Architecting the Networked Society

How should Ericsson shape the future of the Healthcare and Energy sectors?
Mobile World Congress (MWC) at Barcelona, February 2011

It was Hans Vestberg’s second address as the CEO of Ericsson to the Mobile World Congress in Barcelona. He was excited as he reviewed his speech. The vision of a networked society that he had been formulating in his mind over the last year was coming together with the building blocks falling in place. In his speech at MWC last year, he had focused on 50 billion connections and said: “Mobile broadband has moved from being nice to have in our world, to being a necessity. We used to decide when to go online, but now we decide when we should go offline. That desire, to be always connected, plus lower prices of smartphones, affordable laptops and netbooks gives our industry a huge opportunity for growth.”

Now, a year later, his vision of a networked society was taking place with three interconnected building blocks. The first two pieces were familiar to many observers including his team at Ericsson. These were: mobility—the freedom of being anywhere; and broadband—the power to access everything. The third piece—the cloud—or the independence of content and device- was relatively new but central to making the networked society become reality.

He wanted his speech to focus on the vision of enabling 50 billion connections with mobility, broadband and cloud coming together with Ericsson as a leader in shaping the networked society. His speech had a positive, futuristic and upbeat tone. He said that Ericsson was squarely positioned at the center of the evolving Information and Communication Technology (ICT) industry.

Vestberg had outlined his preliminary ideas of the networked society vision in his 2010 letter to the shareholders. In his view…

“2010 was the year when mobile broadband took off. The number of mobile subscriptions increased by more than 60 percent to about 600 million and the number is forecasted to almost double and hit 1 billion this year. Once you are connected, you want connectivity 24/7, wherever you are.

This will become a reality for more and more people since we will see more smartphones in the market, and also more affordable ones. Embedded mobile broadband modules will become standard in laptops and other devices. To meet this consumer demand, network speed, capacity and quality are prerequisites.

In the networked society, everything that benefits from a connection will be connected. We have spoken about how 50 billion devices will be networked by 2020. We are already today enabling the networked society: from the concept of building future networks in demanding urban settings, to our networks which recently attained speeds of 168 Mbps on HSPA – to our business in TV and media, and our services, which help
Hans Vestberg was keenly aware that 50 billion connections would be the easy part. The harder part was to orchestrate all the pieces together to deliver seamless value to consumers and be seen as a prime mover and shaker of the networked society. To him, the networked society is more than a corporate slogan. He is deeply convinced that this evolving ICT industry could have a major impact on the world—not just the western world, but across the globe.

To underscore Ericsson’s leadership ambition, he listed new products and concepts launched by Ericsson at MWC 2011. Those included: the Ericsson Device Connection Platform—to help operators quickly and easily launch machine-to-machine solutions, Antenna Integrated Radio (AIR)—the first stepping stone towards a truly heterogeneous network, IP networking portfolio, and a ‘PC as a Service solution’—which allows operators to bundle software in the cloud on top of mobile broadband subscriptions for consumers.

**The Akamai Alliance**

Vestberg was pleased that he had inked an important exclusive strategic alliance with Akamai to strengthen the capabilities required to be a leader in the evolving ICT industry. He said “The network is the make-or-break part of the equation," and the strategic alliance with Akamai brings mobile cloud acceleration aimed at improving end-user Internet experiences such as mobile ecommerce, enterprise applications and Internet content delivery.

This alliance is an important building block towards Ericsson’s vision towards architecting the networked society. Ericsson with Akamai can accelerate the content and applications from fixed Internet over mobile broadband to deliver true end-to-end quality of consumer experience. By 2016, Ericsson estimates that there will be almost 5 billion mobile broadband subscriptions and this alliance is structured to capture value in the explosive growth in the Internet content and applications that people want to access on their mobile devices.

The Ericsson—Akamai alliance creates, for the first time, an integrated mobile content delivery platform to enable mobile network operators to be more involved in the Internet
value chain and better monetize their networks and subscriber base. The proposed solutions are also designed to greatly simplify how content providers distribute their content and gain access to larger audiences.

**ICT Could Become the “Industry of Industries”**

Over the last three years, Apple has reshaped the ICT industry using its iOS software supported by Apps to deliver superior value to consumers. Apple is the clear leader at present with its app stores serving up applications that can be used on three devices (iPhone, iPod Touch and iPad). Google’s Android market serves up applications for Android-powered devices. Microsoft has recently inked a strategic relationship with Nokia—seeking to create the third mobile ecosystem. Not to be left behind, Blackberry has announced its own set of products with apps available on its app world. The New CEO of Hewlett Packard has outlined a new strategy focused on cloud, connectivity and software to deliver services to the always-connected consumers.

Apps are not standalone but part of end-to-end seamless services. Ericsson is cautiously betting with apps where it can be seen as distinctive and differentiated. One area is mobile payment as person-to-person money transfers are expected to be one of the most widely used mobile applications in many countries in the near future. Ericsson has developed an end-to-end solution and associated business and operational model, fulfilling all necessary regulatory, legal and security requirements, in cooperation with its operator customers and innovative players in the financial sector. Ericsson Money Services and its Money Interconnect Service allow mobile operators, financial institutions and other service providers to be connected to a real-time, cross-border, cross-currency switching network.

Semir Mahjoub, Head of Ericsson Money Services is bullish about payment apps on the phone: “A new market is opening up consisting of consumers whose first meeting with banks will take place over a mobile phone and who may never own a plastic credit card. People who may never enter a bricks-and-mortar bank now have the opportunity to ‘walk’ into a virtual bank using their phone. They will also benefit from more reasonable fees for routine transactions such as transferring funds.” Indeed, this is an area that has attracted the attention of companies such as Google and Visa.

There is no doubt that the scope of mobile applications will evolve in the coming decade as
many players across different industries jockey for an app-driven advantage. In Vestberg’s view “apps are transformative—not only for consumers but also for enterprises,” as he cited smart grids as one example of how applications can change business models. He said: “Take the power sector, which in the process of making power, stands for a fair share of global CO2 emissions. But with mobile apps on top of the smart grids, CO2 savings can be achieved.”

Ericsson’s ConsumerLab found in a study that the habit of downloading applications was adopted more quickly into people’s daily lives than anyone imagined. “Twenty percent of app phone users answered that they downloaded apps daily, and they keep doing so,” it said. Last year, people downloaded nearly 11 billion mobile apps to smartphones.

Vestberg is emphatic that the world of apps in networked society will be more significant than in leisure and entertainment. “The leisure apps, games and things, will always be there and people are sometimes willing to pay for them. But I think the real potential lies in apps for enterprises and in industries like health, power and logistics. The combination of mobility, broadband and cloud, with applications added on top, means major business opportunities for the consumer market - and maybe more importantly, for the enterprise market. We as an industry can tap into new revenue streams and drive transformation in other industries. We can be the industry of industries.”

His immediate interest was on two sectors—healthcare and energy (utilities).

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**Networked Society Can Not Ignore Healthcare**

Most observers agree that while the global health sector is behind the curve in terms of the use of information and communication technologies, it is the sector with significant opportunities for key stakeholders. Technology companies such as IBM, Cisco, Google and Microsoft have initiatives and services in the healthcare arena. IBM has Smarter Healthcare as part of its comprehensive Smarter Planet initiative. GE is making serious investment in healthcare as part of its healthyimagination initiative. Cisco has its HealthPresence solution as part of its broader suite of TelePresence products and services.
Google’s health initiative is aimed at helping individuals organize, track, monitor, and act on health information and could be linked with its dominant Android mobile platform. Microsoft’s healthvault could get connected with its Windows Phone. It is clear that we are in the early stages of networked healthcare. And many interesting apps are being developed such as iPharmacy, Airstrip Technologies, WebMD and others. Walgreens’ mobile application allows users to scan the barcode printed on a prescription label to order a refill. On March 3, 2011, it reported that it has reached over 1 million subscribers in less than six months, with nearly 50% of refill orders originating from a mobile device using the Refill by Scan application.

Analysts expect that a mobile revolution in healthcare is overdue, and now the pieces seem to be in place with 500 million mobile broadband subscriptions. Research2guidance points out that: “the long-expected mobile revolution in healthcare is set to happen. Both healthcare providers and consumers are embracing Smartphone as a means to improving healthcare. Not only are consumers taking advantage of Smartphone to manage and improve their own health, a significant number (43%) of mHealth applications are primarily designed for healthcare professionals. These include continued medical education, remote monitoring and health management applications.”

Vestberg wondered what Ericsson could do to shape the future of the healthcare sector through the intersection of mobility, broadband and cloud in the coming decade. Will this sector be the one where people perceive the transformative benefits of ICT as the industry of industries? If so, what should Ericsson do to establish itself as an orchestrator of the new health sector?

A Networked Society Should Conserve Energy

A networked society will be incomplete and ineffective without addressing the energy sector. This sector—just as healthcare—has been relatively slow in embracing the power and potential of IT. But again, opportunities appear to be significant as many companies and institutions across different industries are exploring new initiatives and making significant investments.

GE is making a significant foray into energy initiatives and has laid out its vision of a smart grid. IBM has its own vision for Smart Grid and is laying the ground for the 21st century energy system working with over 150 different smart grid initiatives in both major and emerging economies. IBM Watson—fresh from its exciting win over humans in the TV game ‘Jeopardy’—is also looking to address thorny issues in smart energy.
Cisco has its own vision for smart grid and joined forces with Itron in September 2010 so that Itron’s smart meters can be designed and deployed on Cisco’s standards-based IP architecture.

Google also has an interesting initiative with its PowerMeter—a free energy monitoring tool that helps individuals save energy and money. Using energy information provided by utility smart meters and energy monitoring devices, Google enables individuals to view their home energy consumption from anywhere online. Not to be left behind, Microsoft has its hohm initiative. These initiatives, while still in the early stages and relatively standalone so far, could see significant benefits when ported on to the mobile platforms of these two companies.

As Hans Vestberg reviewed many of the smart energy initiatives underway across the globe, he was pleased that most schematic representations of smart grid recognize the power and pervasiveness of multiple billions of connected devices. Deep in his mind, he knew that the transformative trajectories in the energy arena would be influenced by combining mobile + broadband + cloud. He was convinced that the energy and utilities would be shaped by ICT and could be a definitive showcase of ICT being the industry of industries. What, then, should Ericsson do to be seen as a transformative leader?

Making the Networked Society Real

As he left Barcelona, Vestberg remembered what he wrote in the 2009 annual report, his first as the CEO of Ericsson.

“It is now 2010 and we have a new decade ahead of us… A decade of new opportunities and challenges… Telecom is no longer about voice only. We do not just connect places and people. We also connect machines and devices. We connect the developing world to the developed world, rural areas to urban areas. Telecom is the nervous system of the world.

In Ericsson we have a vision for this new decade—that there will be 50 billion connected devices. We will connect people with, for example, heart problems to remote monitoring systems so they can stay in the comfort of their homes, and we will connect our cars and trucks to smart road systems for safer driving and better fuel economy. Broadband networks will be the backbone of our smart cities, where homes will be connected so we can monitor and manage power consumption.

In this world the challenge will lie in dealing with the complexity of connecting all these devices. And we cannot fail. Patients must be able to rely on their health monitoring services. Transport companies must be sure that they can minimize gas
consumption by smart routing and up-to-date traffic information.

Our business is about both technology and services. We have to be consultants; we have to be able to develop complex network management systems; we have to be able to integrate systems and solutions from many different suppliers and vendors. In addition, we should be able to deliver the best revenue management solutions and multimedia applications that consumers have ever seen. Everything must be based on IP software.

This new decade requires a lot from us. We will have to change our ways of working. Our success will be determined by our ability to see beyond technology, stay ahead of our customers and solve problems before they even arise.”

He was pleased with where Ericsson is situated in early 2011. He wondered what specifically Ericsson should do to make networked society happen in healthcare and energy.

On to CTIA Wireless 2011

Vestberg boarded his plane to fly to Orlando, Florida for the 2011 CTIA Wireless Conference. International CTIA Wireless dedicated March 23 as “Wireless Health Day.” He was scheduled to join Patrick Soon-Shiong, M.D., chairman & CEO of the Institute for Advanced Health to address the “Networked Society” and the transformation of healthcare through connectivity.

The future that Hans Vestberg sees is an all-communicating world, where everything that benefits from a connection will be connected. His expectation is that ICT becomes the industry of industries—beyond voice communication and apps for leisure and entertainment. He is convinced that the networked society will be prosperous and sustainable if ICT manages to shape the future of two profoundly significant sectors—health and energy.

As he settled into his seat, he said to himself: “only our imaginations can stop us when thinking about the potential of the ICT industry in the networked society.”
Your Task
You have been tasked to analyze the evolution of networked society in TWO sectors: healthcare and energy. Specifically, Hans Vestberg is looking for a presentation with recommendations that addresses the following themes:

1. Your **vision** of networked society in healthcare and energy in 2015. How will ICT shape these two sectors to showcase the power and potential of mobility, broadband and cloud?

2. Your recommended **business model** (products, services and/or solutions) in each sector including revenue drivers for Ericsson. How do you see Ericsson developing a profitable strategy in these sectors?

3. **Competitive landscape 2015** in each sector and Ericsson’s relative position against other key players.

4. Key **partnerships and alliances** that Ericsson should explore in each sector.

5. **Execution roadmap.** How should Ericsson execute on these two sectors across the globe to be seen as a shaper of the networked society?

Hans Vestberg is looking forward to your fresh insights, ideas and recommendations for his upcoming meeting with his executive team. In developing your points of view and recommendations, make realistic assumptions, but be prepared to defend them based on data, analysis, insights and intuition.