4G increases the potential of Unified Communications

TeliaSonera

Summary

- Unified communications solutions can enable strong streamlining of a company's business and operational processes.
- 4G sets a stronger quality base for unified communications.
- Connectivity through high-quality, real-time transmission of voice, data and video supports new behaviour and enables global collaboration and innovation in an unimaginable manner.
- Accessism – the constantly connected state – is here to stay.
- Low latency is the enabler for entirely new mobile services and changed behaviours.
- New applications require high-quality, high-capacity services.
- Streaming video with HD quality will become a natural way of working.

Competitiveness grows out of personal efficiency

Appropriate communications tools constitute a key factor for personal efficiency. Smarter work methods and more efficient processes are made possible by integrating various communications services.

So far, each communications channel (landline telephony, mobile telephony, data communications, e-mail, etc.) has required a separate physical connection. The convergence and integration of services and networks now make it possible to combine voice, data and video with various applications in a common interface. This is called unified communications and is often abbreviated as UC.

This concept makes it easier for businesses, organizations and individuals to communicate more effectively, both internally and externally.

A smarter way to work

In traditional operations, the physical office place has long been a fixed point. Unified communications with mobile integrated ways of working changes this. Employees are freed from dependence on a physical location. They can carry out their duties efficiently wherever they are.

Companies can thus modify their operational processes and thus reach set goals with lower investments in resources. At the same time, life is simplified for the employees. The increased flexibility minimizes the risk of delays that consume energy and generate costs. This results in a win-win situation for companies and employees.

Accessism – a new lifestyle

Constant access has become an important part of the individual's identity and personality and is changing the way we experience reality. The sense of presence and community is based increasingly on virtual contacts. It is not as necessary to be physically in the same place as other people.

Our perception of time is also changing. We are becoming increasingly impatient. We expect interaction in real time and find it difficult to accept long waiting times.

Accessism also affects our way of living. We tailor our lives by adapting the communications flow to suit our own needs and preferences. A fallout of this is that we expect a dialog and a deeper commitment on the part of businesses. To put it simply, we are more ready to become involved in aspects of businesses' operations, such as product development. This creates entirely new conditions for businesses' customer relations.

Superior user experience with 4G

The Internet protocol's versatility has laid the foundation for an enormous range of applications – and a constant need for increased bandwidth for these applications to be able to operate as they should!

The new generation of mobile network technology, known as 4G or LTE, satisfies this demand. Properties such as response time, latency, transfer rate and service quality are on the level of today's fixed IP networks. 4G brings speeds up to ten times faster than today's mobile broadband.

At launch, 4G network will offer up to 50 Mbps and in the next phase, speeds of up to 80 Mbps will be within reach. Thereafter, the goal will be speeds in excess of 100 Mbps. The conclusion is that 4G creates better conditions for unified communications. In cases where TeliaSonera has combined 4G with unified communications solutions, we have been able to see an entirely new frame of reference for how businesses can operate. A typical example is web and video conferencing services using 4G – suddenly mobile virtual collaboration reaches new heights from the user experience perspective.

Social media and access everywhere – exponential growth of media consumption
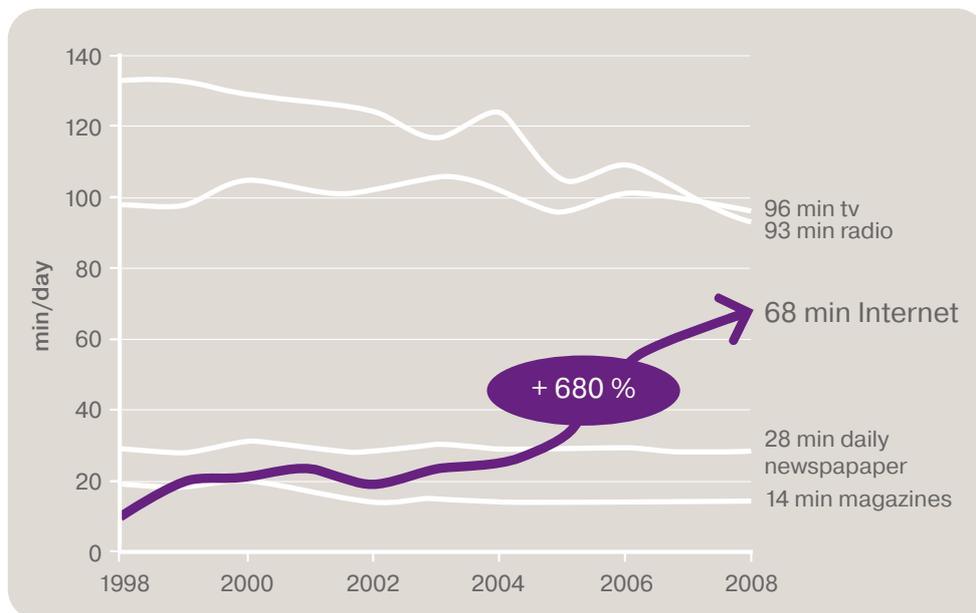
Source: TeliaSonera and external sources.

Media consumption is rapidly moving to the mobile. In addition, personal, individual consumption is being increasingly replaced by behavior involving gathering of news and opinions from individuals, social networks and businesses, and then sharing via the Internet.

The growth of social media is producing new behavior that stimulates valuebased networks and global cooperation. Connectivity through high-quality, real-time transmission of voice, data and video supports new behaviour and enables global collaboration and innovation in an unimaginable manner.

Businesses must address a series of new questions:
· How are customers' preferences and awareness secured in a world where the flow of media messages is rapidly swelling?
· How is competitiveness retained in a globally networked society?
· How will security and confidentiality be maintained – for both data and physical security – when people

publish their activities in social media and use the company infrastructure to log in to private websites?

The capability for continuous, location-independent access to an Internet world with 4G and fibre network access wherever we are will make accessibility even more important in our daily lives.

From text to 3D – the power if innovation

In just a decade, the range of mobile solutions has developed dramatically.

At the beginning of the 2000s, there was little more than text messaging.

By the middle of the decade, niche applications arrived that could be run on standard cell phones.

In recent years the market for mobile software has literally exploded as a result of new hardware, new operating systems and new business models.

And development is obviously rolling on. What comes next? Why not 3D in cell phones?

Innovation through 4G and unified communications

Technology changes bring immense possibilities for innovation. All imaginable mobile devices can become UC workplaces, from laptops to cameras and e-readers. This development paves the way for something called multi-screen UC solutions. This means that users can choose one of several screens to work from – a cell phone, laptop or even the living room TV.

The concept of multi-screen UC solutions also includes the capability to easily transfer an ongoing session from one screen to another without interruption. An example of this is the phenomenon of "dusting" which enables seamlessly casting a Webex meeting over from a mobile phone to a laptop by a simple shake of the arm.

In our interaction with colleagues, customers and suppliers, streaming HD-quality video will become a natural tool that contributes to greater efficiency.

Better than actual reality

The new technological landscape includes considerable potential for creating a completely virtual reality. It can also allow digital information to be superimposed on a picture of the physical world. The latter is referred to as augmented reality.

By combining the different forms of reality – physical, augmented and virtual – service providers will create new services and experiences in a number of areas, including information searching, gaming, tourism, healthcare, retail trade and entertainment.

The companies that deliver solutions will choose different strategies. Some will offer new, exciting functions. Others will launch attractive variants of existing functions, supplemented with aesthetically pleasing and easy-to-use interfaces.

Which challenges and opportunities are we facing?

Consumers will be at the steering wheel in the future. Through blogs, social networks, websites, instant messaging and tweeting, people can communicate with each other all over the world. This combined with new entrants into the ICT arena will radically affect business models in the communications field.

Customer experience and quality of service will be high on the agenda of all players, with the goal of attracting and retaining an IT-mature, demanding customer base. Video will become a standard application that places greater demands on network capacity.

Security and guaranteed level of functionality are becoming increasingly important and will play a decisive role in building long-term customer relationships. Users will base their ways of working on continuous, mobile access to business-critical solutions. Connectivity, performance and security guarantees will be important purchase decision drivers.

If you are in London, San Francisco, Berlin or Madrid and have to work a few hours, the iPhone application WorkSnug can save your day. Hold the phone as if you were photographing the surroundings. Text boxes will now be superimposed over the image that specify names, addresses and distances to nearby public facilities where there are wireless networks and where you can sit down with your computer. You can also obtain user reviews with useful information, such as access to mains power, room noise and even the quality of the coffee.

Ask the right questions

The explosive technological development creates new challenges and opportunities. Businesses can create competitive advantages in their choice of technologies, solutions, and vendors. Here are some basic questions that every decision-maker should place, both to existing and prospective suppliers.

Target group	Critical area	Questions to ask
CEO CFO	• Follow-up of the value generated by investments in new technologies and ways of working	• What is the incremental value to our operations of this investment? • Can I strengthen the company's finances by reviewing CAPEX and OPEX structures? • What is a reasonable time for ROI?
CIO	• Adapting IT to needs of business operations • Keeping pace with new technologies and standards • High-quality, secure user experience • Retained IT security in an environment where more and more mission-critical services are made accessible via more and more difficult to control user devices	• Which new demands are placed on the infrastructure? Today and in the next 24 months? • How will operational systems adapt to these changes? • How do we guarantee security and availability of services, end-to-end? • How do I get help with the migration? Are you a passive provider of infrastructure or do you take an active part in the development of our communication strategy?
CTO	• Assessment of which information produces competitive advantages and which is to be kept in-house • Changing the way of working to take advantage of global expertise	• How can we ensure that work methods and processes are changed to fully utilize the new possibilities of communicating and working? • How do we use the technological investment to enhance the quality of our products and services? • How are outsourced activities adapted?
Sales and Marketing	• Sufficient pace of information dissemination • Improved marketing • Time to market	• Can we reach more customers? • Can we use this technology to provide quicker feedback and better responses to our customers? • How can 4G and UC help us close sales deals faster?
HR	• Adaptation of personnel policy for Generation Y – always connected youth with new values and working behaviour	• Where is the boundary between work and free time? Is the employer willing and able to define it? • How can unified communications and other new technologies facilitate the recruitment of new talent?

TeliaSonera – a supplier with a unique position

Companies looking for a supplier of unified communications in 2010 and forwards should make their choices carefully. The better the supplier understands how social and technological developments affect the customer's business, the better help customers can receive in adapting processes and work methods. The benefits will thus be greater and obtained faster.

TeliaSonera is the Nordic market leader in advanced communications services. This is not only due to our high quality network including ongoing 4G investments but also due to our wide range of services, from operational consulting to security solutions. Unified communications is about delivering end-to-end user experience seamlessly across accesses, a capability that TeliaSonera has had for quite some time. In addition, we already have many of tomorrow's services in place.

Some of our unique qualities:
• According to the analyst firm IDC, Telia is a Swedish leader in UC. Among other things, the report* emphasizes Telia's business focus on UC solutions.
• The first operator in the world to establish a commercial 4G network.
• Ability to provide integrated solutions and extensive expertise in communications services: fixed and mobile solutions, voice and data communications and related applications.
• Development and cooperation with the world's leading suppliers.
• Strong environmental policy that among other things, helped us to reduce carbon dioxide emissions by 70%.
• Established, reliable and financially strong partner.

*(IDC#SE540910R9, May 2009)

Vill du veta mer? Kontakta din säljare på Telia eller fyll i dina uppgifter på www.telia.se/foretagskontakt

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