
NOKIA

When MIT economist Bengt Holmstrom joined the board of Nokia a year ago, he had a question for the company's CEO, Jorma Ollila. "What's your secret code?" Holmstrom wanted to know. "Because you've got to have something."

That could be one of the great business questions of our age. Nokia, as just about everybody knows by now, passed Motorola in 1998 to become the world's leading maker of mobile phones. In 1999, Nokia's market share continued to grow, to 27% (with second-place Motorola at 17%, according to Dataquest), and the company claimed close to 70% of the profits earned in mobile-phone manufacturing. It possesses the world's 11th most valuable brand (right after Marlboro), as judged by consulting firm Interbrand. Its stock market value, $250 billion as of mid-April, is the highest of any European company (although Vodafone should top it after swallowing Mannesmann). While that market cap is but half that of U.S. tech superstars Cisco and Microsoft and Intel, one can make at least a plausible argument that, as the mobile phone displaces the PC as the essential appliance of the Information Age, Nokia could shoulder those titans aside.

What makes all this especially remarkable—indeed, it has already been remarked upon in the pages of virtually every

NOKIA's Secret Code

Perhaps the least hierarchical big company in the world, Nokia has been winning big in wireless. But its Finnish recipe for innovation is about to be put to the test.

By Justin Fox

business publication on earth, including this one—is that Nokia is a 135-year-old corporation headquartered in the previously unremarkable welfare state of Finland. The company has a home market of just five million people. Not all that long ago its major product lines included diapers and rubber boots. So, yes, Mr. Ollila, what is that secret code? (Or, since Ollila and Holmstrom—another Finn—were speaking their native tongue, *Mika on salaisuutesi?*)

"We went on for an hour or two on what it could be" is how Ollila recalls his response. "There is no secret code. But it is a good way of asking the question."

In fact, some top technology companies do possess a secret code that generates huge profits and keeps competitors at bay. The proprietary software code that is Windows, for example, has given Microsoft a lock on the PC market that no competitor has been able to break (although a federal judge seems to be giving it a try). To a lesser extent, Cisco and Intel have also been able to exploit their market leadership and unique technology to make their products a close-

CEO Jorma Ollila *says Nokia has no secret code. Don't believe him.*

PHOTOGRAPHS BY POLLY BORLAND

Design boss Nuovo *insists Nokia phones get the right "face and soul."*

to-inevitable choice for buyers. This is what economists call lock-in.

Nokia's market share in phones isn't big enough to lock in anybody—a mobile phone that could talk only to other phones by the same maker would be worthless. And in Nokia's other main business, network equipment for cellular operators, it's not even the market leader; Sweden's Ericsson is. What's more, Nokia executives seem almost religiously committed to open standards and inter-operability in wireless. They're constantly signing deals with competitors to develop shared operating systems and standards. The idea is that the easier it is to use phones and other wireless devices, and the better they work together, the more people will want to buy them. This makes a lot of sense. It also means that for Nokia to prosper, it has to come out again and again with better, more appealing, more innovative products than its competitors.

With Nokia's stock trading at about 100 times earnings, this may be a sobering truth for investors to contemplate. But it also puts into focus just how magnificent the company's performance has been over the past decade. Throughout the 1990s, Nokia did, in fact, again and again come out with better products than anybody else. It wasn't always technologically ahead; it just made things that better suited the moods of the market and the needs of the moment—phones that didn't require two hands to use, with switchable covers and changeable ringing tones, with the most logical and adaptable user interface, with the right overall look. It was also generally able to get them out to retailers and cellular operators in the right quantity and at the right time. There are three possible explanations for this: (1) Nokia was very lucky; (2) Jorma Ollila is really smart; or (3) something about the way Nokia works makes it more pragmatic, more focused, and more flexible than other companies. There's truth in all three explanations, but when you talk to Ollila about the company's secret, it's clear he's partial to the third.

"It's the way the organization creates a meeting of minds among people," he says. "How do you send a very strong signal that this is a meritocracy, and this is a place where you are allowed to have a bit of fun, to think unlike the norm, where you are allowed to make a mistake?" Yes, this sounds kind of squishy and vague. And it may seem a slender reed upon which to balance $250 billion in market cap. But spend time around Nokia asking what has made the company so successful, and it's as definite an answer as you'll get. Not that people who work at Nokia dislike talking about the place; they, too, just seem to have trouble putting a finger on what's different about it.

Of course, many outsiders have had no trouble putting their finger on Nokia's secret: It's Ollila. One can easily see why, aside from the performance of his company, the 49-year-old CEO has become a hero to investors and business journalists: He is as charming a CEO as you're likely to come across. When Ollila was 17, the school headmaster in his small Finnish coastal town recommended him for a scholarship to Atlantic College, a then-new Welsh boarding school founded by German educator Kurt Hahn (who also started Outward Bound) to bring together future leaders from around the world. Ollila's two years there, plus later stints in the MBA program at the London School of Economics and at Citibank's London office, left him with a plummy mid–North Sea accent and an outgoing, un-Finnish, manner that set him apart from both his colleagues at Nokia and most European CEOs.

But almost every assignment of any importance at Nokia is given to a team, and managing the company is no exception. At least that's the way Ollila tells it. He's sitting in the conference room adjacent to his office in Nokia's glass-walled headquarters in Espoo, a sprawling suburb of Helsinki. Outside, the Gulf of Finland is still hidden under a layer of ice and snow; inside it's pleasant, there's coffee on the table (there's always coffee on the table in Finland), and Ollila is warming to the topic of what makes Nokia work. "First of all it comes from how the management team works, how they communicate," he says. "Is it a political setup, one with lots of hidden agendas? I think we have had through the years, particularly through the '90s, a particularly strong culture of none of that nonsense."

There's a historical reason for this that is crucial to understanding how Nokia operates: These folks have been through a lot together.

Nokia gets its name from a lumber mill built on the banks of the Nokia River in southern Finland in 1865. But the businesses it is now in all sprang from something called the Finnish Cable Works, which merged with the Finnish Rubber Works and the Nokia forest products company in 1967. The Cable Works made power transmission cables and phone lines, so it wasn't all that big a leap when its president decided in 1960 to start an electronics division built around telecom.

Among the division's products were radio telephones—useful tools in a rugged, sparsely populated land, but not exactly big sellers. At least not until the national telcos of the Nordic countries got together in the 1970s to develop a technology (dreamed up at Bell Labs) that made it possible to hook up far more phones than before to radio networks. The Nordic cellular system that began operation in 1981 was not the world's first, but with its excellent coverage, comparatively low prices, and unique feature of international roaming, it rapidly become the world's most heavily used. Its technical standards were later adopted in countries around the world—Spain, Russia, Thailand, even Cambodia. As a result, the Nordic region's big telecom-equipment maker, Ericsson, got a head start in the business of supplying cellular network equipment that it has never relinquished. And Nokia, which made one of the first phones for the system, got in on the ground floor of the mobile-phone industry.

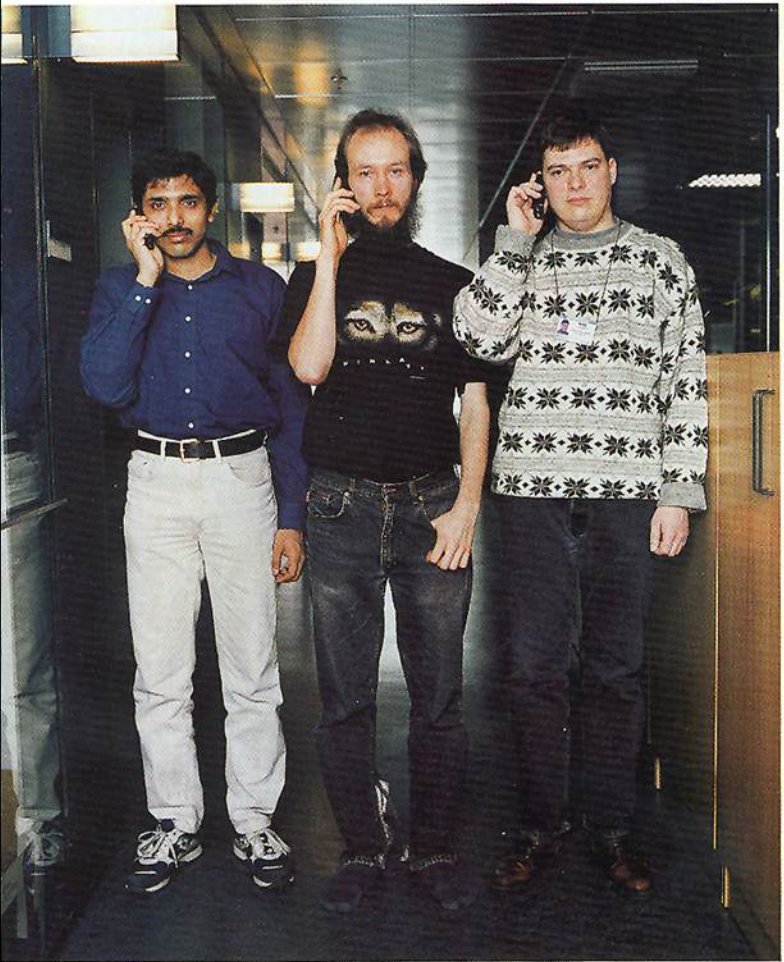
Kari Kairamo, who became CEO in 1977, came from the forest products side of the business, but he saw Nokia's future in technology. Mobile phones alone didn't seem nearly enough at the time, so he plowed the profits of his traditional businesses into buying a German TV maker, Ericsson's computer business, and a U.S. paging company—to list just a few. And since executives who had spent their careers dealing with paper, rubber, and cable had no idea where to start with such businesses, Kairamo turned to the young swer some increasingly arcane questions about technological developments in the wireless industry.

"You beat me with the technical details there," the CEO tells one interrogator. "I'm sorry, my mind was wandering," he says as he asks another to repeat his question.

Then Mark McKechnie, a wireless industry analyst at Bank of America Securities, asks about something that actually matters to Ollila: Will Nokia extend its market-share lead this year? It is as if a fresh wind has blown through the room. Ollila straightens up, loses his distracted air, looks at McKechnie, and says, "We will gain market share in the year 2000. That's very clear."

This reveals a lot about the way Ollila runs Nokia. Or, to be precise, how he lets other people run it. People like Tony Mitchell.

Three R&D amigos: *Amitava Dasgupta, Tom Söderlund, Mika Liljeberg*



Mitchell, a production manager at Nokia's phone factory in Fort Worth, is nowhere near the top of the organization chart of the 55,000-employee company. But like just about any Nokia middle manager one comes across, he's perfectly comfortable explaining the company's philosophy to a reporter. Standing on a balcony overlooking the factory floor, he points out some production lines outfitted with slightly tired-looking manufacturing equipment made by Fuji, then other lines with newer, smaller Siemens machines. "Salo and Bochum went all-or-nothing with automation, using mostly Sony," he says, referring to Nokia's European phone factories in Salo and in Bochum, Germany. "We've done it more step by step. That's unique to Nokia—the freedom a group is allowed to take. There are certain shared systems we keep as standard, but you're allowed to be creative."

This is a common theme throughout the company. Ollila, not surprisingly, given his nontechnical background, appears agnostic about the particular technologies Nokia uses. And while others on the management team are perfectly capable of debating the merits of WCDMA or GPRS or HSCSD or whatever other wireless acronym you can throw at them, they, too, usually stand back and let others deal with the specifics. "The objective is to always have decisions made by the people who have the best knowledge," says Alahuhta.

The result is one of the least hierarchical big companies on earth, a place where it is often profoundly unclear who's in charge. "People who join Nokia spend a few months trying to figure it out," says Kevin Knowles, a human resources manager at Nokia's U.S. headquarters in Irving, Texas. "You really have to figure out a network of people to get things done."

The attractions of this kind of hands-off management are obvious—it encourages creativity, entrepreneurship, personal responsibility. But how does Nokia keep it from spinning out of control?

One answer is financial discipline. The rule, Ollila says, is that if the revenue of a business line isn't growing at 25% a year, and there appears to be no prospect of such growth in the near future, Nokia wants out.

Another is that there are a few people in the organization whose job it is to enforce a certain amount of order. Some are obvious, like CFO Kallasvuo. Then there's Korhonen, now senior vice president of operations, logistics, and sourcing, whose job is to keep the independence and creativity of Nokia's phone-manufacturing facilities around the world from getting out of hand. And there's chief designer Nuovo, who went on Nokia's full-time payroll in 1995. Design ideas bubble up from all over; he's the gatekeeper. "I'm responsible for the continuity—the face and soul of the product," he says. "It has to go through me."

Finally, a crucial aspect of keeping Nokia on track is something that at first sounds deeply dubious: a drawn-out series of meetings every year called the Nokia Way. The process starts with gatherings all over the world to brainstorm about what Nokia's priorities should be, then makes its way up to top managers, who distill the discussion into a strategic vision for the company, which then percolates back down through the ranks by means of a prodigious number of PowerPoint presentations.

It all sounds like an unbearable waste of time, except for this: The stuff that shows up on those PowerPoint slides really matters. If you're a Nokia staffer working on a project that doesn't get mentioned, it's time to find something else to work on. It's telling that I first hear about this process not from Ollila or some other top executive, but from Ilkka Raiskinen, a vice president working on a Nokia's project on "digital convergence"—the presumed convergence of mobile phones and computers and TVs into some new kind of information appliance. Raiskinen is convinced that people at Nokia simply wouldn't put up with the Nokia Way meetings if they didn't convey valuable information. "Our people are also reading the Dilbert," he says. "So you get that feedback quite soon: Is your vision statement a quote from Dilbert or does it convey a message?"

Most of the Nokia Way discussion is for internal consumption. But every few years the company comes up with a new public mantra along the lines of 1992's "telecom-oriented, focused, global, value-added." In 1996, Nokia redefined its goal as "leadership in the most attractive global telecom segments." Last year that became taking "a leading, brand-recognized role in creating the mobile information society." Again, these slogans actually mean something. All over the world, teams of Nokians are working on projects meant to "bring the Internet to everybody's pocket," as Ollila puts it.

Back in 1992, when Ollila and his team began to reinvent the deeply troubled conglomerate they'd inherited, desperation forced them to focus in a way their competitors had not. On the phone side, they bet on branding and con-

A glass-walled haven *in the Finnish wasteland: Nokia's HQ in Espoo* sumer-friendly design at a time when rivals were putting their energy into making the things smaller—or into endeavors other than mobile phones. In the cellular networks business, Nokia jumped at the opportunity provided by the European Community's first steps in the early 1990s toward telecom deregulation. The company allied itself with upstart cellular providers like Orange in Britain and E-Plus in Germany, and stole away business from traditional telecom suppliers.

Now, eight years later, Nokia is a big, strong company taking a leading role in the move toward linking wireless and the Internet. But it's not the only one. Motorola and Ericsson have become similarly focused on what Motorola calls the "Web w/o wires." South Korea's Samsung has emerged as a formidable competitor in the phone business, and an array of U.S. companies, from Palm to Phone.com to Microsoft, want a piece of the mobile Internet action and are likely to get it.

None of this is necessarily bad news for Nokia—the more time and money other companies put into promoting and developing new products for what Nokia calls the mobile information society, the bigger the overall market will be that Nokia hopes to get a slice of.

But there are risks. One is that Nokia could bet on the wrong technology. In the 1990s the company rode the GSM wave to global success. It was in on the development of the standard, produced the first phone for it, and was able to focus its energy on perfecting its phones and network equipment for GSM. It also got in on the ground floor for the technologically similar TDMA standard used by AT&T Wireless in the U.S. But then something unexpected happened. A competing digital standard championed by San Diego's Qualcomm, called CDMA, was adopted by most other big U.S. cellular operators. While Nokia didn't fight CDMA, as Ericsson did, it was unwilling to license Qualcomm's technology, preferring to develop the phones on its own. So far this strategy has been a bust. Nokia's CDMA phones have scored poorly in cellular operators' tests, and its 9% share of the market trails upstarts Kyocera (which bought Qualcomm's phone-manufacturing business), Audiovox, and Samsung, as well as Motorola. Nokia now has hundreds of R&D people in San Diego working to come up with a CDMA phone that will sell. It has also worked hard to make sure that it plays a role in setting the standards used in the next generation of cellular systems (which will mostly use a more advanced version of CDMA). But that doesn't mean it can't be blind-sided again.

While most operations have **a Finn or two** still running the show, key jobs go increasingly to people who didn't grow up in a sauna.

The other, even bigger risk: losing that secret code. To achieve its goal of bringing the Internet to our pockets, Nokia is taking off in many directions. It isn't just making wireless application protocol (WAP) phones that can surf an abridged version of the Internet; it's also making the WAP servers upon which that abridged Net will run. It's building wireless Internet connections for cars; developing products for Bluetooth, a new standard for high-bandwidth wireless connections inside a house or office; and working on wireless videophones and all sorts of other gee-whiz stuff. This is exciting, but it's a lot of businesses to be in for a company that has thrived on keeping things simple. Getting into these areas has also meant buying a bunch of startups, mostly in the U.S., and hiring lots of new people. All this will surely make it tougher for Nokia to retain its unique mix of individual freedom and companywide focus.

The toughest challenge of all, in fact, may simply be that the company is getting less Finnish. Too much can be made, and often is, of the uniqueness of the Finnish character (although most of the Finns at Nokia do appear to share the national predilection for few words and even less nonsense, which enables them to work collaboratively without wasting all their time yammering about it). But regardless of whether or not Finns are particularly suited for the demands of the networked economy, a key factor in Nokia's cohesion and esprit de corps has to be that most of its important managers come from the same small country, far from the world's centers of power and wealth, with a language no one else on earth can understand.

But now more than half of Nokia's employees are outside Finland. And while most of the company's operations around the world still have at least a Finn or two in leadership roles, key jobs are increasingly going to people who didn't grow up in a sauna.

Like Kent Elliott, president of a new division called Nokia Internet Communications, which is responsible for those WAP servers and a whole bunch of soon-to-be-released networking products that Elliott will describe only in the vaguest terms. Elliott was president of a Net telephone startup, Vienna Systems, that Nokia bought last year. Now he, along with 500 other Nokia employees, is based at Nokia's complex in Mountain View, Calif. And he's clearly not Finnish. In fact, his confident, gung-ho manner didn't go over at all well at his first meeting with Nokia executives in Espoo. "They told me afterward, 'We thought you were the most arrogant person we'd ever seen,'" Elliott says. "Then they went to dinner with me and saw my direct reports poking fun at me, and they reconsidered."

CFO Kallasvuo, who ran Nokia's Americas operation in 1997 and 1998, doesn't worry too much about obnoxious newcomers ruining his company. "The organization kind of rejects people who would have that tendency," he says. The so-far-unrejected Elliott sees it like this: "Nokia is in the unique position that it's got a group of managers that have been working together for years—and now they've got a lot of senior people from outside who can shake things up." As long as they can do it without messing up the secret code. F

FEEDBACK: *jfox@fortunemail.com*