spain's, where the national economy had collapsed into ruins. Nokia was able to scrape up enough money from its meager funds to total hundreds of millions of dollars in the complete marketing effort for Lumia. The investment was unreasonable, when considering how many Lumias were sold, which moved in quantities of millions. For example, the Lumia 900 phone sales in the United States were smaller than the money used in its marketing.

Jerri DeVard was a total flop as the Chief Marketing Officer, also witnessed by many Nokians interviewed for this book. DeVard was hired because she had good relations to American network provider Verizon, and has an otherwise handsome CV, but in far away Finland, she did not operate on the same wavelength with her staff.

The money ran out

Nokia had great difficulties changing the predominant thinking patterns of the company to a smaller scale.

Nokia had ordered huge quantities of components and assembly services for Lumia 900 from the Taiwanese manufacturer Compal, because it was imagined that Lumia 900 would sell as well as the Lumia 800. Nonetheless, the new Lumia did not arouse interest in the same way, and there was a big problem ahead: A large amount of materials needed to be bought from Compal, even though the phones sold poorly. Compal was paid as agreed, and Nokia had to sell the Lumia 900 at a ridiculously low price, so that it could get rid of them. The consumers who had bought a Lumia 800 the previous year for 500 euros (\$680) noticed that the Lumia 900 is now selling for 200 euros (\$270).

In terms of capital, Nokia was in the wrong ball game. Apple was a money making machine: It made two thirds profit on its mobile phone business. Samsung made a super high 20 percent profit, in other words

one fifth from every phone sold stayed with the Korean company. Nokia's smartphone gross margin was 20 percent at the time. The fixed costs are deducted from the gross margins. So less money came in than with the competitors, but the costs were the same.

Even if Nokia finally, in 2012, unveiled the lower priced Lumia 520 and 620 models, the cash flow stayed the same. In 2013, when the cheap Lumia models were being shipped, the cash flow stayed more or less the same, at one billion euros (\$1.35 billion). The launching of the cheap phones also did not help the phone business out of its profitability crisis. The cheap Lumias were so cheap, that they brought noticeably less money into Nokia's coffers per phone than the expensive Lumias.

Windows 8 flopped

Business customers were considered to be Microsoft's and Nokia's territory, because the previous leader in that world, Blackberry, was in difficulties. However, the competitive edge in the business world was not realized. The problems were caused by how the widely used PC operating system in business, Windows 7, was in practice, not compatible with Windows Phone. The vision of the Windows chain between businesses' devices remained, in the beginning years, a daydream of Elop and Steve Ballmer.

The biggest disappointment was with the new Windows on the PC. Because Windows 8 was based on the "tiles" thinking, it was thought to make it easier for consumers and business users to switch to Windows Phone.

Especially Risto Siilasmaa praised the combination. Windows Phone and Windows 8 would, according to him, make the PC and phone user experience the same.

The new PC Windows uptake took away all hope. Windows 8 flopped. The predecessor, Windows 7, achieved 20 percent share of PC usage. A year after Windows 8 went public, it had a share of 10 percent. For Nokia, the end of the decisive year of 2013, the statistics showed some shocking facts. The Windows 8 market share had grown only 0.05 percent, when Windows 7 had grown 0.22 percent. So windows 8 lost market share to its four year old predecessor.

Siilasmaa's reasoning is easy to criticize. The tiles in Windows Phones and in the new PC Windows worked in different directions and the usage logic differs, for example in the direction of the swipes, among other things. Rather, Windows 7 and the Android desktop with its icons were closer to each other.

The markets were the most difficult in the world

The smartphone markets can be compared to a storm or a desert. This area of tough international competition is hard to describe. Investments in factories, people, components, and materials are huge and they would need to be predicted correctly according to trends and cycles. A testament to the difficulty of this market is shown by how almost all the PC manufacturers have tried but few have succeeded: Acer, Dell, Hewlett-Packard, Asus. All of them tried, but only memories remain, if even that. Many Android manufacturers have disappeared into the dark haze of history.

The markets were so tight that network providers complained about the royalties that Nokia was paying to Microsoft. The leader of a large European network provider said that he complained to Microsoft many times about its royalty practices. In the leader's opinion, Microsoft saw itself being like Apple, who because of its desirability charged a high price, when Google gave its software to manufacturers for free. The royalty-free Android phone made more money for the network provider than the license-encumbered Windows phone.

The decisive blow to the Lumia phones was made, after all, by the consumers. They did not want Windows phones. All the tricks and dancing around did not help. A phone is bought with emotions.

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23. Tough choice for Mr. Siilasmaa

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One day in September 2013, on the morning TV of the Finnish national broadcaster YLE, there was a news ticker at the upper edge of the screen. A freshly awoken financial reporter stopped in his tracks to watch. These kinds of moments only happen once during a person's

lifetime, like in September 1994, with the even more dramatic and sad news of the sinking of the passenger ferry, Estonia.

Sadness was on the forefront also with this news. Sadness about two things. That the Finnish self-esteem which had arisen from winning the ice hockey world championship, together with the company's mobile phone operations having come to the end of the road. And that the reporter who had been following Nokia's phones for nearly 20 years had, in a moment, lost his professional identity. September 3, 2013 will always be remembered for the rest of his life.

The worst was that it seems that light had begun to appear in the midst of this darkness. Between July and September, Windows Phone's market share went past 10% in the most important countries of Europe, and in a year had doubled. In Italy, iPhone had been left behind. In Latin America, the same had happened before summer. The third ecosystem had emerged a few months earlier, when Blackberry was left behind. In the summer, new fast-selling models were launched, and the Lumia lineup was comprehensive. Why just now? Why so cheap?

In hindsight, it is easy to notice certain facts which get blurred in all the wishful thinking. Worldwide, the market share of Windows Phone was still less than five percent. Nokia's money was running out, and the losses continued.

When the markets opened on that September morning and the share price jumped from three euros (\$3.95) up to over four (\$5.25), eyes were finally opened. Nokia had encountered a random stroke of luck. Or rather two.

The turning point happened in the spring of 2012. Jorma Ollila resigned (*finally*, in the opinion of many), after holding the role of chairman for 13 years. Especially the big domestic shareholders had wanted Ollila out of the picture. Ollila should have originally left in 2010, but he was asked to continue because of the company's difficulties. In spring 2011, he announced that it would be his last term.

The considerations for identifying a replacement for Ollila's role as chairman of the board, were intense. Because the CEO was from overseas, only domestic candidates were even considered for chairing the board, especially because there had been no pressure from foreign shareholders for this nomination. Possible candidates from within the

board were Risto Siilasmaa, Jouko Karvinen from the paper and pulp company Stora Enso, and possibly Kari Stadigh from the Finnish bank Sampo.

The chief editor of the Finnish business newspaper *Kauppalehti*, Hannu Leinonen, could tell already in September 2011 that the name would be Risto Siilasmaa. According to Leinonen, the speculation outside the company that the Nomination Committee would be making a genuine decision, was no longer valid. After the summer, according to Leinonen, it was clear that Ollila had chosen his crown prince. “Nokia would no longer be Ollila’s Nokia, if he left a matter of such magnitude for others to think about”, Leinonen formulated.

Ollila’s connections to Siilasmaa were well known—their shared businesses included at least the online marketplace Fruugo. The nomination was anything but simple. Siilasmaa was by trade an entrepreneur and business angel. There were doubts whether he could fill such big boots of the governing body of a large corporation. His strengths were his technology background and experience in working on the board. He was with Nokia during big changes from the beginning, and understood their background.

When the candidate for the chairman of the board was announced in January 2012, the reactions were mostly positive. Siilasmaa’s choice was interpreted as emphasizing the anchoring of Nokia in Finland. There were also critical voices. A well-known Nokia analyst from the investment bank Nomura, Richard Windsor, considered Siilasmaa as suitable for the role, but not necessarily the best. According to Windsor, Nokia’s problems were gigantic. They should increase sales, improve their results, take over new smartphone markets, fight for their position in developing countries, defend their relationship with Microsoft, and so on. Siilasmaa’s experience in these areas had gaps. His skills had not been tested yet in these playing fields.

The test began in the spring of 2012 at the general meeting on May 3. Ollila, who was leaving the company, told the full Helsinki Messukeskus convention center crowd that this moment was special for him. He wished that he could leave behind a thriving company. Despite the difficulties, Ollila said that the board stood fully behind CEO Elop without wavering, and would continuously support him. When his

speech had concluded, Ollila wished his successor luck and officially opened the general meeting.

The successor went on the stage once. On behalf of the Audit Committee, he presented the auditor's selection. The board chose the chairperson only at the organizational meeting after the general meeting.

The new chairman quickly made it clear that his ways of working were different from his predecessor's. The fourth floor office where Ollila worked was removed. Siilasmaa started working without his own office. He had a desk in an open office.

“When people walked by, they could always exchange a few words. It is a brilliant way of doing work. No one ever comes into an office”, he told *Suomen Kuvalehti*.

Risto Kalevi Siilasmaa was born in 1966 and spent his youth in Helsinki. In school, it is said that Siilasmaa did not stand out from the other students. Already before high school, he worked evenings at the Valintatalo department store in Tapiola in Espoo, and later at the Sesto grocery store in Lauttasaari in Helsinki. In December 1982, when Commodore 64 computers started selling in Finland, Siilasmaa and his friend Ismo Bergroth knew that they wanted one. The obstacle was the price. They saved their salaries for months and bought one device and took turns using it.

In high school, Siilasmaa spent more and more time on the computer. He worked as a counselor in the Bittileiri computer camp, among other things. When others were cursing about syntax errors, Siilasmaa stayed calm. Many remembered his face. The dark, helpful guy, who was later successful.

Despite his hobbies and his helping out at computer magazines, his studies remained on track. After high school, Siilasmaa got into Helsinki University of Technology to study industrial engineering and management. This major is nicknamed “*vuorineuvos* line”. [18] It is difficult to get into and the studies can be applied to a variety of different areas, unlike other areas of engineering. For example, areas of application include how to shorten the lines at theme parks, increasing the effectiveness in operating rooms, management of distribution of products, and production of cheaper and more reliable cars. Bars were

not included in the young man's study program. He preferred being in the Taekwondo studio.

Still, his graduation didn't happen till 2009. On May 16, 1988, as a 22 year old, he started a company together with his student friend Petri Allas. They named the company Data Fellows. The company started gradually changing focus from providing computer training to cybersecurity. Products included antivirus software and software that encrypts data traffic. The final lucky stroke was the coming of the internet, which led to an explosive growth in the demand for cybersecurity. In November 1996, Data Fellows won the EU IT Grand Prize, which finally brought the company into the forefront of Finnish news. The value of the award was 200,000 euros (\$234,000). What was interesting was that the Nokia Communicator was in the same competition, with poor results.

When Data Fellows was listed on the Helsinki stock exchange luckily before the internet bubble burst in 1999, Siilasmaa noticed suddenly that he was the second richest person in Finland. He was still the largest owner of the company that had since changed its name to F-Secure. He left his position as CEO in 2006, and his invitation to the board of Nokia came in 2008.

Siilasmaa is described as analytical. He gets into things very deeply and questions the viewpoints of the leadership. He is called sharp, balanced, and a good listener. His character is considered by evaluators as pedantic. When Siilasmaa starts to do something, he keeps going till it is done. After a decision was made, he has supported the board with all his energy. He is also said to be patriotic in a good way. His agenda at Nokia has always been a bit broader than the narrow view of only Nokia's benefit.

His tendency to rather be an introvert than an extrovert is a counterbalance. His charisma could be called weak. Many will remind you that despite his background in F-Secure, he is not a real software specialist. He does not have hands-on programming experience.

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In his Keilaniemi fourth floor open office, Siilasmaa quickly started to question the strategy which he had started to develop. What could be

done differently? What could we give up? Were there other possibilities with smartphones than Microsoft? The focused strategy work began at the latest in the previous summer, when Microsoft announced its Surface tablet. It stepped on the toes of the computer manufacturers who used Microsoft software. If this happened with computers, anything could be ahead with phones, the reasoning went. Especially now that Microsoft had brought forward hardware manufacture in their strategy.

Nokia's board started thinking about scenarios. What will happen when Microsoft does this? How will it affect us and Google? What if Microsoft really does that? Or if Google's next move is this, how can we add possibilities for us to succeed? Should we sell NSN so we could buy more time for Lumia? Could we find companies to buy? Could we sell Navteq? What about patents—could we get money from them to alleviate the cash flow crisis? The work included the unbiased evaluation of the Nokia-Microsoft agreement, and the possibility of changing it with negotiations.

Android was on the table continuously. It was installed in Nokia devices, and was proven to work acceptably. But would the coffers withstand the loss of the Microsoft support payment and the penalty payments of breaking the contract? And the employees, with starting over again with a new platform from scratch?

The analysis, which lasted many months, has been described as being so thorough that afterward, nothing could come as a surprise.

Materials for the extraordinary general meeting, where the decision to sell the phones business to Microsoft was taken, contain a detailed description of how the negotiations which led to the sale started and how they proceeded. The text has gone through a thick column of lawyers, so its truthfulness is credible. Nokia would hardly have taken a risk that the decision to sell would be seen to be based on mistakes in the materials for the meeting. Also, reporter Ina Fried had given such a detailed explanation on the website *AllThingsD*, that the source would have to have been Ballmer, Siilasmaa or both. Siilasmaa clearly wanted to downplay the allegations that the deal was done by Elop.

In February 2013, Ballmer called Siilasmaa and expressed his concern with three words: "Can we talk?" Ballmer called, even though he knew

that evening was turning to night in Finland. For him, it was morning. The time zones of Seattle and Finland cross in such a way that work is never done during the same normal work time. During the five minute call, the two agreed to meet soon at the Barcelona Mobile World Congress. The topic was set as “strategic partnership”.

Now would be a good time to pause for a moment. Siilasmaa was the chairman of the board and Ballmer was the CEO. Why did Ballmer contact Siilasmaa and not the current chairman, Bill Gates? Was Nokia considered a second rate target?

Siilasmaa has never commented about this mismatch. The normal practice would have been to approach the CEO, when feeling out the possible sales of a business unit and not the whole business. Siilasmaa probably understood from the beginning that Ballmer was wise enough to avoid hygiene problems. Had he directly approached his counterpart Elop, it would have seemed suspicious, due to their common background. On the other hand, the roles of chairmen of the board in the two companies were different. Siilasmaa worked full time. Gates had already been concentrating on his namesake foundation and on his family, and had withdrawn from practical leadership.

Siilasmaa accepted the invitation without becoming offended because of the circumstances. Before the meeting, both of them reviewed what was working well in their partnership and what was not.

The two of them talked for an hour in hotel Rey Juan Carlos, named after the Spanish king. The options were combed through without prejudice. The option of terminating the participation was accorded the same foreground status as the option of deepening it. Ballmer put the basic arrangement on the table, that Microsoft had to get more money from each phone that was sold. If Microsoft put \$20 into marketing each Windows Phone device, then a return of \$10 was too little. According to Ballmer, marketing money was used ineffectively for two brands—Lumia and Windows Phone. Software engineers were doing double work. In other areas, the cooperation was hitting bumps. The work would proceed better if the phone manufacture was transferred completely to Microsoft, Ballmer estimated.

Microsoft really became concerned about Nokia’s financial situation. There was good reason to be afraid that Nokia would jump ship over to

Android.

Siilasmaa announced that Nokia did not have any intention of selling. Should it further be examined what could be done with the cooperation?

This announcement put a train in motion that almost derailed many times, often went in strange directions, required a lot of luck, and eight months later, led to one of the most dramatic acquisitions in Finnish business history. The first step was evaluating the state of the cooperation, which Siilasmaa had demanded before agreeing to concrete discussions. Nokia used a lot of time, for example, to study how things looked from Microsoft's perspective. The board also agreed that Siilasmaa would handle the negotiations. Elop would have been unsuitable for the job, due to his Microsoft background.

The negotiations could very well lead to a corporate restructuring, according to a source from the board, therefore Nokia started scanning for options outside of Microsoft. For a few months, they considered whether to keep going in the same direction, or try to change the agreement with Microsoft. Should a new platform be adopted for smartphones? Is it better to sell the entire mobile phone business or only part? Should the location services business HERE be sold? Completely or partially?

Already in the early stages of the evaluation, Nokia decided that it would be good to start negotiations with Microsoft. The first meeting was, as agreed, a month after the Barcelona Mobile World Congress, at the end of March, 2013. At the end of April, the parties met in the premises of Nokia's legal office in New York. Nokia was represented by Siilasmaa and Elop, who as a member of the board and CEO, was present in the process, along with Louise Pentland and Timo Ihamuotila. On the other side of the table sat Ballmer, along with Terry Myerson, who had transferred to head of the Windows Phone unit, Chief Financial Officer Peter Klein and Chief Legal Officer Brad Smith.

When the discussion got going, Microsoft opened the game. They started talking about purchase offers. When Nokia heard the proposals, they withdrew to prepare an answer.

When they met back together, Siilasmaa made a ten minute speech, where he calmly and politely explained that the parties' price

evaluation of the phone business are from different planets. Ballmer answered that it was good to know where we were going. A new meeting was considered unnecessary.

The initiative, which came to be known as Project Gold Medal—Microsoft used the name Edwin Moses, Nokia the name Paavo Nurmi—was made of tougher stuff than the gentlemen had imagined.

On the following morning, Siilasmaa sent Ballmer a text message and suggested that the companies explore whether or not the analysis should be continued. Maybe the topic of money came up too soon. Perhaps Microsoft had lacked knowledge of the many parts of Nokia and did not understand their value. Perhaps the companies were closer to each other than they realized.

A series of telephone negotiations followed. It led to a meeting at Microsoft's legal office in London in May, 2013. *AllThingsD* describes the dramatic events on the evening of the 24th. The groups from Nokia and Microsoft were the only ones in the building. The parties were on different sides of the floor considering tactics, when the building shook with a huge roar. A roar so huge that it could have only come from the huge lungs of the Microsoft CEO. The Nokia team was startled, and guessed that Ballmer had reacted to their proposal differently than how they had hoped for. In the Microsoft room, they were wondering what was happening because Ballmer had left the room just a moment prior.

After a moment, they heard a person running, which added to the restlessness. Gradually, it became clear that Ballmer had not noticed the glass coffee table and had tripped. He had hit his head and gotten a knot on his forehead. Myerson sent the Nokians a text message and explained what had happened. Even as he was being fixed up, Ballmer continued the negotiations with Siilasmaa and Elop. At the end of the evening the group went for dinner, where Ballmer arrived with his head wrapped in a bandage.

The next morning, the coffee table had been moved to the middle of the floor's lounge area beside the window, and by afternoon, it had been removed completely.

Nokia's map services Navteq, which had gotten the name HERE became a bone of contention in this discussion. Siilasmaa was unshakable. Here was mandatory for Nokia's future. Ballmer was of the opinion that

Microsoft could not succeed in the mobile world without control of the maps and navigation platform. On June 14, 2013 he flew to Finland, together with his Chief Legal Officer. This time, the flight went without any problems, and they met the Nokians at the Båtvik manor house in Kirkkonummi, which was owned by Nokia. The results were unimpressive. Nonetheless, they concluded that they wanted to continue negotiations.

During that time, Siilasmaa had gotten a special reason to continue the negotiations. Nokia had, after a long time, gotten a stroke of luck. Two major developments were coming together just at the right time. Siilasmaa came to know that the German Siemens' share of their shared networks company, NSN, was up for sale. They felt extremely lucky that their negotiations had remained outside the eye of publicity. Siilasmaa and the CFO, Timo Ihamuotila, started to develop some downright brilliant business.

Siilasmaa notified Ballmer that Nokia had a list of prerequisites that have to be fulfilled before any serious negotiations about the sale of the phones could take place. The first one was a convertible bond. Nokia had to get it whether or not the sales of the phones business took place. The other involved the maps. HERE had to be taken off from the negotiation table. Nokia would keep it.

The partner figure skating began. Nokia was promised a convertible bond of 1.5 billion euros (\$2.2 billion). Nokia now had money to buy Siemens out, without Microsoft being able to use that as leverage in the sales of the phones business. On the other hand, Siemens thought that Nokia had empty coffers, and agreed to make a payment plan for part of the sales price. The analysts had appraised the value of NSN at 6–9 billion euros (\$8–12 billion). Nokia got half at 1.7 billion euros (\$2.2 billion). The price probably would have risen had Siemens known that Nokia was getting money from Microsoft. The NSN deal was announced on July 1, 2013.

Nokia's second stroke of luck occurred during 2009, when Nokia Siemens Networks had appointed Indian Rajeev Suri as CEO. Suri had trimmed the joint venture's workforce with a heavy hand, and concentrated on mobile broadband, especially LTE technology. The company, which had been facing losses, recovered and so quickly turned profitable in 2012 that Nokia gave a positive profit warning.

Because of Suri, Nokia was able to get its other support pillar in shape. The future could possibly be built on something other than phones.

Suri was born in 1967. He has a bachelor's in electronics and communications engineering from the Mangalore University.

He came to work for Nokia in 1995 in Singapore. When Simon Beresford-Wylie transferred to head Nokia Networks in 2005, Suri moved to his place. Suri was later responsible for NSN's services business activities and worked in India, Britain, West Africa, and Singapore.

Suri followed Beresford-Wylie to lead NSN, and moved from New Delhi to Finland in the fall of 2009. Suri is married and has two children. He is living in Finland once again. His family previously followed him, but now the two boys are studying, and his wife lives mainly in Singapore, where one of the boys is studying.

Suri's goal has been to raise NSN to be the world's second largest networks manufacturer after the Swedish Ericsson. The goal has remained just a dream. In 2013, Ericsson's market share, according to the market research company Dell'Oro, was 36 percent. In second place was Chinese Huawei, which had 23 percent. NSN's market share had shrunk to 17 percent. In the fourth place was Alcatel-Lucent at 13 percent. NSN's profitability had nonetheless remained good. It concentrated on money-making projects at the cost of market share. NSN had, on average, 64,000 employees in 2012. Nokia had 48,000 in the other units.

According to a source from the board, in summer 2013, they arrived at the conclusion that Nokia had good reason to sell off the phones business completely. It would get the accounts in shape and get rid of the uncertain future of the nest of losses and would be able to build a nice support pillar, thanks to the NSN deal. The board was continuously active. They had meetings at a furious pace in 2013. The meetings added up to 34, and including the committee meetings, 60.

David J. Cord explains in his book that Nokia used the Huawei card during those times. According to Cord, Huawei and Lenovo expressed interest in buying Nokia, after Wall Street Journal had hinted that there were discussions underway. If Huawei was interested, it would have constituted a good weapon for Nokia, because Huawei might be

interested in both phones and networks, because it was succeeding on both sides, and was targeting aggressive growth. When Nokia presented this possibility with Microsoft, the answer was blunt. Microsoft reminded them that they had 55 billion euros (\$70 billion) as liquid cash. They had enough to buy any phone manufacturer, if things don't work out with Nokia.

The breakthrough occurred at the end of July in New York. The maps question was solved. The deciding factor was that since it is a question of software, the source code could be shared. The intellectual property rights would stay with Nokia, but Microsoft would get a special license which gave it equal rights with Nokia to modify the map services, and permission to do with the source code as it pleased. The road opened. After the meeting, Siilasmaa and Ballmer shook hands. A PowerPoint presentation with the main points had been collected together, which would be fleshed out.

During the following weeks, the lawyers created contracts from the PowerPoint presentation, and the companies started a due diligence process, where they would check the points of the deal. The date for sealing the deal was agreed to be September 3, 2013. The business sale would become very demanding. From Microsoft's perspective, it could only succeed if the company cultures were suitably close to each other. The decision to buy could be interpreted that, in Microsoft's opinion, the cooperation had gone well.

In a few interviews, Siilasmaa and Ihamuotila were congratulated that they succeeded in selling the feature phones in the same package with the smartphones. It is true that Microsoft expressed interest in buying only the smartphones, and that was what they were primarily interested in. The negotiators quite quickly concluded that the parts could not be separated. They had so much in common, among other things sales, logistics and management, that separating them would have given birth to two lame ducks.

On the first Sunday of September, Ballmer finally flew to Finland, and on Monday the deal was finalized and the papers were signed. Risto Siilasmaa called Jorma Ollila and the Finnish prime minister Jyrki Katainen that evening to convey the news. Nokia employees got news the next morning via text message, and after a few moments, the morning TV was able to report their news.

The press conference was called together at Dipoli in Espoo at 11:00. Siilasmaa took 9 minutes to tell how the decision was the most demanding and complicated in his life. He described it as rationally correct, but emotionally difficult. Nokia's board had gone through all the options, and had come to the conclusion that the deal was in the best interest of Nokia shareholders.

Next, Ballmer stepped up on stage. He concentrated on calming the Finns. Siilasmaa had obviously told him that how Microsoft is viewed in Finland is important for the continuation of the phones business. Microsoft would start a data center in Finland and invest at least 190 million euros (\$250 million) in it. Microsoft promised to be a good corporate citizen in Finland, and assured that the development of mobile phones would continue in Finland. According to Ballmer, the deal was a win-win. The time it took for him to say all this was five minutes.

After the details from Siilasmaa and Ihamuotila had been handled, Siilasmaa invited Elop up on stage. Elop waited a short moment, and climbed the few steps onto the stage with familiarity, and started.

His expression was serious. One could see in his face that he was troubled. Instead of waving around, his hands stayed at his sides or clasped in front of his stomach. The presentation was colorless and subdued, even if the content was supposed to appeal to people's emotions. According to Elop, Nokians had every reason to be proud of their work and achievements. He told them that he was proud of them, even if he was frustrated at being left behind in market share by the competitors. He said he was also sad, because the word Nokia in its former form had meant so much to so many people.

Finally, Elop addressed the people of Finland. The pride felt by Finns toward Nokia has been an inspiration to him and a source of strength. He thanked the people for the support he had. Now a new chapter was beginning in Nokia's life, according to him. Some things would still not change. "As you see the bright yellow Lumias in peoples' hands overseas, continue to be proud. The phone is still made by your friend, colleague, or even family member. We will stay in Finland to win."

Ballmer didn't want to stay and answer the questions from reporters. Ihamuotila, Siilasmaa, and Elop stood up in a row. Elop stood next to

Siilasmaa like an ice hockey coach that had just lost his game. It seems his hands had difficulties finding a place. One's attention shifted to the sleeves on his suit, which were too long. He was a defeated man.

The winners stood next to him. Siilasmaa's radical decision garnered thanks where it was important. The share price had risen over 40 percent, even if many thought the sales price was too cheap. Nokia had become a real company. One whose cash flow was transparent, which was predictable, and whose future looked bright and with whom one could expect new business.

One representative from a large shareholder was satisfied with the result. "We had high expectations for Siilasmaa, and they were fulfilled. His board met unbelievably often. The alpha and omega of everything was that Siilasmaa could use his time for Nokia. From our point of view, Siilasmaa is the hero of this story."

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The Nokia–Microsoft agreement was multifaceted and complicated. The most relevant parts and the changes that were announced in Nokia were the following:

- Microsoft pays the sum of 5.44 billion euros (\$7.2 billion) in cash for the sale. From the sum, 3.79 billion euros (\$5 billion) are for the mobile phones division (Devices and Services). 1.55 billion (\$2 billion) are for the licensing of patents for 10 years. On top comes 100 million euros (\$130 million) for the exclusive right to modify the license agreements to be continued. Money for the patents therefore comes continuously when ten years are up.
- Microsoft makes convertible bonds to Nokia for 1.5 billion euros (\$2 billion).
- The Nokia brand remains under the control of Nokia. Microsoft receives a license to use it in its feature phones for 10 years.
- Nokia can use the Nokia brand on its mobile devices at earliest on December 31, 2015.
- The Lumia brand is transferred to Microsoft.

- Microsoft becomes a strategic license holder of Here. It will pay separately for the license to Nokia.
- Around 32,000 employees are transferred to Microsoft, out of which 4,700 are in Finland.
- Elop will step down immediately from his responsibilities as CEO and will transfer to Microsoft when the deal is confirmed. Until then, he is responsible for the Nokia mobile phones division.
- Siilasmaa will become temporary head of Nokia, and Ihamuotila will become temporary CEO.
- Elop will be paid the amount specified in his CEO contract in case of the sale of the business.
- The purchasing cash flow was about 15 billion euros (\$19.8 billion) in 2012, which was nearly half of Nokia's cash flow.
- The deal is finalized by the end of March, 2014.

On September 3, in Keilaniemi and Redmond, the difficult job of finalizing the deal was begun. This period was one of the most difficult in the history of business. What made it especially difficult was that a part of a large company was being split off, instead of selling an independent unit. Information systems, business services, bookkeeping, and so on—everything had to be rethought. The new Nokia needed a new strategy, organizational structure, leadership, and capital structure. The unit had to still be able to start its activities immediately when the deal was finalized. The part that was being split off needed to sit well in the buying organization. And everything needed to be reversible in case the deal fell through.

The biggest stumbling block was seen in the approvals of the antitrust officials. In the US and the EU, they came in the beginning of December 2013, but in Asia, especially in China the decision was drawn out. The local manufacturers, Google and Samsung told the officials that they were concerned about their patent licenses. They feared that Nokia would start to be a patent troll.

Patent disputes had been everyday life for years in the mobile device world. What has kept the prices down is that many patents are based in reciprocity, and the owners of the patents are themselves mobile phone

manufacturers. When Nokia was giving up its mobile phone manufacturing, it was reasoned that it might raise the prices of its patents and terms. In South Korea, the organization of electronics manufacturers made a similar complaint to the antitrust officials. Even the European Union warned that it would be following the patent licensing practices when it accepted the Nokia sale.

In India, tax disputes chafed at the deal. The dispute was about license fees that needed to be paid based on software development. Nokia had paid taxes to Finland, so the worst that was ahead was double taxation of billions of euros. The Indian officials told that they would block the transfer of the Chennai factory to Microsoft until the mess was sorted out. The dispute took on absurd characteristics, when the Tamil Nadu state tax officials claimed that during 2009–2011 Nokia had sold 275 million mobile phones without paying value added tax on them. According to acting CEO [19] Ihamuotila, the phones had been exported overseas. “If the phones had been sold in Tamil Nadu, every resident of the state would have bought four phones in three years. We certainly don’t have a 100 percent market share there”, Ihamuotila said publicly.

While waiting for the final signature for the deal, the circle was closed with the three year old events in a surprising way. Nokia unveiled three phones which were based on Android. It was as if Nokia acknowledged its mistakes, even though the phones were based on free Android, and remained outside the Google ecosystem.

“Hell freezes over, Nokia unveils an Android Phone”, rattled the web publication Mashable. Freely translated, cows had begun to fly. It was asked whether Nokia was pushing Microsoft with the Android project? Or was Android plan B if the Lumias failed?

Or was it after all what Nokia said it was, a gateway from Asha to Lumia?

The best answer is probably a combination of everything. The phones certainly caused Microsoft a scare: If the phones known as Nokia X would start to fly, Nokia might pull out of the Windows Phone deal, despite the penalties. The X series was, in that way, used as a price leverage for selling the phones. Microsoft had to buy Nokia’s phones if they wanted to get a decent life expectancy for Windows Phone at all.

This idea is supported by how the head of Windows Phone, Joe Belfiore, made some sour statements about Nokia's move. The X series might have also been a way to force Microsoft to buy the feature phone business along with the smartphones in the same package.

The gate theory also has credibility. Nokia had built their own operating system for the X series, which combined the Windows Phone tiles together with features from the Ashas. The most important applications were Microsoft Skype, Outlook, OneDrive, as well as Nokia's Music, Maps, and Drive. Apps could also be downloaded from app stores that were independent of Google. The bundle led Asha users into the world of Lumia and Nokia, as well as Microsoft services.

Why was the X series unveiled, even if the phones business had already been sold to Microsoft?

Nokia needed to be prepared for the possibility that the deal might fall through. The companies needed to act as if the deal was not even going to happen until the time the antitrust officials had approved it.

On March 24, 2014, Nokia announced that the deal with Microsoft would be moved to April. They had not received all the approvals from the antitrust officials. Those with weak nerves began to have doubts: Was the deal in danger of falling through? The penalty for the deal was 700 million euros (\$922 million). It is a big sum, but it would have still left a big hole in Nokia's finances with the loans included in the deal.

It was finally ready on Friday, April 25. The price of the deal rose slightly from the original. The Chennai factory remained outside the deal. According to Nokia, this had no real effect on the terms of the transaction, and Nokia would receive compensation from Microsoft for responsibilities that were not transferred. Furthermore, Nokia notified that it would be closing its factory in South Korea, therefore it would not be transferred to Microsoft.

When the deal was delayed, it looked month by month better for Nokia. In 2013 during the last quarter, Samsung's and Apple's profitability decreased. HTC and LG were fighting for their lives. Lumias were selling poorly, and in January of 2014 they had clearly plummeted. The phone markets were heading for bloodier competition, where Nokia had no reserves to work with.

Friday, April 25, 2014 was still a sad day. Jorma Ollila had hired, with great expectations, a foreign CEO in 2010 to lead Nokia. A CEO with a software background. A CEO, who combined Finnishness and Americanness. A CEO who was supposed to save Ollila's life's work. A CEO who was supposed to lift the crown jewel of Finland to a new level of prosperity.

Three and a half years. Only three and a half years and that operation—which we call Operation Elop on the cover of the book—had ended in a perfect belly flop.

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[18] 'Vuorineuvos' is an honorary title granted to leading lights in Finnish industry by the President of Finland.

[19] This is presumably a mistake. Ihamuotila was the acting CFO.

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24. The bonus brouhaha boils over

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Risto Siilasmaa has said he just knew that Stephen Elop's payoff would cause a brouhaha. A clause in the Microsoft-Nokia agreement requires Elop to have his stock compensation vested in an accelerated manner along with a 4.2 million euros (\$5.5 million) cash payment including salary, severance pay and bonuses adding up to a total of 18.8 million euros (\$24.7 million). Siilasmaa says he thought he could soften the blow and do a favour for Nokia shareholders by asking Microsoft to pay part of the payoff. He turned to Ballmer and again implored him to consider how important the perception of Microsoft in Finland would be for the future of Microsoft mobile devices in Finland.

It was a bad idea. The value of Elop's stock awards—totalling in 14.6 million euros (\$19.2 million) at the current rates at the time—went public from a filing of the extraordinary meeting voting on the sale of the Nokia mobile device business. The media went crazy. The payment was considered outrageous since the general impression was that Elop

had brought Nokia to ruins. And when the buyer, Elop's former and future employer, was to foot part of the payout bill, many considered it to be an additional reward for selling Nokia to Microsoft.

For instance, the *Wired* magazine had a bold headline: "Microsoft Brings its Trojan Horse Home".

On top of everything, Siilasmaa blundered in his communication. According to him, the reward was based on Elop's CEO contract, which essentially was the same as Kallasvuo's. But Finland's largest newspaper *Helsingin Sanomat* dug out the truth. Kallasvuo's contract did not have the controversial clause entitling him to an immediate share price performance bonus in case of "change of control".

The controversy reached political proportions. The then finance minister Jutta Urpilainen considered the judgement of the payoff justified. She called for consideration of new rules that would allow shareholders to decide on executive compensations at the general meeting. She also insisted upon introducing a clause in collective labor agreement requiring "responsibility and moderation in all reward practices". Even the American *Forbes* magazine quoted the then prime minister Jyrki Katainen who called the reward "quite outrageous".

On top of that, Elop refused to take a cut in the payoff for marital reasons. Elop had separated from his wife Nancy in October 2012 and filed for a divorce in August 2013 after 26 years of marriage. The family had never moved to Finland but stayed in Seattle, and Elop had decided to sell the family residence.

Since there was no prenuptial agreement, Nancy would be entitled to half of Steven's assets. Allegedly, Elop had justified his refusal to Siilasmaa by claiming that Nancy's divorce lawyers would accuse him of destroying Nancy's assets.

The imagination of speculants was flying sky high. One thought that Elop was hired to prepare Nokia's mobile phone unit to a sellable condition. Another speculates that the accelerated stock grant "change of control" clause was included in Elop's contract on purpose, because Elop and Nokia both knew at the time that Nokia's mobile phone unit would soon be taken over by Microsoft.

The media, as well as the speculants, forgot about one crucial fact. If you want an American executive, you must compensate them on American terms.

The median compensation for CEOs of US publicly traded companies on Standard & Poor 500 index (S&P500) in 2012 was about \$10 million per year. In 2012, Elop's tech peers like Honeywell's David Cote received \$56 million, Qualcomm's Paul Jacob \$36 million and AT&T's Randall Stephenson \$26 million.

The type of stock award previously commonly used in Nokia, viz. stock options, are not so common in the US anymore. Their bad reputation and taxation practices have made corporations change the way they incentivize executives: Restricted stock units. It is not uncommon for CEOs nowadays, also within Nokia, to be awarded performance-related stock. The CEO is incentivized to stay on. Should he/she resign during the three-year performance period, he/she would lose the stock reward.

Restricted stock units have a major advantage. They align the interest of CEOs to those of the shareholders. A big salary comes out of the shareholders' pockets. In the US, there is also a corporate tax law limiting the employee salary deduction to \$1 million per employee. For example, Qualcomm's Jacobs had an annual base salary of 1.2 million euros (\$1.65 million). The rest of his 36 million euros (\$49.4 million) payment was awarded in stock.

However, restricted stock units raise three questions:

- What to do in the event of change of control within the performance period and the company's direction changes?
- What if the responsibilities of a CEO diminish so much so that he/she can no longer influence actions to meet the performance criteria?
- What if the CEO is fired?

Wouldn't it be unfair for the CEO to lose his/her stock grant in cases like this? He/she might just be on the verge of reaching the set targets. Wouldn't it be right to take protective measures against situations like these?

Americans seem to think so. This is in the core of the reward controversy. In the US, almost without exception, CEOs have stock “change of control” clauses in their contracts requiring their stock compensation to be vested in an accelerated manner should they resign following a change of control. The number of stock units they receive is calculated as if their targets were met. It is impossible to hire a top American executive to Europe without this clause even though it is uncommon in Europe. This is the reason why Elop’s contract differed from Kallasvuo’s. In the event of “change of control”, Elop stood to have all unvested stock vested in an accelerated manner should he resign. The takeover triggered the accelerated bonus.

It would have been in Elop’s interest to resign following the takeover. Nokia, however, wanted him to stay through the transition. Hence, the amendment to the employment contract. Elop was granted the same compensation if he was to stay on. He did, and made a smooth transfer back to Microsoft.

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Elop’s CEO employment contract was reasonable by American standards. He himself commented on it at the time of the appointment: “The Nokia Board of Directors, particularly the chairman, are fully aware of contractual matters”.

Some commentators were of the opinion that the CEO contract created a strong incentive for Elop to take substantial risks with Nokia. One of the many conclusions reported that Elop stood to gain a huge reward if

- the share price drops deeply as the company is driven to a cash flow crisis
- Nokia sells the mobile phone business under pressure to raise cash
- share price rebounds sharply on a takeover bid but still remains far below where it was when Elop joined the company

And that is exactly what happened between 2011–2013, much to the amazement of the speculants.

Restricted stock grant may well encourage a CEO to sell the business. BlackBerry, formerly RIM, CEO Thorsten Heins was perceived to have

had this specifically in mind. He stood to make 40 million euros (\$54 million) if the company was sold and he is ousted. Should he be forced to step down without the company changing hands—which he was—the compensation would only be half of that. Heins and the BlackBerry board were criticized the same way Nokia was: What is the point of rewarding the CEO for failing to turn the company around?

This was of no concern to BlackBerry. The new CEO John Chen was awarded restricted stock units valued at 61 million euros (\$82 million) on top of his annual salary.

Historical data shows that even this sum is small. The Finnish business magazine *Tekniikka & Talous* reviewed earlier cases. General Electric's CEO Jack Welch is at the top. He collected a severance payment of 300 million euros (\$417 million) when he was fired in 2001. Viacom's CEO Tom Freston was sacked in 2006 after holding office only for 9 months receiving a severance package for nearly \$100 million. Heinz's William Johnson stands to gain over \$200 million in the event of change of control. If any consolation to the Finnish people, Sanjay Jha received a severance pay of 50 million euros (\$63.7 million) when he resigned as Motorola's mobile phone business was taken over by Google in 2011.

In Elop's case, we are now approaching the main point. Did the “change of control” clause set an incentive for him to sell a Nokia business unit to Microsoft?

Yes. It may well have done.

Nokia shares had plummeted, economy in ruins. Elop knew he was unlikely to meet the performance criteria, which meant that he would be left without stock grants. By triggering the change of control, he would stand to gain a substantial amount without meeting the set performance criteria. Furthermore, the takeover might increase the value of stock options, which were also part of the compensation package.

It would still be unreasonable to claim that Nokia Board of Directors were fooled. An expert on executive compensation packages said that corporate executives are like top athletes. They are genuinely passionate about the task in front of them and will only agree to take it on if they feel excited about it. The change of control clause is a minor detail in the employment agreement, more like a safety valve. It would

be highly suspicious if a CEO were to prioritize that issue high among other requirements.

Now for the grande finale: Elop had no reason to deliberately damage Nokia. Not even with the change of control clause. He would have gained a lot more by achieving the set goals. Every rational being would have set out to reach for the rewards through Nokia's success.

The truth is that a company on the verge of a bankruptcy is of no interest to anyone. What if Microsoft had not been keen to purchase the Nokia mobile device business? Elop would have been left with nothing. Above all, Elop did not sell the device business to Microsoft. That was done by Risto Siilasmaa and the Nokia Board of Directors.

Elop's huge compensation package was a follow-up of American corporate culture and the common practice of overwhelming compensation rewards. The business school giant has it all figured out regarding risks in the use of restricted stock awards and the change of control clauses. Despite that, these kinds of compensation packages are widely used.

Then, a human argumentation as the icing of the cake. Elop chose Nokia although he stood to gain more had he stayed in the US. More than monetary benefits, he was driven by ambition.

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Naturally, Elop was paid a salary, too. His employment contract outlined the following:

- 1.05 million euros (\$1.47 million) annual salary.
- 2.3 million euros (\$3.22 million) as compensation for loss of income at Microsoft.
- 510,000 euros (\$710,000) to cover for Microsoft reward refund.
- 312,000 euros (\$434,000) for legal fees relating to Elop's transfer to Nokia.
- 3 million euros (\$4.2 million) as a second compensation for loss of income at Microsoft due October the following year from joining.

Adding the stock rewards and stock options, Elop received 6.7 million euros (\$9.38) in total during his first year at Nokia.

The following took place according to the 2011 Annual Report:

- 1.02 million euros (\$1.4 million) annual salary
- 2.1 million euros (\$2.94 million) additional bonus (including the second Microsoft compensation, which apparently remained lower than mentioned above)
- 6.7 million euros (\$9.38 million) of stock grants and options at the then current rates including annual salary and bonuses

2012 was like this:

- 1.08 million euros (\$1.43) annual salary
- 4.3 million euros (\$5.69 million) compensation including stock rewards and options

Allegedly, Elop earned 9.7 million euros (\$13.3 million) in 2013. Along with the stock gain, the severance pay rose to 24.2 million euros (\$33.12 million) which indicates Nokia having compensated Elop 52.8 million euros (\$72.3 million) in total.

Wrong. The media in Finland got the figures wrong from the start. The biggest mistake was to interpret the 24.2 million euro reward to be an additional severance pay. It was not. Those appalled were not aware of the actual details behind the figures. The reported yearly payments included theoretical calculations on his equity awards. Nobody actually knew what their value would be in a year's time. International Financial Reporting Standards require the stock grant units to be reported in closing share price calculated as if the targets were met.

By going through four years of Annual Reports, it turns out that by the time of the change in his position, he had not been granted any equity awards. Neither options nor restricted stock. Why not? Because the performance period was still ongoing. For that reason, the whole controversy surrounding the reward was partly unreasonable. Elop was not paid 24.2 million euros as additional severance pay as many commentators and politicians imagined. [20] He received the money that Nokia had already reported as having paid him.

We have calculated Elop's total earnings based on Annual Reports. The sum is 34.7 million euros (\$47.5 million) including 18 months of base salary and management short term cash incentives 14.7 million euros (\$20.1 million), equity awards, i.e. restricted stock grants 12.7 million euros (\$17.4 million) and stock options 7.3 million euros (\$10 million). Particularly profitable were 2013 options of which the closing price was 2.73 euros (\$3.73). Elop received 4.6 million euros (\$6.3 million) for those.

Huge sums, but still smaller than what many of the politicians agitated by the controversy were criticising.

We want to emphasize that we are not taking a moral stand on the size of the rewards. We feel it is more important to understand that without this, it would have been impossible for Jorma Ollila to hire an executive from North America, and that compared to North-American practices of reward, Elop's compensation was reasonable.

As Nokia CEO, Elop was expected to purchase Nokia shares himself, too, worth three year's annual salary according to the board's recommendations. Elop was fairly lazy in this, partly due to stock market regulations. He purchased his first shares in February 2011 with 1 million euros (\$1.36 million), i.e. roughly his annual salary. At the same time he reported having sold his Microsoft shares that had come under criticism. A top up of Nokia shares worth 500,000 euros (\$780,000) followed six months later, after which he had 425,000 shares in total. By the end of 2013, there was no change, meaning that the recommendation for 3 million euros was not reached even after the stock gain by the takeover.

The board's recommendation does not define any time frame for share purchases. The members are expected to increase the number of their shares with half of the reward profits but as mentioned before, Elop did not have any stock compensations vested until he stepped down.

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[20] Presumably a typo in the original text, €20.1 million changed to €24.2 million.

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25. The world's worst CEO?

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Stephen Elop, in many respects, is one of the worst CEOs in the world, if not the worst. The fall of Nokia's mobile phones was one of the most dramatic ever among the companies listed in Global Fortune 500.

Let's play a little number game. A day before Elop started, the market value of Nokia was 29.5 billion euros (\$37.5 billion). When Nokia announced that it would sell its mobile phone activities to Microsoft, the value was only 11.1 billion euros (\$14.7 billion). Elop's term as CEO lasted 1,020 days. Every day Elop was at work—counting 7 day work weeks—ate away 18 million euros (\$23.8 million) from the shareholders' assets. This achievement is mind-boggling.

Still, some defend him and blame the failure on Olli-Pekka Kallasvuo.

This conclusion is shaky. When Elop started, the sales of Nokia smartphones grew. Elop's task was to plug the leaks. When Elop accepted the task, he believed that things could be fixed. It was futile to try to explain afterward. Elop failed in his task all by himself.

The “Burning Platform” speech has become a legend how a CEO can destroy almost everything with one stroke. Consultant and ex-Nokian Tomi Ahonen has created the fitting term: “Elop Effect”. Elop combined two different CEOs cardinal blunders: The Osborne and Ratner Effects.

In 1983, the computer manufacturer Osborne announced several new models of computers, which they said would be launched in sales after one year. In the meanwhile, sales of the old models plummeted because the consumers were waiting for the new models. Osborne ended up in bankruptcy. Gerard Ratner, on the other hand, was the CEO of the jewelry company Ratners. He gave a speech in 1991, where he said that Ratners products were so cheap because they were “total crap”. The consumers believed him and stopped buying.

Elop announced that Nokia is giving up on Symbian before any Windows Phone smartphone was ready (Osborne effect) and with his “burning platform” speech, expressed that Symbian and MeeGo were trash (Ratner effect).

In parallel with the “burning platform” speech, another serious mistake was made with the binding Microsoft agreement. It was senseless to lose freedom in the most dynamic sectors of the business world. How would anyone know what the world would be like in 5 years? It is ironic, as we showed earlier, that Nokia was afraid of becoming Google’s slave through Android. A prisoner or a slave, it is the same, but as Google’s slave, one could always run away from their master at any time. With Microsoft, Nokia was cornered without any alternatives.

Elop chose a daredevil one-path policy, even when the fast-moving internet era demands more. For example, Google does all sorts of experiments, sometimes even when logic defies them. By experimenting, the company confirms whether or not it has not overestimated its possibilities in its chosen path.

Elop also made quite many little mistakes. Many foreign recruitments went bad. Foreigners do not have the same kind of commitment to Nokia as Finns do. In the organizational upheavals, entire teams were lost: The best left and were replaced by people with the wrong skills. US-centricity backfired in other parts of the world. Sales of the Lumia phones launched at the wrong times. The effect of the ultra-cheap Android prices was underestimated. The list is long.

And as one of the interviewees reminisces, there were many PowerPoints and initiatives to save money during Elop’s time. It was very seldom taken into account what the consumers wanted and how to get the sales back to the old levels.

And what does Elop himself think about his mistakes?

The answer comes from Elop’s long time leadership coach, Stephen Miles. “The greatest thing about Stephen is that he never gets down or gets stuck in regret. Never. He is a machine.”

Apparently, even when 20,000 people have lost their jobs as well.

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After over a hundred interviews, we are completely convinced about one thing: The talk about any conspiracy behind Elop is without any basis. Elop was not a Trojan horse. Microsoft did not smuggle him into

Nokia with a plan to later buy Nokia's phone business for a low price. Our interviews gave no indication—none, whatsoever—that would have hinted that this could have been even possible.

A Trojan horse is a war stratagem from ancient Greek mythology. In the Trojan war, Greek troops entered the enemy city of Troy by hiding inside a hollow wooden horse. Trojans dragged the wooden horse inside their city walls because they thought it was a gift. Inside the wooden horse, the Greek soldiers waited until the night and then took over the city.

The conspiracy theory is absurd because this time the wooden horse was not a gift but was selected by Jorma Ollila and the Nokia board. It was not possible for Microsoft to influence this process.

The conspiracy theorists then say: Elop turned into a mole when he was injected into Nokia by chance.

It is difficult to understand why Microsoft would have wanted Nokia to fail. A successful Windows Phone ecosystem was of utmost importance to Microsoft—and it is good to keep in mind that in those days, device manufacturing was a side note in the Microsoft corporate strategy. And above all: why would anyone pay one billion a year for a company hoping it to fall? Risto Siilasmaa may be childlike in appearance, but based on our interviews he is a pedantic, prudent, and rigorous negotiator. He involved Elop in the negotiations with Microsoft. Siilasmaa has been very convinced that Elop worked only in the interests of Nokia.

The pension fund Ilmarinen is one of the large shareholders of Nokia. Deputy CEO Timo Ritakallio of Ilmarinen thinks that the claim of the Trojan horse is totally absurd. Ritakallio says that the conspiracy theorists seriously underestimate the Nokia board of directors if they believe that the board had stood still when an outsider was preparing the phone business for sale. He says that no actions by the board or by Elop support this claim.

The last nail in the Trojan horse theory was revealed in March 2014 when the news agency *Bloomberg* disclosed details of a June meeting with Ballmer and the Microsoft board. Several members of the board objected to Ballmer's intention to buy Nokia's phone business, according to *Bloomberg*. Even Ballmer's longtime supporter Bill Gates

was against him. The division hinged on whether Microsoft should expand to hardware manufacturing or remain as a software company. Ballmer's yell was heard outside of the conference room, according to the news agency. He claimed that he could not act as CEO if the proposal was not accepted. Several members in Microsoft's executive team also expressed their objection to the deal, including the future CEO Satya Nadella.

Conclusion? In 2010, when Elop was "smuggled" into Nokia, Microsoft did not want to become a phone manufacturer. In 2013, when it was time to turn the Trojan horse plan into action, the desire was almost as weak. Where would the horse have been needed?

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When the result was what it was, it must be asked, was it all Elop's fault? If a movie was made about Nokia's phones, would Elop be the bad guy?

The plot of a movie requires that there is good against evil. In real life, things are much more multicolored.

The big strategic plans of a publicly listed company are made by the board. The highest responsibility fell on the chairman, Jorma Ollila. Nokia's board was professionally run, but looking back, when choosing the CEO, it also outsourced the company's strategy. To a large degree, it is a question of the ways of working and ethics of the board. In Google's board, the decision making power rests on three people (founders Sergei Brin and Larry Page, and the CEO Eric Schmidt). They have concluded that there are other factors pressing in decision making than economic metrics. Apple has the same principle. You have to say "no" to Wall Street. This point is also made by Clayton Christensen, in his book *The Innovator's Dilemma*: If we obey money, it does not solve the bigger problems. Nokia's board had begun to optimize. There were shortcomings in the ways the operative leadership was monitored.

Elop got an important role to act in favor of Windows Phone, while preparing his choice. The choice was made sincerely, and the decision was justified.

Let's listen for a moment to a CEO of one of the largest mobile network providers in the world. In his opinion, time has shown that Windows phone was the best choice of all the alternatives available in 2011 for Nokia's owners. He raised a relevant question: If Nokia had gone with Android and was in the same boat as before the sale to Microsoft, who would have bought it then? An Android mass-producer that is in financial difficulties? No one. Because of the Microsoft decision, Nokia could get a price for its phones. And a new start as a networks company.

He even defends the "burning platform" speech. It was surprising that Symbian lived as long as it did, he says. A year before Elop, according to him, everything at Nokia had begun to decline and that people were depressed. No one was really able to do their work, when no one knew what was happening. After the burning platform, Elop had to let people go, but then people were reinvigorated and the energy level was high. The network provider CEO remembers Nokia first as very strong, then very weak, and finally strong again, a manufacturer with its pride back, whose market share was increasing. The return of the pride was because of Elop, according to him.

"Elop made one very big mistake. He let Microsoft pay some of the rewards when transferring to Microsoft", the network provider CEO says.

That mistake, as pointed out by the CEO, was not made by Elop, but by the chairman of the board, Siilasmaa. The decision was ethically intolerable and gave birth to unnecessary speculation, according to the network provider CEO.

Another CEO of a mobile network provider says he talked to several of his colleagues about Elop's future after the Microsoft deal. Almost all of them are of the same opinion: They would have wanted Elop to continue leading the phone division at Microsoft, and they were happy with Elop's ways of handling cooperation.

If we give the Trojan Horse theory a possibility, Elop was excellent in that role. As a Canadian, he gave a convincing impression that he really cared about Finland and Nokia. To top things off, he was modest and dressed like a Finn without false Bohemianism (Apple) or false relaxedness (Google). He fit in with Finns, even if he was a real talking-machine. Sugar-coated flattery and bravado remained in check. An

employee of the communications department vividly remembers seeing him at the Heathrow airport in London. He looked fed-up and tired with a little backpack on his shoulder, waiting in security. It was hard to believe this was a CEO of a globally listed company.

People who worked with Elop were invariably in agreement that he did his work like a machine. Many said that he was the hardest working person they had ever met. He flew over 60,000 miles a month on business, or more than twice around the world. He used a lot of energy to motivate people and to take care of business relationships, and raised the level of work to a new level. Nokia got its humility back, started making decisions, implemented them effectively, and started to think about the markets from a consumer's perspective. Not just anyone could have made this happen. It required an exceptional leader, and an extraordinary work effort from him. Why be bothered if the goal was to destroy Nokia?

Nokia's phones were not killed off by a murderer from Canada. What killed them was the arrogance born in Nokia's own country, concentrating on costs, unclear responsibilities, and bad decisions made by the company's board.

Elop's role is summarized here: He failed in his attempt to save Nokia. He made gigantic mistakes—but in good faith. Inspired by his success with Macromedia Flash, he put all his eggs into one basket at great risk. He pushed ahead like a Finnish small business entrepreneur, into whose head was driven the teaching that you can only succeed if you believe in yourself. Sure, success requires belief, but many who have believed have ended up bankrupt. Belief does not guarantee success. It is a requirement of success. For Elop, everything was all or nothing. If there was even a small possibility of contributing to the success of Windows Phone, it was chosen, even if another option would have been more useful elsewhere. When Elop arrived, Nokia was arrogant and thought it knew how things were done, didn't listen, and made decisions slowly. Because of Elop, everything had to be decided very quickly.

Now let's give a chance to speak to a former American executive of Microsoft. He tells us that he was shocked by Nokia's choice of Windows Phone, even if he worked at Microsoft. The only explanation was that Elop subconsciously wanted to do a favor for his former

employer and boss, Ballmer. Microsoft leaves an impression on people as an employer, according to the American leader, which is hard to get rid of. It becomes like part of the DNA.

“Many former Microsoft employees go through the same phase”, he said.

According to a large shareholder, someone from a small company should have been chosen to lead Nokia, rather than someone like Elop, who was a division leader of a large company. At Microsoft, Elop continuously had his boss nearby. The work of a CEO is a thoroughly lonely job. It is important to have networks, where you can throw ideas around and get new perspectives. If one’s network is former colleagues from Microsoft, the ideas get stuck.

The final conclusion is simple. Elop was the wrong man for leading Nokia. Someone else would have been able to save Nokia.

There was only one person who claimed to have known with certainty that Elop was the wrong choice. Hindu astrologer Shyamasundara Das states on his website that he has consulted in the selection of leaders of many large companies. The results are good, according to him. He says how he knew beforehand that Carly Fiorina was the wrong person to lead computer manufacturer Hewlett-Packard. The effectiveness of his method is proven by how the astrologist would have advised Nokia to hire someone other than Elop.

Should Ollila have listened to him?

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26. What if...

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Speculating about the fate of Nokia phones has been a popular national pastime in Finland, as of late. [21]

The news about Microsoft closing the Oulu mobile phone R&D unit has added fuel to the fire. The same fate is threatening the Tampere and Salo R&D units. Microsoft seems to be ramping down the phone activities it bought from Nokia, after Satya Nadella took the reins of

CEO from Steve Ballmer. Stephen Elop was not able to get profitable growth in the phone business neither at Nokia, nor at Microsoft.

Hindsight is the cheapest of all the forms of wisdom. One of the most pathetic forms is “what if” speculation. We still dare to think about what if Nokia had done differently, what should it have done, and what would have happened.

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Most of the people interviewed in this book believed that Elop would have ended up with a strategy like Samsung, that is having multiple software platforms. The Korean company sells, besides Android and Windows phones, phones made with its own software platform, Bada. Many of those interviewed were of the opinion, that if Nokia had announced a strategy of having multiple software platforms, and had gone with Symbian and MeeGo in parallel, Microsoft would have had to flex and give the Windows Phone bundle with more enticing terms.

It remains a mystery to us, whether having multiple platforms was ever an option for Elop at any point. At first, he praised MeeGo. Was it manipulation done by a talented actor? Or did Elop change his mind as the situation got worse?

Elop knows the answer best himself, but the hours of thought behind his reasoning seem to be clear. Splitting the poker chips would, in his mind, have weakened the possibilities of creating a real ecosystem out of MeeGo, likewise with Windows Phone. The efficiency would have suffered. One member of the board reminds us that the decision to change the strategy to drop Symbian took 24 months. After focusing, it took 6 months to create the first Lumia. The same would not have been possible in the world of multi-platform.

One can try to throw the ball in the other direction as well. Symbian would have still made billions if its ramp-down had not been so dramatic. With that money, it certainly would have been possible to get phones with different operating systems into sales.

How would a multi-platform model have worked?

It would have been difficult. At any rate, the majority of those interviewed for this book were of the opinion that the phones had left Nokia behind. There was certain death ahead. Nokia made phones which were unsustainable for its profitability. It would have required massive changes.

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Don't get us wrong. We are not knocking the choice of Windows Phone. It might have been the best strategic option of all those available. Perhaps the same thing had happened as before, the execution of the strategy failed.

In hindsight, it is easy to say that the exclusivity of the Microsoft agreement should have been revealed later. The most important things in Finland have been done using secret meeting minutes. It should have been done without announcing burning platforms, that Lumias would come side-by-side with Symbian. If the devices were done with proper hardware, the combination would have survived a while. When the Lumias were ready, then the exclusivity agreement could have been announced. Even better, if they had launched directly with Windows 8 phones.

A managed transition. It would have opened up a possibility for Lumia. In the shops, Lumia phones would have replaced Nokia's own phones instead of Android phones. Everything rested on this point. Dropping Android from places where it had already taken over proved to be impossible.

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What if Elop had chosen Android and hopped onto the winner's train?

Let's back up a little. What if Nokia had chosen Android in 2007, when there would have been a chance? If Nokia had become the first ruler of the Android world, something beautiful could have been created. Maybe even a renaissance of Nokia phones. But that did not happen. Samsung got there first.

But let's think still for a moment, what would have happened if Elop had chosen Google instead of his previous employer in the beginning of 2011.

We can start from the speech of Risto Siilasmaa, chairman of the Nokia board, in the exceptional general meeting in the fall of 2013. Small investors chastised him about the choice of Windows Phone and how, through that, Nokia ended up in the lap of Microsoft. He was moved by the critics. He asked: What could have been done differently?

The question is indeed relevant. Was Android an option?

According to Siilasmaa, it was not. We have a different opinion. Android was a real option, and a better option than what Nokia had publicly stated. Managed transition is the keyword here as well. With the help of Android, Nokia would have been able to replace its cheap phones before the competitors.

Elop and Siilasmaa defended Windows Phone with the argument that Samsung's key position strangled the other Android manufacturers, and it would have been impossible to fit in. Elop and Siilasmaa had left the consideration of this important question halfway: Why did Samsung and Android get such a strangling position? Because Nokia opened this opportunity up to them with its Symbian catastrophe. At least in part.

Choosing Google in 2011 would have undoubtedly been a bold move. Android would still have been a sure choice, and in the long run, fewer people would have lost their jobs than with the Microsoft choice. Especially when the combination would have enabled Nokia to compete in the lower mid-price category without all the image and device restrictions from Microsoft. We believe it to be very possible, that by choosing Android, Nokia would have stayed in the game longer.

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The Elop way of putting all the eggs into one basket might have even worked with MeeGo as well. Especially if Symbian had been ramped down to make way for MeeGo already before 2010, the world today might look very different. In our interviews, there were a lot of people in support of MeeGo. It would have been possible to build an ecosystem

around it, and time would have opened new possibilities in the free world of Android.

We still want to emphasize that we have understood the nature of opinions. Some of them are expressions of bitterness from former employees and conclusions made from their own narrow point of view. MeeGo is also romantic and stirs up feelings of longing, and bypasses rational thought. We also understand the idealism of Free Open Source Software, and that also blinds people from the truth. Our mission here is to sort through what is relevant, and hopefully we have succeeded in this.

We have also understood that the people who have agreed to being interviewed by us are more likely people who have left Nokia than people who have stayed, and people who have left MeeGo are numerous, which has certainly colored the interviews.

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More speculation: What if someone else had been chosen, rather than Elop.

If Anssi Vanjoki had become CEO, MeeGo would have lived. More resources would have been put into it. Symbian would have been ramped down, but in a controlled manner, spanning 2–3 years. In parallel, Android might have also been taken, but not Windows. Vanjoki would have probably chosen a multi-platform strategy.

If Symbian had been ramped down in a controlled manner, it would have been compensated with an increasing amount of MeeGo and Meltemi phones, and Nokia could still be in the phone business. The crash of Symbian would have been less sudden and new solutions could be brought in at a reasonable pace. We must also keep in mind that the smartphone markets were growing. If the market share had been stabilized in some form or another, the sales would have increased. With Meltemi and MeeGo, Nokia would have also been a solid player with tablets as well. Nokia could have caught up with the growing markets, because both cheap and flagship tablet models would have been developed at a fast pace.

If the MeeGo/Meltemi ecosystem would not have been created, there would still have been Android apps. So they could have chosen the Jolla way. It is its own ecosystem which also operates as a parasite on another ecosystem, Android. The consumer doesn't care if an app is a Qt or Android app. The important thing is that Facebook, Instagram and other key apps work.

The above paragraph might sound technical, but that is a topic related to the crash. The brand was lost, because the wrong operating system and ecosystem were chosen. Even if money was being made on mid-price and cheap phones, their image should have been used to help strengthen the world's' best and most advanced mobile phone.

The decisive blow to the profitability of Nokia's phones was the smartphones becoming cheaper.

Neither Vanjoki nor anyone else would have been able to stop this chain of events. Speculation around the idea that Ollila's original first choice candidate would have come to far away Finland to lead Nokia leads to a short chain of reasoning. He would be subject to the same set of rules as Elop: A large business made impossible by its lack of profitability. This super savior would have needed to make massive, correctly targeted cost reductions, without losing the ability to innovate. This would have been a tough cookie for anyone, when they were up against very powerful players. Nokia would have certainly achieved a sustainable growth in the phone business if the Samsung-Android pair had encountered some unexpected setbacks. Even if Apple had collapsed, it would not have automatically saved Nokia.

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There are yet more topics of speculation. What if Nokia had not sold its phones to Microsoft? The experts unanimously agree: Nokia would have ended up in a cash crisis and the existence of the entire company would have been at risk. The phones had become a dangerous burden that needed to be dropped. Nokia got a good price for its phones and turned its activities into a profitable direction.

Now finally: What if Jorma Ollila had stepped down earlier as chairman? The board led by Ollila got a CEO from the New World, but Nokia itself represented history. A CEO cannot work wonders by

himself. He needs the support of the board, who have enough understanding to bless the strategy and other critical decisions. Many uphold Siilasmaa as the hero of this story, who managed to save Nokia from certain disaster at the last moment and sell the phones. Many who decried the sales price of the phone activities, gave praise.

A leader of a large American hedge fund says directly, that he underestimated the desperation of Microsoft, upon which Siilasmaa managed to cash in. The exclusive agreement with Nokia had left the American giant vulnerable. The sales price of Nokia phones was, in his opinion, far too high. Why? Because the sales volume of the Lumia phones, which they were following, was continuously decreasing. The right price, according to him, would have been 1–1.5 billion euros (\$1.3–2 billion) or even less.

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Nokia under Siilasmaa's leadership got a new start. Even if the signs look optimistic, the world can change suddenly. It may be that the situation in the company can undergo extreme changes. Siilasmaa's real final value still remains to be seen.

The change of rhythm in the board and the commitment of the chairman in bringing Nokia upward, in any case, made a huge impression on large shareholders. If Siilasmaa had replaced Ollila earlier, the process of recuperating would have started more quickly. The decisive thing from Nokia's stance would have been who Siilasmaa's board had chosen to be CEO.

In summary, Nokia was in such deep water in 2010 from long procrastinated solutions and because of the quickly growing market, the board made the wrong decision: To hire Elop as CEO. The Microsoft man lashed up Nokia as a beast of burden for Windows, and then tied its hands. The result was a historical loss of market share and sales, a cash crisis and the end of the legendary Finnish mobile phone industry.

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[21] Note that the text reflects the situation in October, 2014.

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27. Epilogue

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We interviewed 102 people for this book. We heard the sentence “Nokia’s biggest mistake was ...” almost as many times. Each time the ending of that sentence was different.

There are as many versions of Nokia’s recent history as there are storytellers. So we don’t even try to insist that our book illustrates the ultimate truth. The book is a synthesis of multiple views and interpretations; as such we have tried to make it as accurate as possible. Economic history will reveal a more accurate truth after sufficient passage of time since these events, Nokia will open its files, and the people involved will start to publish their autobiographies.

Rumors and conspiracy theories will likely continue to thrive, although as we have described, they do not have any solid basis.

During the course of this book project we have reviewed multiple rumors and some partially imaginary claims.

One such claim is that Jorma Ollila was the Trojan horse. Seriously: We saw no reason to even investigate this further. Dear conspiracy theorists, please cool down! Jorma Ollila and Stephen Elop came to their decisions based on the best available information they had at that time, acting sincerely. They wanted to save Nokia, and they worked relentlessly towards this goal. Kudos to them for this.

The fact that decisions made turned out to be wrong does not make the decision makers traitors.

Another rumor has it that Steve Ballmer’s superyacht was in the Helsinki harbor in the summer of 2010 and that Ballmer was in Finland to negotiate the deal with Jorma Ollila. Except that it was not Steve Ballmer’s superyacht. It belonged to Paul Allen, a Microsoft co-founder who had left the company in 1983.

A third rumor claims that after the Nokia Board of Directors had decided on the Windows Phone strategy, Microsoft people waiting outside the meeting room were ready to take over. Wrong. According to

sources in the board, neither Microsoft nor Google representatives were ever seen in or around those meetings.

According to a fourth rumor, after a year at Nokia, Elop realized that the Windows strategy would be a dead end. He supposedly contacted Steve Ballmer and told him that Nokia's Windows phones would not have a chance. Ballmer was then said to have contacted Risto Siilasmaa. This is a grave accusation. It means that Elop bypassed his own superiors to reveal Nokia company secrets to Microsoft—even if these might have been construed as his personal opinions.

We were not able to have this rumor confirmed or denied but it is hard to believe that Elop had come to such a conclusion before the Lumia sales had even started. He had been working for Nokia for one year by October 2011. If there is any truth behind this rumor, it must have leaked from Microsoft since for Elop to disclose this would have been tantamount to playing with fire.

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We thank everyone who has been interviewed. You have invested your time altruistically to benefit our writing project.

The takeaway message after all these pages can be summarized as: Nokia's phone business did have a chance. Yet, it was still merely a chance that would have required a long series of right decisions, luck and a lot of skill. The end result could still have been the same as what actually transpired, but the probability of this might have been smaller.

What is gone is gone and will not come back. Great memories will remain, as do the ample amounts of world-class know-how and lessons for posterity. *Goodbye Nokia Mobile Phones!*

Stephen and Nancy were officially divorced on July 3, 2014. The family residence in Redmond, Washington, was still on sale in September 2014. The price had been dropped from the original \$5.8 million to \$4.5 million. In April 2013, Stephen moved a little closer to the Microsoft headquarters. The new residence in Grousemont Estates in Redmond cost \$1.1 million and Elop is probably still living there.

Events have followed a familiar pattern. In July 2014 Microsoft announced the layoffs of 18,000 employees, of which 12,500 were former Nokians. In Finland, this will impact 1,100 employees. According to media reports in July 2014, Microsoft is planning to discontinue the Asha and S40 feature phones inherited from Nokia in the next 18 months. The Android-based Nokia X product line will switch to Windows Phone even though it seems to have been a success: Information from September 2014 indicates that Nokia X series was the best-selling smartphone in the under-\$150 price category in 40 countries. Nokia's smartphone market share had roughly tripled in those countries. The Lumia share had remained stagnant.

It looks like the brand still has appeal as long as the phone is inexpensive enough and the operating system presents the right image. In particular, the X series did beat cheap Android phones from local Asian manufacturers and seems to have been performing well against the cheap models by Samsung as well.

The story in our book reached its final conclusion one day before going to press—Microsoft announced that it will stop using the Nokia brand for its smartphones from the beginning of 2015.

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We would like to thank journalist Katja Boxberg, software developer Antti Koivisto and managing director Timo Salminen for their support and assistance. We also thank editor-in-chief Arno Aho for arranging the time to work on this book and for his support. We thank our spouses and children for their patience.

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Appendix 1: Where are they now?

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Please note that this reflects the situation in October 2014 when the original book was published.

MARKO AHTISAARI left the Nokia head of product design job in October 2013. He is a Director's Fellow at the MIT Media Lab. The Media Lab at MIT tries to combine technologies, multimedia, arts, and design.

JERRI DEVARD who led marketing at Nokia quit in July 2012. She worked in her own company until March 2014, when she started as the Chief Marketing Officer of the US company ADT selling security services to homes and small companies.

STEPHEN ELOP stepped down from his Nokia CEO role after the Microsoft deal was announced to become the acting head of the Nokia phones unit. He was one of the candidates to succeed Steve Ballmer as the next Microsoft CEO but lost to Satya Nadella. Elop is currently in charge of the Microsoft devices unit, including the phones bought from Nokia, Xbox gaming consoles and Surface tablets.

COLIN GILES quit his Nokia head of sales job in September 2012. In July 2013, Giles started at Huawei, heading phones marketing and moved forward in May 2014 to another Chinese company, Lenovo, as their Vice President leading sales.

MICHAEL HALBHERR continued in the new Nokia in his old job but his title changed from the Executive Vice President of Here to the CEO of Here. He quit in August 2014 presumably after having differences in opinion with Nokia CEO Rajeev Suri regarding the future of Here.

JO HARLOW who was leading the smartphones operation at Nokia, transferred to Microsoft in the deal and is in charge of the phone operations.

TIMO IHAMUOTILA held the role of Nokia interim President after the Microsoft deal was announced. Ihamuotila is the CFO in the new Nokia.

OLLI-PEKKA KALLASVUO quit his job as the CEO of Nokia in September 2010, and later started as a board member and is the vice-chairman of the Board of Directors of TeliaSonera and construction company SRV. He is the chairman of the board of the Swedish Zenterio company developing software for digital television receivers.

MARY MCDOWELL left her job as the head of Nokia feature phones in June 2012. She has been working as a board member of the event company UBM and software company Autodesk.

JORMA OLLILA left his post as the Nokia chairman of the board in the spring of 2012. Ollila is the chairman of the board at Shell and Outokumpu, the chairman of the board of the EVA thinktank in Finland, and an advisor-partner of the consulting company Perella Weinberg Partners.

JUHA PUTKIRANTA transferred from his job as the Nokia head of manufacturing and subcontracting to Microsoft to lead the two company integration operation.

NIKLAS SAVANDER left Nokia from his job as the head of the Markets unit in August 2012. In April 2014, he started as the CEO of the Swedish Elekta company manufacturing radiotherapy equipment, after having worked as an advisor to several venture capital funds.

MARJORIE SCARDINO left the Nokia Board of Directors in the spring of 2013. She had quit her job as the CEO of the media company Pearson before that, and after Nokia she has worked primarily as a board member, including the board of Twitter.

RISTO SIILASMAA was the Nokia interim CEO after the Microsoft deal was announced. Siilasmaa is currently the chairman of the board of the new Nokia.

RAJEEV SURI is the CEO of the new Nokia from May 1, 2014.

TIMO TOIKKANEN moved from his job as the head of Nokia feature phones to Microsoft and continues to be in charge of feature phones.

ALBERTO TORRES left his job as the head of Nokia MeeGo in March 2011, and started as the head of Hewlett-Packard mobile business in September 2012.

ANSSI VANJOKI started in August 2013 as a Professor at the Lappeenranta Technical University in Finland. Vanjoki is the chairman of the board of the sporting goods manufacturing company Amer Sports and a startup investor.

CHRIS WEBER transferred from his job as the head of Nokia sales and marketing to Microsoft where he is currently in charge of phone sales.

JUHA ÄKRÄS transferred to the new Nokia to lead Human Resources.

KAI ÖISTÄMÖ did not move to Microsoft in the Microsoft deal.

Öistämö's permanent employment with Nokia ended in April 2014, and he works as an advisor to Nokia.

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Appendix 2: Glossary

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3G (3RD GENERATION) Acronym to denote third generation cellular mobile networks. First generation networks used analog standards like NMT (nordisk mobiltelefon) and second generation networks were digital such as GSM (global system for mobile telecommunications). 3G enabled faster data communication. The first 3G networks were deployed in the early 21st century.

4G (4TH GENERATION) Acronym for the fourth generation cellular mobile networks that follow 3G. 4G enables faster data communication. The definition is somewhat unclear: Network providers also market their fastest 3G data networks under the 4G moniker. The first 4G networks were deployed at the end of the last decade.

ANDROID Free smartphone and tablet operating system developed by Google. Android is open source software based on Linux. The Google version of Android requires Google services on the phone, such as the mobile app store Google Play. If a manufacturer makes modifications on its version of Android, it won't be able to have Google services in their phones.

CDMA (CODE DIVISION MULTIPLE ACCESS) Roughly one third of the world's cellular mobile networks are based on this second-generation cellular mobile network technology, especially in the United States and Asia. CDMA is a competitor to GSM, and it is often seen to include also the 3G version called cdma2000.

CORPORATE PHONE (Finnish: **YRITYSPUHELIN**) High-performance smartphone for enterprise customers, includes security functionalities. Well-known corporate phones include Nokia Eseries smartphones and Blackberry smartphones of the Canadian RIM corporation.

ETHERNET Local area networking technology for computers. Local area networks include computer networks in individual buildings or corporate networks in a single office location.

FEATURE PHONE (Finnish: **PERUSPUHELIN**) An inexpensive mobile phone lacking some smartphone functionalities, such as fast data transfer and a large variety of applications. With feature phones, one can make phone calls, send and receive text messages and access the internet in a limited fashion.

FLASH Animation and multimedia software toolkit by Macromedia. Adobe bought Macromedia and Flash in 2005.

GOOGLE DOCS Free office application suite for word processing, spreadsheets, and other applications. The applications are used with an internet browser and the documents are stored in Google servers. Google Docs is a competitor to the more expensive Microsoft Office suite and free OpenOffice.

GRAPHICS ACCELERATOR (Finnish: **GRAFIKKAKIIHDYTIN**) Microprocessor to allow computing devices to produce graphics on the display faster. Offloading graphics software operations to a graphics accelerator frees capacity from the other components in the computer for other tasks. Many smartphones and computers have graphics accelerators.

GSM (GLOBAL SYSTEM FOR MOBILE TELECOMMUNICATIONS) Second-generation cellular mobile network technology developed in Europe during the 1980s. GSM introduces a SIM smartcard to identify the user, allowing billing to happen based on phone numbers instead of devices. The first GSM networks in Finland were built in the early 1990s.

iOS An operating system developed by Apple that is used in iPhone smartphones and iPad tablets. Apple does not license the iOS operating system to other manufacturers. The first version of iOS was released in June 2007.

JAVA Programming language developed by Sun Microsystems. Java is being used in about 3.8 billion devices, from phones to supercomputers. It is used in developing applications for low-end phones.

LINUX Operating system initiated by Linus Torvalds in Finland, based on open source software that is available for free and allows further modifications. Google's Android is based on Linux just like the MeeGo operating system Nokia was developing for a long time.

LTE (LONG TERM EVOLUTION) New cellular mobile network technology. Basic LTE is often considered to be 3G, while the more advanced versions like LTE Advanced are part of 4G. LTE significantly improves data transfer speeds. It is becoming the first truly global network technology because both GSM and CDMA technology network providers can migrate to LTE.

MeeGo Mobile device operating system developed by Nokia and Intel by merging their earlier operating system endeavors (Maemo and Moblin). MeeGo was planned to become the Nokia smartphones operating system but the plan was scrapped when Stephen Elop announced that Nokia will start using Windows Phone.

MELTEMI Operating system for feature phones and mid-tier smartphones developed by Nokia in secrecy during 2011–2012. The development was terminated when Android smartphones price points reached the same level as the planned Meltemi phones. Nokia also had plans for Meltemi tablets.

MULTITASKING (Finnish: **MONIAJO**) Functionality of an operating system that allows the device to execute multiple applications in parallel, making it more convenient for the user to switch between applications.

OPEN SOURCE (Finnish: **AVOIN KOODI**) Method to develop computer software allowing anyone to freely access and make further modifications of the original software. Open source licensing terms often dictate unrestricted availability of software modifications. Enthusiastic developers or companies often drive the development of open source software that is made available without license fees.

OPERATING SYSTEM (Finnish: **KÄYTTÖJÄRJESTELMÄ**) The central software program in a computer or smartphone that is required for other applications to work. Smartphone operating systems include Symbian, Android, and iOS.

OPERATOR BILLING (Finnish: **OPERAATTORILASKUTUS**) Users pay for their purchases via their phone bills even if the money eventually goes to some other party than the network provider.

PLATFORM (Finnish: **ALUSTA**) In this book, platform primarily denotes either the combination of the smartphone operating system and the required electronics and hardware or only the operating system. The first platform in Nokia smartphones was Symbian, then Windows Phone. Platform can also denote approaches where the software or mobile phone technology is based on one single baseline version that is modified to develop new products.

QT Software development framework developed by Trolltech in Norway, bought by Nokia in 2008. Qt simplifies mobile application developers' work. An application can be developed for multiple operating systems in one go. Digia in Finland has continued to develop Qt further after Nokia abandoned the framework.

S40 Operating system developed by Nokia for its feature phones. S40 is the world's most widely used mobile phone operating system. Nokia had sold over 1.5 billion S40 phones by 2012.

S60 User interface platform developed by Nokia that was built on top of the Symbian operating system. S60 is a user interface platform because it has broader functionality than just the user interface.

SMARTPHONE (Finnish: **ÄLYPUHELIN**) Mid-tier or expensive mobile phone with a rich set of applications, graphical user interface, and decent internet connection. Smartphones usually have an open operating system for new applications developed by third parties.

SYMBIAN Smartphone operating system initiated and offered to other manufacturers by Nokia. The heyday of Symbian ended in the year 2010 when Android became more popular than Symbian. Nokia turned Symbian into open software but Stephen Elop terminated Symbian as Nokia's primary smartphone platform and chose Microsoft Windows Phone instead.

SYSTEM-ON-CHIP (Finnish: **PIIRISARJA**) Small piece of silicon containing an immense number of small electronic components. In this book, system-on-chip denotes one silicon chip that contains all the most important electronic components for a mobile phone, including the microprocessor. Lumia phones use Snapdragon chips by Qualcomm. Synonyms for system-on-chip include microchip and integrated circuit.

TD-LTE (TIME DIVISION LONG TERM EVOLUTION) Fourth-generation cellular mobile network technology based on LTE. LTE variants also include LTE FDD (frequency division long term evolution). The TD-LTE standard was developed by China Mobile, Huawei, Nokia Solutions and Networks, Samsung, Qualcomm, and ST-Ericsson.

TD-SCDMA (TIME DIVISION SYNCHRONOUS CODE DIVISION MULTIPLE ACCESS) Third-generation cellular mobile network radio technology used in China to avoid using Western technologies.

TIZEN Operating system for mobile devices that was born after Nokia ended its MeeGo development and Intel together with Samsung continued the work. Tizen is used, e.g., in wearable devices of Samsung.

USER INTERFACE, UI (Finnish: **KÄYTTÖLIITTYMÄ**) Control devices and software for the user to control a product. In phones the UI consists of elements visible on the phone display and the methods, such as the keyboard or touch gestures that are used to control the device.

WINDOWS 8 Microsoft operating system for computers that succeeded Windows 7. Windows 8 became available in October 2012. It includes the start screen optimized for tablet computers and visually resembles the Windows Phone user interface that is recognized by its “live tiles”.

WINDOWS PHONE 7 The Microsoft smartphone operating system and the successor of Windows Mobile. Windows Phone 7 became available at the end of 2010. Microsoft collects a license fee for Windows Phone 7.

WINDOWS PHONE 7.5 An improved version of Windows Phone 7, also known by the codename Mango. Windows Phone 7.5 introduced new

features and brought new languages. The first Lumia smartphones used Windows Phone 7.5 but Nokia had no chance to influence what is in it.

WINDOWS PHONE 7.8 A version of Windows Phone 7 that was created to remediate the fact that phones running Windows Phone 7 were not upgraded to version 8. One could adjust the size of the tiles like in Windows Phone 8 but Windows Phone 8 applications did not work.

WINDOWS PHONE 8 The successor of Windows Phone 7.5 as the operating system for Nokia smartphones. Windows Phone 8 deviates from its predecessors so much that applications developed for it did not work in its predecessors and the earlier phones could not be upgraded to the new version.

Addendum to the glossary in the English translation

We provide the following additional clarifications specifically for the English translation.

NETWORK PROVIDER (Finnish: **OPERAATTORI**) The Finnish term “operaattori” refers to companies that provide network access and communication services to subscribers. Within Nokia, the standard English translation was “operator”. In North America, other terms such as “network provider” and “carrier” are more commonly used. In this translation, we generally use “network provider” throughout for the sake of consistency, except when reporting verbatim original English quotes.

DIRECTOR, MANAGER (Finnish: **JOHTAJA, PÄÄLLIKKÖ**) The book refers to multiple named and anonymous people with their titles in Finnish being “päällikkö” or “johtaja”. Through some detective work with Google and LinkedIn we found out the more accurate English titles for some of the people mentioned in the text but in many cases, and especially with the anonymous references, we generally use “manager” for the original term “päällikkö” and “director” for “johtaja”.

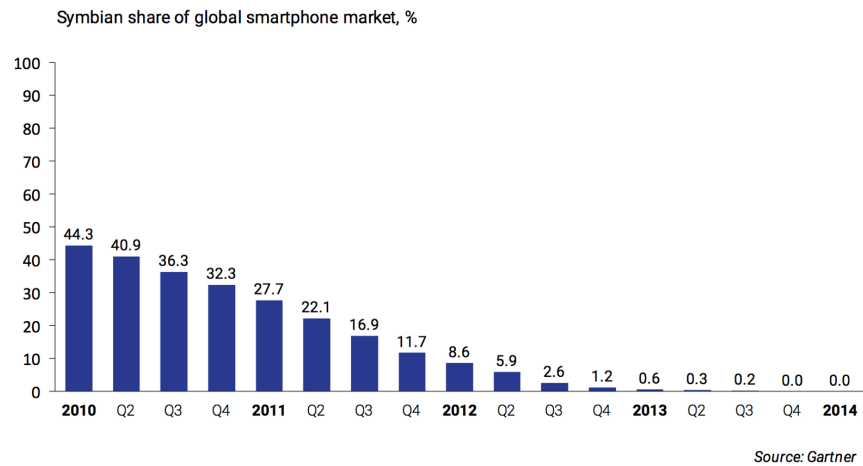
STATUTORY NEGOTIATIONS (Finnish: **YT-NEUVOTTELUT**) Finnish labor law requires that an employer planning job reductions (or other major changes affecting employees) have a series of negotiations with employee representatives on how the reductions/changes are

implemented. Finnish sources sometimes translate this as “cooperation negotiations”.

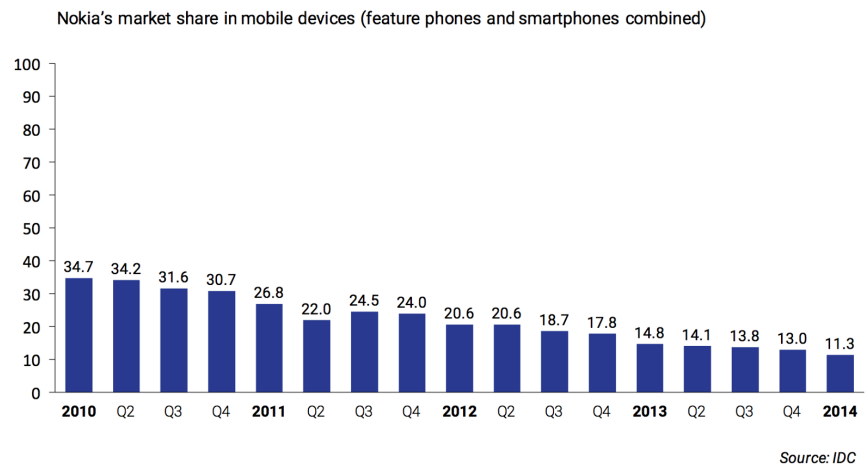
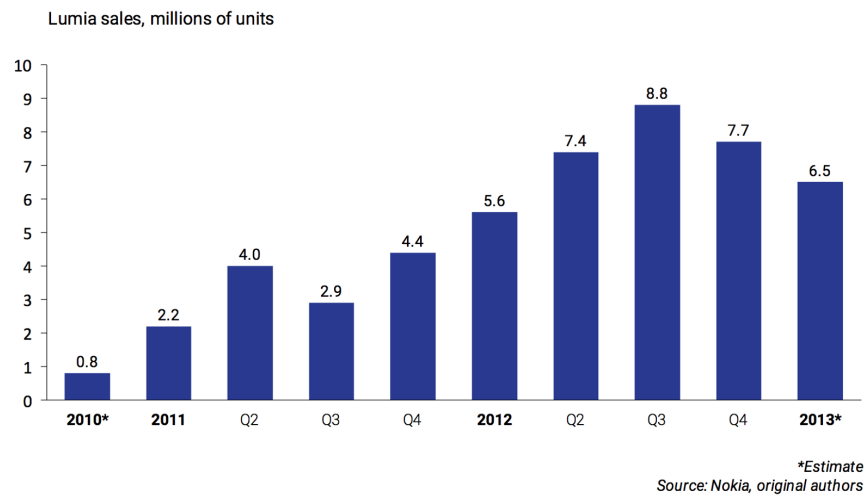
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Operation Elop



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11 people

OTHERS

SAMI AAVIKKO, retail store director at network provider DNA in Finland

JYRKI ALI-YRKKÖ, research manager at the Research Institute of the

Finnish Economy (Etlä)

DANIEL CHUNG, Nokia China operator marketing director

JULIEN CODORNIU, former Microsoft employee

HORACE DEDIU, analyst

JYRI ENGSTRÖM, former Nokia software developer and founder of Jaiku Oy, currently investor living in the Silicon Valley

MIKKO ERVASTI, analyst at Evli bank

JYRI HAGMAN, former Nokia product development director

JUSSI HURMOLA, former Nokia MeeGo director

PEKKA ISOSOMPPI, former Nokia public relations manager, currently press counsellor in the embassy of Finland, London

SALLA JÄMSÄ, former Nokia human resources employee

TERO KUITTINEN, analyst

SAMPSA KURRI, founder of the *Muropaketti* website

JR LESKINEN, editor of the business newspaper *Kauppalehti*

ROBIN LINDAHL, former Nokia global operator relationships director, currently member of Outotec Oy leadership team

NEIL MAWSTON, analyst at Strategy Analytics

MIKKO MERIHAARA, former Nokia Oulu R&D center chief shop steward

CAROLINA MILANESI, analyst

FLORIAN MULLER, IPR expert

LESLIE NAKAJIMA, American marketing expert who worked on Nokia Lumia

HELENA NORDMAN-KNUTSON, analyst

VESA-MATTI PAANANEN, Microsoft ecosystem relationships responsible

PEKKA PESONEN, Nokia Bridge director

MIKKO PULLIAINEN, editor of the *Aamulehti* newspaper

SARI PÄIVÄRINTA, former Nokia Windows marketing manager

HANNU RAUHALA, analyst at OP-Pohjola bank

MIKAEL RAUTANEN, analyst at Inderes

RAMASHISH RAY, former Nokia Asia retail director, currently director at Samsung

MAGNUS REHLE, Telia-Sonera director

TIMO RITAKALLIO, deputy CEO of Ilmarinen insurance company

ROSS RUBIN, analyst

MIRJAMI SAARINEN, news editor at the *Kauppalehti* newspaper

SAMI SARKAMIES, analyst at Nordea bank

KAI SEIKKU, CEO of component manufacturer Okmetic

TIMO SEPPÄLÄ, research manager at the Research Institute of the

Finnish Economy (Etlä)

PETRA SÖDERLING, former director of Symbian Product Management,
Symbian Open Source, and director of Symbian Foundation

PIRKKO TASKINEN, former Nokia sales manager

JUKKA TASKINEN, former Nokia Meltemi marketing manager

VILLE VALTONEN, former head of human resources at Nokia Finland

LEE WILLIAMS, former Symbian Foundation Executive Director

BEN WOOD, analyst at CCS Insight

DAVID B. YOFFIE, Harvard University professor

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Chief editor

Mobile software business entrepreneur

Board member

CEO of a European mobile network provider

Application development director

Director in a US technology company

Chairman of the board of an international mobile telephony company

Design expert

CEO of a global mobile network provider

Nokia Markets unit employee

Director in a US technology company

Director in the Nokia Design Unit

Director in an international consulting company

Nokia Meltemi manager

Director in a US technology company

International consulting company expert

Consulting company director

Director in a Finnish mobile telephony company

Nokia finance & control director

Director in an international consulting company

Nokia Meltemi director

Nokia communications employee

Nokia strategy department employee

Nokia MeeGo director

Nokia middle management employee

Nokia operator relationships employee

Nokia Research Center researcher

Nokia middle management employee

Nokia user interface developer
Financial editor
Member of the Parliament of Finland
Nokia communications employee
Nokia middle management employee
Nokia Siemens Networks director
Nokia middle management employee
Nokia middle management employee
Nokia Money employee
Nokia sales director
Director in a network provider company
Representative of a large Finnish shareholder
Venture capitalist in the US
Analyst
Nokia director
Director who knew the Nokia Salo manufacturing facility
Director who worked with Nokia design
Analyst
Nokia communications employee
Nokia communications employee
Nokia software developer

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The final final epilogue

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This online book is a pro bono effort by a team of former and current Nokians to translate the original Finnish Operaatio Elop book from Finnish to English. It all started when the original book was published in October 2014. By that time, Nokia's phone operation had been going through difficult and turbulent times; it had been sold to Microsoft, and Nokia was focusing on its telecom infrastructure business. There was bitterness in the air and conspiracy theories abounded—after the crown jewel of Finland and champion of the whole European technology industry had crash-landed. Many readers praised the original Finnish book for its objective treatment of the affairs at Nokia, thanks to the background research done by the authors Merina Salminen and Pekka Nykänen through interviewing a large number of Nokia employees, executives, and other stakeholders. After reading the book reviews, non-Finnish readers were asking in social media if the book is going to be available also in English.

Like many other former and current Nokians of that time, Harri Kiljander bought the book as soon as it was available. After spending the following night reading the book, Harri sent an email to the publisher asking them to deliver a thank you message to the authors for a well-written book. To Harri's surprise, Merina Salminen and Pekka Nykänen soon responded to his email, and over the next couple of emails a loose idea was born: Gather a team of Nokians to bootstrap an English translation of the book and eventually publish a proper English version of the book. Harri introduced the idea to Janne Parkkila who invited Timothy Jasionowski to help in the effort. The team agreed with the authors to translate a set of chapters as a teaser to expedite their task finding a publisher for the English version. By the fall of 2015 a sample set of chapters was ready and the authors had signed a deal with a publishing agent.

In May 2016, Microsoft announced they will be shutting down practically all phone research and development operations in Finland. Harri decided to check the English book status with the authors. There was no progress, so Harri asked if a pro bono team could translate and publish the whole book—unfortunately the deal with the publishing agent did not allow this.

Triggered by Microsoft announcing the death of Windows Phone in October 2017 Harri again checked the English book status again with the authors. There was no progress with publishing the English version, so a deal was made with Merina and Pekka: If their agent cannot get a contract for them by the end of the year, the pro bono team can translate and publish a non-commercial English version of the book.

Beyond Nokia is a closed Facebook group for ex-Nokia employees globally with over 27,000 members in February 2018. Stories have been written of what keeps the ex-Nokia community together and this forum is one manifestation of the old *Connecting People* mission statement of Nokia still going strong. On October 13, 2017, Harri sent out a call for contributors message in Beyond Nokia:

Call for contributors!

Windows 10 Mobile was axed this week and as we all know, Nokia's path crossed with Microsoft's mobile platform endeavours. Stephen Elop was in a key role in that development, and after Nokia's handsets were sold to Microsoft in 2014, two Finnish journalists Merina Salminen and Pekka Nykänen wrote a book of what had happened in Nokia's handset business during 2010–2013 when Stephen Elop was the CEO of Nokia. The book "Operaatio Elop" ("Operation Elop") came out in Finnish but no English version was published.

I spoke with Pekka after the book was launched and we came up with an idea to crowdsource some of the book chapters in English to expedite the English version of the book. However, the publishing agent they had selected did not do her job properly so no English version ever came out. The agreement with the agent has been prohibiting Pekka and Merina from proceeding with any alternative paths to publish an English version.

The contract period with the agent ended some time ago and Pekka and Merina just let us know that it's ok for them if we want to translate and launch a free English version of the book!

Janne Parkkila and myself feel there might still be interest towards an English version of the book. We have some chapters translated and

proofread and we think that Medium would be a good platform to launch the book e.g. under an appropriate Creative Commons license.

Ex-Nokia volunteers started to sign up both as translators and proofreaders and eventually there was a team of 20+ enthusiastic people, from San Diego, California, to Ulm in Germany to Oulu in Finland to Batam in Indonesia, and in many other locations. People had worked at Nokia—and some are still working—as engineers, marketers, designers, and managers. Some team members are or have been professional wordsmiths in their working lives but most were simply interested in working on a small new chapter in the Nokia story. Nokia’s corporate language was internally humorously said to be ‘broken English’ and our team screening criteria was “good enough broken English so that one can actively contribute to a credible business book”. Some of our team members are among those who were initially interviewed to the Finnish book by Merina and Pekka. At some point in history we all have worked for Nokia, some also for Microsoft, some of us were even colleagues, but most of us actually have never met each other in real life. We decided to use Google Docs [22], Facebook Chat and Medium for the translation project.

Some people have asked us why we want to dwell in the past. They say they want to leave Nokia behind and move forward. Also we want to move forward—we *are* moving forward. We also enjoy working as a team in the *Connecting People* spirit, even if no longer a full-time Nokia team, hopefully sharing some Nokia learnings with a wider audience so that those may help them in their new jobs and lives. We know a number of other books have already been written about Nokia’s mobile phones, see e.g.:

Nokia Saga: kertomus yrityksestä ja ihmisistä, jotka muuttivat sen by Marco Mäkinen (1995, in Finnish)

Boken om Nokia by Staffan Bruun and Mosse Wallén (1999, in Swedish and Finnish)

NOKIA—A Big Company in a Small Country by Jyrki Ali-Yrkkö (2000)

Nokia Oyj:n historia 1–3 by Martti Häikiö (2001, in Finnish)

The Nokia Revolution: The Story of an Extraordinary Company That Transformed an Industry by Dan Steinbock (2001)

Nokia: The Inside Story by Martti Häikiö (2002)

Mobile Internet Technical Architecture (MITA) by Nokia (2002)

Mobile Usability: How Nokia Changed the Face of the Mobile Phone by Christian Lindholm, Turkka Keinonen, and Harri Kiljander (2003)

Uusi Nokia-käsikirjoitus by Juhani Risku (2010, in Finnish)

Mahdoton menestys by Jorma Ollila and Harri Saukkomaa (2013, in Finnish)

Operaatio Elop—Nokian matkapuhelinten viimeiset vuodet by Merina Salminen and Pekka Nykänen (2014, in Finnish; the original book)

Kännykkä—Lyhyt historia by Niko Kettunen and Timo Paukku (2014, in Finnish)

One by Microsoft and Nokia (2014)

The Decline and Fall of Nokia by David J. Cord (2014)

Nokia och Finland. Rapport från de galna åren by Carl-Gustav Lindén (2015, in Swedish and Finnish)

Ringtone: Exploring the Rise and Fall of Nokia in Mobile Phones by Yves Doz and Keeley Wilson (2018)

Ours is a translation project. So please try to remember that we are not the authors. All that credit goes to Merina and Pekka. We took what they had published in Finnish and translated it to English as a team. Our team learned a lot in this project: From spelling the em dash “—” to the use of footnotes and how to do currency conversions in the past, how to refer to “palkkajohtaja” and “vuorineuvos” in US English, how to do handovers between translators and proofreaders in Google Docs, and what the difference is between “basic phones” and “feature phones” in 2018, if any. We decided to write primarily for the North

American audience, and Nokia's official language used to be US English so we wrote this text in US English. The original book was mostly using the Euro currency for financial numbers; to help the non-European reader we decided to add US Dollar equivalents using the exchange rates dating back to the original context in the storyline. Many of the interviews had been originally conducted by Merina and Pekka in English and many of their written sources were also in English. We did not have access to these interview notes. So whenever we couldn't locate the original sources, we had to translate their Finnish translations in the book back into English. Likewise, we have translated people's titles to English in Appendix 1 and in the People index section, knowing that in this translation we've not been able to refer to everyone with their accurate titles. Apologies for that.

We had fun translating and editing the book and we hope you enjoyed reading it. If you dislike or disagree with something in the book, we ask you to consider not shooting the messenger.

We would like to thank Merina Salminen and Pekka Nykänen for their highly collaborative attitude with this non-commercial translation and publishing project. We would also like to thank the legal and typography experts in the wider ex-Nokia community who gave us valuable guidance for free in this project, and Jari Ijäs for the stunning cover photo, taken from the old Nokia headquarters. Please do note that Merina and Pekka own all commercial rights to the book; so others do not have permission to use the material for commercial purposes.

February 11, 2018 [23]

. . .

[22] Chapter 5 describes how Elop was beating Google Docs when leading the Microsoft Office team.

[23] Coincidentally, it was also February 11, in 2011, when Nokia, led by Elop, announced the plan to kill Symbian and to team up with Microsoft for Windows Phone.