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Case Study 4: The Collapse of Nokia's Mobile Phone Business

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Nokia's loss of dominance in the mobile market after 2007 is one of the most significant failures in modern business history. For Finland, this was an economic catastrophe, when the largest company in the country lost grip on its core business. In 2007, Nokia's mobile division was the leading mobile device manufacturer in the world, with a market share of about 40% (Cord, 2014). In 2011, its market share was only 25%, and the company started software collaboration with Microsoft. In 2013, it was announced that Nokia would be selling its entire mobile business to Microsoft. By this stage, the company's market share was only 14%. By 2015, the market share was a measly 1%. Microsoft, in turn, announced in spring 2016 that it will stop manufacturing mobiles it inherited from Nokia. Practically speaking, the company's mobile phone business crashed from the top position in the world to complete extinction within about eight years.

A lot has been written about Nokia's hardship and ruin. People are passionate about this topic, particularly in Finland: after all, this company was the country's first real world-class business, which at one point had the highest market value among European corporations. The descriptions of Nokia's failures are often ideologically charged and tainted. As Professors Eero Vaara and Juha-Antti Lamberg (Laamanen, Lamberg, &

Vaara, 2016) have persuasively demonstrated in their recent study, interpretations regarding Nokia have been turned upside down as triumph has turned to disaster. The same company which was idealised as having exemplary management started to look like a textbook case of failed strategies, as soon as the difficulties started. It is tempting to interpret everything related to a company through a positive frame of reference when it is experiencing financial success, while a fault-finding perspective promptly takes centre stage as soon as problems start to pile up (cf. March & Sutton, 1997). Such polarisation of the representations of organisational and managerial competence can obscure a more impartial understanding of the actual structures and processes within corporate entities. Bearing that caveat in mind, this section aims to use the source material available about Nokia advisedly. There are so many different types of people and stakeholders around the company that it is somewhat impossible to try and uncover the overall picture of the decisions and solutions that led to the downward spiral using traditional interview methods. Each actor has its own story. And each of these in turn often coalesces into attempts to rationalise, legitimise and sugar-coat the story-teller's own solutions. In this book, the case of Nokia is analysed mainly on the basis of the executive biographies (Alahuhta, 2015; Ollila & Saukkomaa, 2013; Palmu-Joroinen, 2009) and interviews (Heikkinen, 2010) as well as historical overviews, newspaper articles and reference books about the company (Cord, 2014; Häikiö, 2009; Linden, 2015; Nykänen & Salminen, 2014). However, the interpretation or "reading" provided in this book in respect to the processes related to the collapse of Nokia's mobile business does not attempt to become the exclusive truth about controversial processes and events; instead, it is offered as one narrative among others. The focus is, again, on the dynamics between different levels of wisdom in organisational action and decision-making. Nokia's situation around the year 2008 could simply be described by stating that there was a paradigmatic change under way in the mobile business. The company had been successful by making reliable, technologically advanced phones cost-efficiently. Nokia was strong particularly in Europe and in developing countries. However, a significant thing happened in 2007; Apple launched the iPhone. This model was completely different from any other product on the market at the time. It had a

touch-screen and only one function key. The phone was simple to use, and aesthetically unique. Apple was able to offer a large amount of apps.

Another front also opened up in 2007: the search engine Google presented their own operating system, Android, designed for smartphones. The Android system was open; that is, all mobile manufacturers were able to use it, regardless of their particular software resources. The appearance of Apple and Android on the mobile market meant that companies that were previously developing computers and internet services broke into an arena dominated by mobile device manufacturers. With Steve Jobs at the helm, Apple had brought home computers within everyone's reach, and had recently also expanded into music distribution through the iPod device and the iTunes online service. Google, in turn, had become the king of internet search engines.

Nokia's mobiles were reliable, and always advanced technologically, but now they looked pitifully old-fashioned, with their clumsy user interfaces and limited range of services. A Nokia mobile was durable, but cumbersome. On the other hand, Apple's iPhone was a beautiful trendy product, which was easy to use and whose touch-screen offered many innovative ways to use the phone; for example, for gaming. The Android OS provided a strong basis for new smartphones, while the capacity of Nokia's own Symbian was starting to reach its limits in its current format (Cord, 2014).

Nokia was unable to respond to iPhone's challenge. It started losing market share. The selected operating system, Windows, was not as intuitive as iOS, which Apple had been developing for computers for a long time. In principle, however, Nokia had every opportunity to accept the challenge of its new competitors. The company had an extensive product development organisation and a stable financial situation. It had already started developing a touch-screen in 2004. The technical features of the iPhone were not considerably more advanced than those of their competitors. Nokia had also been aware for a long time that the Symbian operating system was coming to an end, and the company had been designing a new, substitute software platform for some time (Cord, 2014).

From the perspective of traditional situational management theory, Nokia's technological operating environment was going through a sudden

change, which should have denoted an attempt to achieve greater flexibility in the operating method and form of organisation. In the case of a stable operating environment, a company can be successful with a hierarchical organisational structure, which functions predictably and efficiently. In turn, in a turbulent situation, an organisation should break rigid rules and the barriers between different departments and levels of hierarchy, and aim towards unprejudiced interaction (Donaldson, 2001). However, this did not happen. Nokia had become a faceless machine, with information not flowing freely inside it and it therefore wasted energy on slow decision-making and the wariness of middle management (Cord, 2014; Heikkinen, 2010; Nykänen & Salminen, 2014).

This explanation, which sounds credible in itself, is not surprising. Large corporations can easily transform into bureaucratic mammoths, which can be toppled during an extensive technological or market breakthrough due their inability to adapt to the changed situation. Financially successful companies in particular can easily sink into dangerous complacency. Nevertheless, the bureaucratisation and expansion of an organisation does not explain why in Nokia's case it became the fate of the company. There are also many examples in economic histories where corporations have been able to save their skin and invent new products or services, or in some cases even focus their business operations on completely new fields as old opportunities become obsolete. For example, the computer manufacturer IBM sold its device production unit and focused instead on services and software business. Previously known as the world's most powerful computer manufacturer, the company took a successful leap into a new life (Agarwal & Helfat, 2009).

On the other hand, Nokia's extended story could be interpreted as renewal. As the mobile business collapsed, the company still had the field of e-commerce, which was first expanded through collaboration with Siemens and later through the acquisition of Lucent. Perhaps, in its own way, Nokia returned to its roots as an industrial company, when it continued business operations in the field of phone network technology. Recent years have shown that network business was the right choice: the mobile departments sold to Microsoft were not viable, and the mobile industry has otherwise shown signs of saturation. Nokia's background as

an engineer-driven company manufacturing industrial products seems to be suitable for the regularities in the information network business. However, the crash of the mobile business was a clear failure. If we wish to explain that, we have to look for such factors and backgrounds that are related to Nokia's special characteristics: its history, culture and leadership. These will enable us to better understand Nokia's story and its unique dynamic. By addressing the company's own special background, we can also avoid the generalising and popularising explanations that have been offered by previous observers.

6.1 Nokia's Story

In the 1980s, Nokia was a conglomerate that aimed to internationalise and become independent from Finland's closed economic system. Kari Kairamo, the charismatic CEO of the company, envisioned an international or even global future for the company. At the time, the Finnish economy was dominated by large companies in the paper industry and profitable projects related to Soviet trade, and like continental Europe, commercial banks were in control of industry (Häikiö, 2009).

Nokia attempted to detach itself from the Finnish economic system. It was aiming towards the West, and away from the control of the big banks. Kairamo had acquired consumer electronics businesses in Europe. At the same time, the company was still manufacturing rubber boots and tissue paper. Nokia had recruited a group of young, internationally minded talent, and it was considered to have a different spirit than many other large corporations of its time. One of the recruits was Jorma Ollila, who was hired as the Finance Manager.

Kari Kairamo was an energetic executive who enjoyed being in the public eye. He also had a nationwide impact, and was active in the political sphere. However, in 1988, Nokia's pace slumped. Showy business acquisitions were a strain on the balance sheet. Stocks dropped by 40%. Large banks were no longer satisfied with Kairamo's management style. Media publicity had also turned against the company, as the former favourite of economic press was now branded a rabid adventurer.

Kari Kairamo had been experiencing mental health problems. In 1988, the situation started to become unbearable for him. In spring, Timo H. Koski, a gifted manager and a close colleague of Kairamo, dies of a brain haemorrhage at a mere 40 years of age. The CEO Kairamo becomes depressed and ultimately commits suicide in December 1988. At first, the company refers to it as a seizure, but *Helsingin Sanomat* later reveals—for the first time in the Finnish journalistic circles—that the cause of Kairamo's death was suicide.

The coming few years are confusing for the company. There is a power struggle among the top management, and the burden of debt is a strain on the finances. There are dramatic changes in the environment: the Cold War ends and trade with the Soviet bloc crashes. Finland ends up in a recession. Finally, the company's management is rearranged. Jorma Ollila from the younger generation is selected as the CEO, supported by Casimir Ehrnrooth, who becomes the Chairman of the Board.

Nokia had been developing mobile phones already in the 1980s. Now, these became the main field of business the company started to focus on. Other business operations were gradually sold off. Ollila surrounds himself with intelligent and ambitious professionals from the same age bracket. The company clearly turns towards the Anglo-American business model, where business operations are carried out on the terms of the owners and investors. The mobile market is growing rapidly, and Nokia's previous development work, and the pioneering role of the Nordic countries in the emerging mobile phone technology, is starting to bear fruit.

Nokia rises from the bottom: in 1992, the earnings increase by 385% compared to the previous year, and a staggering 510% in 1993 (Häikiö, 2009). Soon, it is competing for the position of market leader. However, in 1995, the expansion of production is halted by quality and logistics problems. The company's shares drop by 50% between 1995 and 1996. The young generation of executives experiences their first serious crisis (Ollila & Saukkomaa, 2013). Consequently, the organisation is trimmed down to a more efficient and more uniform whole. The monitoring of lower-level operations was made more efficient, and sales forecasts were compiled more carefully than before (Häikiö, 2009; Ollila & Saukkomaa, 2013; 321–2).

Nokia achieves market leadership in the mobile phones in 1998. Its efficient internal monitoring and supervision organisation helps to overcome the 2001 regression (Alahuhta, 2015; 112–5). The company manufactures a growing number of different models cost-efficiently based on a similar technology (Ollila & Saukkomaa, 2013). Nokia maintains about a 30–40% slice of the global market. Its portion of Finland's GDP in the 2000s is around 3–4% (Ollila & Saukkomaa, 2013). It seems that nothing could threaten the leading status of the company.

In 2006, Ollila becomes a full-time Chairman of the Board, and Olli-Pekka Kallasvuo takes the helm as the new CEO. Ollila has been working as Nokia's Chairman of the Board already since 1999, alongside his operational role. Ollila is one of the most influential people in Finland, and an internationally renowned business executive. He becomes the Chairman of the Board at Shell. In 2006, there are rumours that Ollila had been approached to consider becoming a presidential candidate for the coming Finnish elections.

In 2007, Apple presents the iPhone. Nokia's managers belittle this novelty product. In the same year, Google starts development work on Android. In 2010, the difficulties in responding to the challenge of new competitors and product concepts start to become apparent. Nokia's market share drops, and the profit rate is getting weaker. Stephen Elop is appointed as the new CEO. The company starts its first large-scale redundancies in 2011. Personnel layoffs continue almost without break until, finally, the new owner of the mobile business, Microsoft, stops production in 2016. Around the same time, Finland sinks into a long regression during the aftermath of the global financial crisis. Nokia only retains its network business.

Some interesting conclusions can be drawn from Nokia's story. To begin with, the company has been through several crises, but has survived from the predicaments by carrying out radical structural updates. The crisis in the late 1980s/early 1990s led to a generational change in the corporate management. The old national industrial generation gave way to a cohort of internationally oriented strategic, finance and marketing experts. Kari Kairamo's colourful persona, with attempts at a wide-ranging societal influence, was replaced by Jorma Ollila and the unassuming professionalism of his team. The change was fast. Kairamo's

suicide was a warning example to the younger generation about what could happen if a person does not approach the management of a company in a professionally detached way. Kairamo was an artist in the corporate world, who burned himself out as problems started to pile up (Ollila & Saukkomaa, 2013). The new generation had reservations about spontaneous leadership and publicity operations. The confusing management structure after Kairamo's death and the related power struggle between groups inside and outside of the company also made its mark on the executives as warning examples.

The younger generation of executives went through their own "Winter War" during the logistics crisis of 1995–1996. Their reaction adhered to the teachings of the 1980s trauma: the company had to be careful with their growth estimates and focus on ensuring internal efficiency and control. Problems were caused by poor monitoring and planning, they concluded. Nokia also became more distrustful regarding external stakeholders, particularly the subcontractors that seemed to have betrayed the company in 1995 (Häikiö, 2009). There was also an attempt to take better control over investor publicity. This was a revolutionary experience for the new executive generation. In Jorma Ollila's words, "[W]e did not want to end up in a similar nightmare like in 1995 ever again. ... I was a bit paranoid about this, and I didn't want to leave any room for bad luck" (Ollila & Saukkomaa, 2013; 322).

Nokia's rationalised management methods and mechanistic form of organisation produced excellent results for a long time. There were no revolutionary innovations on the mobile market; instead, phone features expanded gradually, giving Nokia the opportunity to manufacture large volumes of products tailored for different customers and markets, using what was essentially the same technological-software template. The company's phones were reliable, technologically strong and effortless devices. After the experience of the 1995 crisis, Nokia's organisational psyche had shaped into a model emphasising internal efficiency. In later years, when the company expanded, it continued on the course of a risk-averse culture.

Now, the organisation just had many new sections and levels, each trying to avoid risks and ensure sufficient viability in any situation. This takes us to the twenty-first-century Nokia prevalent in the critical writings published in recent years (Cord, 2014; Nykänen & Salminen,

2014): a rigid, finance-oriented consensus system, with the main focus on avoiding mistakes. After 1996, the visionary aspect was replaced by verification or audit culture, which was led by finance- and calculation-oriented people. The engineers' creative ideas were buried under a multi-layered bureaucracy, which was apparently intended to ensure that all operations would be tied to the rest, proving to be sensible with regard to long-term performance. Recent academic research on Nokia has also highlighted an atmosphere of fear (Vuori & Huy, 2016), as well as clinging to distinctive internal jargon (Brannen & Doz, 2012) as a path to a culture of control to avoid mistakes that had developed within the company.

Experiences of working with Nokia confirm the image described above. In academic circles, it was known that the company tightly upholds its organisational privacy. Anyone collaborating with Nokia had to sign strongly worded non-disclosure agreements (NDAs). When I was conducting interviews in one of the departments of the company, many interviewees wanted to know what the study was being conducted for and what my background was. Mistrust regarding an unannounced "outsider" researcher was palpable. By comparison, in another company, where I also conducted interviews, the reception was sympathetic and friendly. Word spread throughout the community about the young researcher making interviews, and soon many were eager to tell their own story. At the end, I was even approached for advice on developing foreign operations.

6.2 Jorma Ollila's Story

CEO Jorma Ollila's autobiography presents a parallel view of Nokia's culture. If the new generation of managers wanted to distance itself from the fast-paced adventurous mentality of the 1980s, Ollila's personal juxtapositions also contain interesting hints regarding those underlying factors which helped to develop the company's culture in a rationalist direction. In particular, in a few parts of his autobiography, Ollila mentions how several key figures related to Nokia's rise were from Western Finland or Ostrobothnia (Ollila & Saukkomaa, 2013; 131, 187–8).

Ollila himself hailed from Southern Ostrobothnia. He combines the usual stereotypes associated with Western Finland, such as inwardness and rational contemplation. Heading East, there is an emphasis on openness and intuitive spontaneity. Whether this distinction based on regional tribes is truly accurate is irrelevant in this context. What is important is that Ollila includes this distinction, with the aim of using it to describe the characteristics of Nokia's culture.

According to this juxtaposition, Nokia would be a touch more reserved and intellectually oriented than the average "corporate citizen". A middle-class background and entrepreneurial home are also described in Ollila's analysis. Elsewhere, he admits to being a person who gets things done, not an actual political figurehead or an academic analyst. In other words, it seems that Nokia is a community of professionals who are slightly introverted, interested in scientific contemplation and solidly middle class. Not, therefore, a business run by visionary leaders like Kairamo, but neither a free brainstorming group of reflexive thinkers.

Indeed, since the 1990s, Nokia became specifically personified in Ollila. His persona and experiential background played their role in shaping Nokia's culture, although the effect of a single individual regarding the construction of the values and beliefs of a large organisation is always limited. Published in 2013 and edited by Harri Saukkomaa, there are fascinating distinctions and notions in Ollila's autobiography. The book has been recently published in English (Ollila & Saukkomaa, 2016). The generational gap and the significance of regional cultural differences have already been mentioned.

Furthermore, Ollila highlights his opinion of himself as a person who gets things done, which in turn is distinct from two other types: those who use power, and social people. In his book, Ollila has a rather neutral tone regarding the characteristics of those people who use power, but he describes people who enjoy social situations to a greater extent (Ollila & Saukkomaa, 2013; 87). They are the type of people who enjoy socialising more than results. Ollila clearly alludes to socially oriented people being morally lazier and perhaps inferior to people who get things done or even those in power. He mentions "with all due respect" that the people from the Mediterranean region belong to this category. Ollila's views are obviously based on Protestant ethics stemming from the Nordic Lutheran tradition (Weber, 1976), where it is believed that salvation is guaranteed

by hard work and frugality. The reliability and goal orientation that is characteristic of Finnish culture is mixed into this secularised eschatology (Kortteinen, 1992). Life is a series of projects that are overcome by hard work and honesty. The comfortable enjoyment of life and other people is immoral.

In the description of his childhood and youth, Ollila's memoirs also emphasise performance and hard work. For socially oriented people, the natural enjoyment of leisure time and creative idleness were reprehensible in the Ostrobothnia of his childhood. "You had to work hard if you wanted to have a successful life" (Ollila & Saukkomaa, 2013; 25). Ollila also mentions significant things about his childhood home. His parents had not graduated from university, which is why a lot was expected of the children. It was particularly important to do well in school. At home, the power of systematic intellectual preparation was also emphasised: everything would be possible as long as you "research, study, and do things properly" (p. 37). Hard work and obtaining intellectual control over new situations were the keys to success in a modern world. Ollila admits that he is weaker at improvising, for example. Neither was there a significant collection of fiction in his childhood home. Hardly any emotions were expressed.

Occasionally, the analyses construed by Ollila are contradictory. Although he admits in many places that he considered the best option for himself to be to build a career as a bank employee working for Citibank, previous stages both as a grad student at London School of Economics and as a student politician seem to follow the chosen path of business life as a kind of a "shadow". At times, Ollila wonders whether he would now be a professor of political economy at a foreign university if he had continued with his thesis in London. On the other hand, he notes that the slowness of an academic career could have been a dangerous path for his performance-oriented nature. Likewise, when addressing the option of a political career in his biography, Ollila often ponders how he did not feel he could adapt to the constant publicity and election campaigns that are a part of a politician's life. However, among other things, he paints the job offer he received from the think tank Elinkeinoelämän Valtuuskunta (EVA) in 1984 in relatively positive colours. Keeping an eye on social issues and politics interested him also during the Nokia years.

Likewise, his views and experiences regarding Kari Kairamo are fascinatingly charged. Ollila writes how he had turned down other offers besides EVA while he was considering his career options after Citibank. However, it was specifically Kairamo who contacted him and convinced him of the dynamic nature of the company and its CEO. The internationally oriented corporate culture created by Kairamo, which seemed independent in the context of 1980s Finland, suited Ollila's own tendencies and operating style. He chose Nokia and Kairamo. On the other hand, Kairamo's fast-paced and publicity-oriented leadership is used as a warning example of a distorted business management mentality. Ollila even goes so far to say that in his opinion, Kairamo may have been a great president or a director of an international institution, but at the same time, "he was nevertheless no business manager or industrialist" (Ollila & Saukkomaa, 2013; 119).

It is possible that the significances and analyses highlighted by Ollila are contemplations that were included in the biography only by chance. On the other hand, they tell us in their own way about the internal tensions related to his story. Social influence and a career as a politician or statesman was left to one side, but the monitoring of wider social issues continued throughout his career at Nokia. Academic studies in the field of economics were interrupted when the opportunity arose first to work in international banking and then at Nokia. At the same time, however, Ollila contemplates how he could have become a professor of political economy if things had turned out differently. Ollila's old schoolmates, Seppo Honkapohja and Pentti Kouri, also appear in the narrative, both of who became political economists. He also mentions many other former fellow students who continued on an academic career path.

The identities of politician and scientist seem to be the Others in Ollila's story—parallel roles which negatively determine the chosen path towards becoming an executive of a large company. This could be interpreted as also being reflected to some extent in Nokia's collective psyche. The company wanted to distance itself from social and political movements, but was meanwhile stuck in them at a deeper level, drawing a line between their "own" world and the world of "others". Likewise, Ollila could have been subconsciously tied to the sphere of science and academic life by naming it as the area whose difference determined the

special characteristics of the sphere of corporations and business management in a roundabout way.

As semiotics-oriented organisational researchers (e.g. Cooper, 1986, 1997) have noted, drawing lines and making distinctions not only isolate an organisation from its environment, but imperceptibly also lock the community into a relationship with those aspects or topics that are placed outside the system. *Borders separate as well as unite*. On the one hand, a powerful differentiation against politics or science creates a shared internal identity for a community, while making it dependent on the areas considered to describe the reality outside the boundary. Accordingly, Nokia's culture emphasises rationality and a disciplined systematic approach, which in a way contains the opposite of the adopted identity, for example, in Ollila's case, public social influence and the pursuit of science, on the other hand.

Considering the warning stories highlighted in Ollila's biography about Kari Kairamo's active public influence, and the Protestant ethics with their meagre Nordic expressions of emotion adopted in his childhood, it can be said that of the two negative "others", it is actually the extrovert, intuitive style which has—as the opposite of the ideal mentality—determined Nokia's culture under Ollila's management since the 1990s.

Interestingly, the underlying significance of social politics emerges not only in his biography but also in a few public comments he has made in recent years regarding global changes. In March 2009, Ollila was interviewed by the *Financial Times* (Milne, 2009). At that point, the financial crisis had become apparent to its full extent. Somewhat surprisingly, Ollila calls for companies to have a more extensive social role. The risk here is that an economic model aimed only towards the short-term growth of shareholder value could lead to dangerous apprehensions. In his view, the Nordic model that combines the market economy with social well-being could provide a solution to the ongoing crisis. At the time, it is important "to consider social solidarity to a great extent". In 2016, Ollila gave a banquet address at the 70th anniversary celebration of the Research Institute of the Finnish Economy. Ollila has been the Chairman of the Board at EVA since 2005. In his speech (Ollila, 2016), he also presented his views on topical social change. The focus of the

speech is on recent political movements, where populist and nationalist powers have become stronger at the expense of liberal democracy. Ollila contemplates the connection between the fears related to globalisation and technological advances, and the rise of the new political trends. Finally, he calls on political processes, which he expects to curb the problems caused by market liberalism and to support the positive features of technological development.

Both speeches showed concern regarding the social counter-reactions of market liberalism and technological development, and possible unrest caused by crisis. This is more clearly the voice of an influencer analysing a political field, or a social analyst, rather than that of a business executive. Ollila's fear regarding the radicalisation of the anti-capitalist movement could stem from his early 1970s experiences in Finnish student politics (Ollila & Saukkomaa, 2013). Ollila was the Chairman of the National Union of University Students in Finland in 1973–1974. Back then, left-wing radicalism was at its peak, and was particularly influential in student politics (The Editorial Staff of *Ylioppilaslehti*, 2004). The centrists, represented by Ollila, attempted to restrain the worst revolutionary intentions while standing firmly behind Kekkonen's line of foreign policy that took into consideration the interests of the Soviet Union (Ollila & Saukkomaa, 2013).

In Ollila's estimates, the social environment often manifests itself as a force field, threatening for progress and economic dynamics. Although this involves a stretched interpretation of the psychological mindscape of the organisation, it would seem that one of the underlying patterns of Ollila's and Nokia's story is the bipolarity of the Cold War era and its manifestation during the politically frantic 1970s. The opposite of Western market liberalism is revolutionary socialism, or more generally a movement that is desperate to achieve a fundamental social change. The two camps are mirror images of each other. They cannot be separated from each other. The anarchist Other is a shadow behind the global market economy and its technological engine. This negative aspect of the binary opposition central to the individual and collective sense of self follows Nokia's corporate culture latently, in a symbolic manner—half-consciously as the imagined uncertainty and unpredictability of society at large. The bipolarity of the world continues as the ideology of a closed

organisational system, where external reality is forbidden while it continues the definition of identity from its own negative perspective. Bipolarity reinforces differentiation between an efficient, controlled organisational entity led by disciplined, rationally oriented managers, and the intuitive external society, or historically speaking—the previous generation, where visionary adventurers, media figures and revolutionary anarchists cause unrest and disruption.

The problem with these types of strong dualisms is that although they are building a uniform organisational culture instead of setting boundaries, they also prevent reactions in situations where two separated operating methods should be combined. At some point, a company or an organisation has to attempt to maintain the continuity of its internal processes and procedures, while focusing its energy on the turbulence and uncertainty of its operating environment. There are situations where it would be necessary to surrender to the surrounding discourse and to draw intuitive conclusions regarding the ongoing changes. The spontaneous expression of feelings and the open handling of disagreements also play their part in thawing changing situations in groups and organisations. In critical situations, it is necessary for an organisation to understand that they can open up to the turbulence and ambiguity of the operating environment without the shaking-up of established routines and structures denoting a descent into chaos. Without opening up to external dynamics, a company or organisation can perish after losing the opportunity to participate in the renewal of the markets, technology or political economy.

6.3 Apple and the iPhone

The new situation faced by Nokia in the field of mobile phones becomes clearer when we have a short overview of the solutions and visions that led to the iPhone, developed by Apple. I will again be relying on a biography, this time on the book written about Steve Jobs in 2011 (Isaacson, 2011). According to this biography, the iPhone design process was prompted by the success of Apple's previous hugely popular product, the iPod music player. Jobs could see that the constantly developing mobile phone features

would soon include music downloads and playback. This would deal a deathblow to the iPod, because nobody would need a separate music player. So, it was necessary to take a leap towards producing mobile phones.

First, Apple wanted to collaborate with Motorola. However, the company had no previous experience with mobiles. It soon became obvious at Apple that the products of established mobile companies did not satisfy the company and its management, who had always focused on user experience. Apple wanted to make a phone that was completely its own, with properties similar to its previous classic products: Mac computers and iPod devices. Product development assignments were first given to a team led by wireless network engineers, but it was soon transferred to the department for consumer goods. The phone would become personal and symbolic.

The iPhone's revolutionary touch-screen had originally been brainstormed for the tablet computer, the iPad, which was launched later. Jobs wanted to make the iPad as simple and intuitive for its users as possible, which is why the design process did not include clumsy stylus pens and buttons, which were dominant on existing devices. The goal was to achieve an efficient system that could be controlled by touch. This had already been in development for another product, the new MacBook Pro, but only as a touch pad designed for the laptop. As the product development team for the iPad was presenting the multi-touch control to the iPad, Jobs realised that this would also be a solution for the user interface of the iPhone. The finishing touches to the iPad were sidelined, and all focus was now on the iPhone's touch-screen.

Consequently, the background to the development of the iPhone at Apple involved interaction between the development teams of different products. The MacBook Pro provided an idea for the iPad's glass touch-screen, which in turn was taken on board as a lead in the development of the iPhone. Within the company, new innovations flowed fruitfully from one department to the next. Jobs himself functioned as the top "cross-fertiliser" by combining ideas presented by different teams in a way that would suit the company's needs. However, many features that made the user experience more pleasant required a long period of technical development before they could function smoothly in the device. The leading

principle of the design was simplicity and intuitiveness of use, supported by technological and material solutions.

One of the features that reminded users that the iPhone was an aesthetic experience was the closed cover of the device. The iPhone could not be opened. Its technical parts were not important. Jobs wanted the device to feel beautiful and appealing. To begin with, glass was selected as the material for the touch-screen, rather than plastic. Glass provided a more stable and better-quality impression. The glass screen initially covered only a part of the phone, but it was later extended to the entire width of the phone. The design of the phone is that of a single element: a glass screen surrounded by an aluminium frame. This caused further technical problems when the antenna did not function without disruptions inside the solid frame material. However, Jobs did not want to give in on the visual uniqueness of the phone. The iPhone had to be stylish, like exclusive jewellery or designer clothing.

Apple had previously already built the music service iTunes, through which it was possible to buy music online and download it to an iPod device. Now, the same service was available on the iPhone. At first, Steve Jobs wanted to keep the iPhone as a closed system, to which external parties would not be able to provide apps. However, he had to give in to arguments presented by his executive team. This resulted in the AppStore, a service managed by Apple for getting applications developed by independent suppliers. The AppStore revolutionised the use of mobiles. Together with the touch-screen and other features, software companies rushed to develop games, utility programmes and entertainment applications. The phone had now truly become a multi-purpose device.

Jobs and Apple had already shown their ability to integrate software, digital content and device options before. The company had first developed the iTunes music library, and then managed to get large record companies to offer their products to be purchased digitally in the iTunes Store. Apple had built a seamless system where the user could download, manage and play music flexibly. Other competitors could not respond to this challenge, and Apple assumed the leading position in music services. This setback was the worst for Sony, which had everything necessary to

build an equivalent system: reputable portable music devices (WalkMan, DiscMan) as well as a large record company (the former CBS Records). However, they were unable to build something that would combine different elements with the same flexibility. The same pattern was later repeated with mobile phones, where Apple overthrew the sovereign technological leader, Nokia.

On the other hand, Apple's strength lay namely in its innovative construction of the user experience. It was not an industrial company, but it aimed to provide a simple and intuitive way of using information technology, in accordance with Jobs' vision. In 1985, the sales of the new Macintosh computers had not had a great start. The majority of the profit came from the older machine, the Apple II. However, Jobs would have preferred to focus on pioneering products such as Mac. Members of the Board who represent the company's shareholders felt Jobs to be a threat to the company's profitability. Hence, he was fired from the company he founded. Later, the rapidly advancing field of technology became dangerous for the now-conservative Apple, and Jobs was invited back in the 1990s to brainstorm breakthrough products. Since Jobs' death, Apple has been unable to present any radical changes in the 2010s, and the company is now threatened by the cheaper, more cost-efficient smartphones offered by their competitors.

Apple's management model is completely different compared to that of Nokia. Apple has no official strategy. Nokia, in turn, has articulated its strategic plan meticulously. Neither has Apple formed a traditional divisional structure, which often leads to turf wars between different fields of business. Instead, the entire company is performance-oriented together. Steve Job's management style was also exceptional: he wanted to see the models and prototypes currently in development in the form of physical objects. Jobs' strong vision about the simplicity and intuitiveness of use guided decisions directly, without any heavy bureaucratic decision-making machinery or the interference of lower-level managers (Isaacson, 2011). At Nokia, in turn, product suggestions were handled by committees on several hierarchical levels as well as the finance-oriented managers of different departments.

6.4 Why Was Nokia Unable to React to a Transformed Competitive Environment During 2007–2010?

Apple's approach in commandeering mobiles as a part of the integrated, user-friendly world of devices, digital services and software highlights Nokia's weaknesses in responding to this new challenge. Nokia did not have a similar visionary leader. The top management of the Finnish company consisted mainly of finance experts. Entrepreneurial experience in product development by staying close to R&D teams, physical prototypes and their applications was unfamiliar. Due to rigid performance monitoring and an isolating organisational structure, different divisions and functions were unable to communicate with each other. Nokia was first and foremost a technologically oriented device manufacturer—a hardware company rather than a software innovator. Apple's skill of combining a physical device, software and user experience as shown in their previous products was too challenging for Nokia.

As has been stated above, Nokia's paralysis caused by the breakthrough of the iPhone and Android since 2007 could be interpreted through the obvious features related to the culture and structure of the company. Nokia had become extremely egocentric and arrogant. Business success had gone to their heads. As Laamanen et al. (2016) observed, during the years of success, Nokia was constantly praised without any criticism in management publications and business studies. This, of course, set the stage for a dangerous sense of pride, as executives from little remote Finland suddenly discovered themselves in the global limelight. On the other hand, the heaviness and bureaucracy of the organisational structure were obvious. Decisions were made in committees, where each hierarchical level presented their own assessment on the viability of the presented projects and innovations (Heikkinen, 2010; Nykänen & Salminen, 2014). There were too many censorship filters in the way of new ideas before they could have reached the attention of the top management. And in top management, only a few understood the new application-heavy mobile paradigm (Ollila & Saukkomaa, 2013).

But why did Nokia fall into these traps and why was it unable to change its way of thinking? As an organisation, it had world-class product development resources and competent staff at its disposal, as well as access to the leading researchers and consultants. Why did pride and bureaucracy gain ground in a company that had previously remained humble and agile?

According to the wisdom-related frame of reference outlined in this book, we can analyse how Nokia and its management processed information and what style of decision-making they had as a dynamic set-up consisting of three elements. The company's culture had been focusing on producing and managing analytical-rational information. Nokia's management believed that careful analysis would provide the best basis for successful decision-making. In addition to Jorma Ollila, this view was also adopted, for example, by Matti Alahuhta. A former Nokia mobile phones President, Alahuhta moved from Kone to become the CEO of Kone Corporation in 2005. In his recent book, Alahuhta has admitted to being in favour of a decision-making method which "collects all available relevant information, uses it to build a perspective, and then relies on contemplation" (Alahuhta, 2015; 170).

Nokia was convinced that it was possible to obtain the best real-time overview of the condition of the organisation through finance and operation monitoring systems. After 2007, financial results continued at an excellent level all the way until 2010. This factual information convinced Nokia that its current product range was competitive, and that there was no direct cause for a radical change of strategy. However, this was a short-term performance analysis, which failed to consider the paradigmatic change brewing on the market. On the other hand, Nokia's finely tuned production management system created the illusion that the risks had been tamed. Like any other mistake-eliminating system, the production and logistics information system had its place when the aim was to minimise errors and disruptions within the organisation. However, it is unable to perceive a changed situation in the operating environment, and reflect on its own assumptions at a meta-level. Management systems do not know how to challenge themselves.

Nokia and its management's previous experience and the intuitive beliefs and recipes shaped by those experiences were unable to challenge

the dominance of the analytical-rational information in the company. As has been highlighted above, the management generation that rose to their positions in the 1990s saw Nokia nearly destroyed by Kari Kairamo's visionary and adventurous leadership in the 1980s. Kairamo's dedicated orientation towards broader society and media publicity became a warning of what kinds of pitfalls are involved in the management of a large company. The new generation wanted to keep a low public profile and focus on developing the business operations professionally according to international rules. Nokia would no longer be a venturesome champion, but rather a careful slow bulldozer, resolutely slogging along the chosen path. The logistics crisis of 1995 and 1996 further reinforced the belief that a technology company should focus on controlling growth and expansion instead of compulsively taking over market shares. The idea of Nokia as a closed organisation is also related to this, developing its own internal efficiency and monitoring systems. The largest perceived problems were apparently the company suddenly moving to a new field of business or to a new market without all of the key operations of the company being able to follow as a cohesive whole.

It is worth mentioning the last factor that determines intuitive wisdom: the illusion of "eternal success". Nokia had managed to overcome the 1995 crisis, and it had also survived the crash of the dot-com boom in the early 2000s. The analytical and conservative approach it had adopted seemed to be working time and time again. The business saga, which was unique in Finland, created wealth for the company's staff but also for the entire country. The local community obediently served Nokia's needs by training suitable personnel, providing support for research and development, and even shaping legislation to reflect the best interests of the company. Nokia was a role model for other companies and management theories. All of this resulted in the company starting to view itself as infallible.

The background of intuitive experience resulted in the role of analytical-rational information being valued. Accordingly, Nokia's subjective beliefs accepted rational information because it was seen as a representative of the modern, neutral professionalism valued by the management, which in turn was opposite to the previous subjective and visionary decision-making. There was no desire to return to the impulsiveness of the one-time

CEO Kari Kairamo. The idea of the organisation as a finely tuned machine also provided space for analytical-rational knowledge. Nokia wanted to avoid its previous mistakes, which is why it focused on operation and finance monitoring and reporting systems.

On the other hand, experiential teaching and traumas from earlier stages also affected the limited use of philosophical wisdom. *Sophia*, as advocated by Socrates and Plato, is wisdom based on the premise that all human knowledge and certainty should be doubted. In 2007, Nokia should have noticed that the rules of the game were changing and that the previous beliefs and recipes for success were coming to an end in the mobile business. However, there were no compelling external reasons for this. Nokia was making a steady profit and was the global market leader. As Jorma Ollila describes the mentality of the period in his autobiography, “We knew how phones were designed, manufactured and marketed. Our machinery was supreme. Nokia’s phones worked reliably in all countries, networks and conditions. Nokia’s engineers were the best in the world. We had taken over all markets ... [In 2007] Nokia would have been by far the most popular bet to win [in a competition between Apple and Nokia]” (Ollila & Saukkomaa, 2013; 418).

Nokia did not have sufficient philosophical humility to imagine a time when the mobile business would be a software-driven competition, with the mobile having become a part of the digital ecosystem. More generally, the company could not foresee a situation where the dominant views, solutions and attitudes would be redundant. Nokia thought that because it had nearly all the resources (money, know-how, experience) necessary to control the changing technological and market situation, nothing could threaten it.

However, studying Apple’s recent history could have shown how wrong these illusions were. The “fruit company from Cupertino”, as a Nokia executive, Tero Ojanperä, referred to Apple in 2009 (Borden, 2009), brought Sony, the electronics and music distribution giant, to its knees in the field of digital music. Apple had excelled by creating new product concepts, which the customers did not even know they wanted. Apple created markets with its user-friendly, stylised packages. Nokia, in turn, had built the technological field for mobiles, but was stuck going nowhere. Its attempt at covering up for the lack of software know-how by

acquiring specialists and companies (Ollila & Saukkomaa, 2013) did not tackle the actual problem—open dialogue between different departments and building a completely new kind of user experience from a new technological and software base.

Nokia's inability to question dominant views seems to originate mainly from the company's organisational culture. The managers valued performance and strict work morals in accordance with Protestant ethic. Open contemplation and analyses of world-changing visions did not really fit this cultural landscape. Decisions would be made based on facts and analyses, attempting to predict and manage scenarios of change construed according to the available information. As an old-generation Nokia executive stated in an interview in 2006 (Ristimäki, 2006), the executives of the new generation were lacking in general education. They were only focused on issues relevant regarding the immediate result, and were not interested in the wider arcs of history, culture and politics. In this kind of approach, changes in the operating environment are interpreted as challenges that can be successfully responded to by further tightening the grip on the existing machinery.

In addition to Ollila, his successor, Olli-Pekka Kallasvuo, has described the transformation launched by Apple and Android as an unpredictable revolution. In an interview of Kallasvuo at the Insead Business School in 2014 (Insead, 2014), Kallasvuo emphasises the uniqueness of this market change: the transition was stronger and more sudden than any other business upheaval in modern economic history. "Nobody could have predicted what would happen" was his assessment of the events between 2006 and 2008.

That is certainly the case if the starting point is the analytical-rational approach for construing knowledge, which was adopted by Nokia. On the other hand, as Taleb (2007) states, dynamic markets in the fields of finance and high technology are full of unpredictable surprises. One illusion that leads to the appearance of surprising "black swans" is a decision-making process that is based on observations regarding past events. This inductive reasoning is common in social scientific reasoning (Bryman, 2015). If a sufficient number of observations indicate a certain regularity, the analyst can draw the conclusion that this is a more generally applicable theoretical law. However, as noted time and again in this book, previous observations

are no guarantee of something exceptional not occurring at any point. The fact that Nokia had been a leading mobile communications company for a long time, and that it had been able to overcome one difficulty after another, was no guarantee that a competitor would not appear one day with a completely different kind of approach. All swans are white until a black swan appears somewhere, and all previous wisdom is instantly shattered.

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