

## THIS IS ERICSSON CONSUMERLAB

ConsumerLab is a knowledge-based organization. We provide consumer insight to influence strategy, marketing and product management in the Ericsson Group. Our knowledge helps operators develop attractive revenue-generating services.

We gain our knowledge through a global research program based on annual interviews with 80,000 individuals in more than 40 countries – statistically representing the views of 1.1 billion people. We have been doing this since 1995 and we use both quantitative and qualitative research. We spend hundreds of hours on in-depth interviews and focus groups with consumers from different cultures. Our research includes general market and consumer trends and in-depth insights into specific areas.

To be close to the market and the consumers ConsumerLab has team members in most of Ericsson's market regions. Being part of the Ericsson Group gives us a thorough understanding of the Information and Communication Technologies (ICT), its market and business models. This broad knowledge is unique and is the basis for our credibility and integrity. We see the big picture, understand where the individual fits in, and know what this means for future trends and services.

## **REFERENCES**

- > Ericsson ConsumerLab Global Infocom Study 2002-2010
- Ericsson ConsumerLab Mobile Broadband Business users study 2011
- > Ericsson ConsumerLab Mobile Broadband Study 2009-10
- > Ericsson ConsumerLab Device Study 2010
- > Ericsson ConsumerLab China Mobile Internet Study 2010
- > Ericsson ConsumerLab India Country Study 2010
- > Ericsson ConsumerLab Rural Broadband Study 2008
- > Ericsson ConsumerLab China Urban Infocom Study 2008-2010
- Ericsson Multimedia Sales and Marketing Share of Wallet study 2009
- Morgan Stanley Economy + Internet Trends 2009
- > www.cnnic.cn
- > www.eiu.com

## EXECUTIVE SUMMARY

In 2010 the number of worldwide mobile broadband subscribers – generated by strong growth in smartphones, connected laptops and tablets – passed the half billion mark. Ericsson estimates that this figure will pass 1 billion before the end of 2011 and will reach close to 5 billion by 2016. At the same time revenues for mobile and fixed line operators is estimated to be about USD 1,650 billion in 2011 – close to 3 percent of the expected global nominal GDP.

This means that people are becoming more dependent on internet services to maintain their lifestyle. It is one of the last things that consumers would give up if they had to reduce their expenses. Organizations and governments are also increasingly using the internet to deliver services to customers and citizens.

The needs for internet access are fulfilled through various types of connections that use both mobile and fixed networks – and various types of devices that complement each other.

The switch to smartphones is leading to mass internet usage and a shift in behavior, attitude and usage among consumers. We are seeing a trend where all kinds of people are using smartphones, not only the tech-savvy or professional types.

Internet everywhere has become a prerequisite for business – not an option. Surveys show that mobile broadband in a business context improves efficiency and productivity with increased amount of new business, higher efficiency and

profit margins are expected to increase. In the ConsumerLab Mobile Broadband Business Users Study 2011, 95 percent of smartphone users said that:



The internet has therefore become a necessity, with consumers needing to be connected everywhere, and we see strong and profound drivers for this. Consumers are starting to regard being connected as important as having electricity.

In addition, there are billions of people using the mobile phone in emerging markets, most with limited or no access to computers. This creates immense potential for the mobile phone as an internet access point.





# THE NEED FOR 24/7 INTERNET ACCESS

Daily internet usage is increasing every year and has become a necessity for life. And young people are not the only heavy users; people of all ages are becoming more dependent on internet services. And because internet covers most aspects of life, the need to be constantly online has become a reality for many people. As an example, a study made in the US, UK and Sweden among 15 to 69 year olds shows that daily internet usage increased to 90 percent in 2010 from 36 percent in 2002.

Browsing and e-mail usage are still the most common activities on the internet, though many people frequently use it for shopping, chatting, reading blogs, watching videos and listening to music. People also deal with practical issues like banking, shopping research and purchasing goods and services. They use it as part of their social life through social networks, interest groups, and share their everyday lives through communities and blogs. They catch up on TV programs they have missed, watch video clips and stream films.

## Weekly usage of internet services

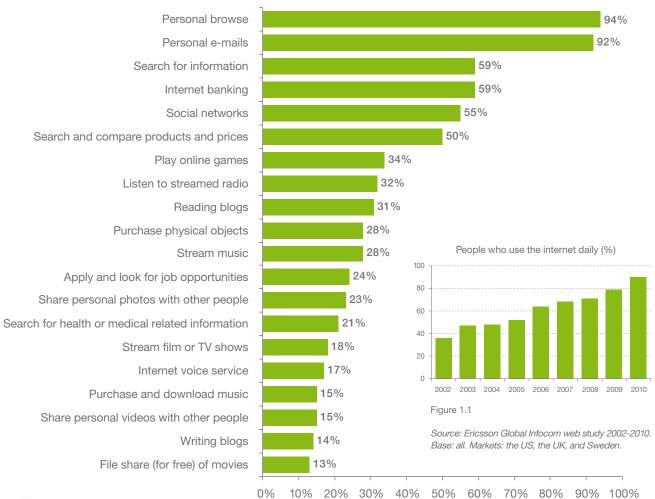
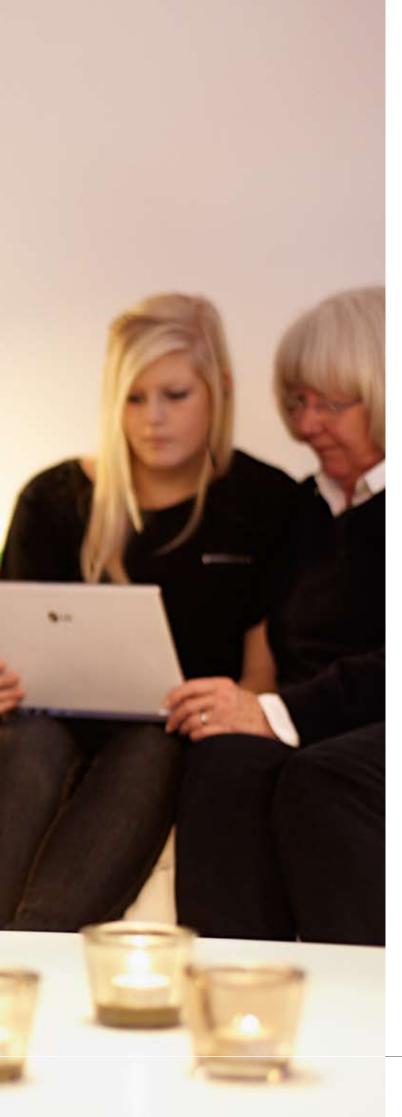


Figure 1.2

Question: How often do you do any of the following on any of your Internet capable devices? Source: Ericsson Global Infocom web study 2010. Markets: the US, the UK, and Sweden.





## ACCESS FROM ALL DEVICES

When services go online, they are also accessible from different devices. The users do not have to bother about synchronizing devices or care about where the content is stored. Online services reinforce the importance of connectivity. When you have a crucial part of your life online, it becomes natural to access the services wherever you are, at home or outdoors, on your way to work or school, while on vacation, or anywhere else.

## STRONG AND PROFOUND DRIVERS

There are strong and profound drivers for always being connected to internet. And having internet access is one of the last things people would give up if they had to reduce their monthly expenses. Being connected to the internet satisfies several basic needs of modern life.

**Control:** You can manage your life through different internet services and be in control of what's going on.

Belonging: You're a part of the social loop and can stay in contact with friends and family.

Freedom: You have the freedom to move around and not be tied to or restricted by time and place. You do not have to rely on others to get access to internet services.

# STAYING CONNECTED WHEREVER YOU ARE

Different devices serve different needs. The need to access internet services through the day is fulfilled by the different types of mobile and fixed connections available as well as the various types of devices – such as mobile phones, laptops and tablets. The device and connection that users prefer depends on the context and purpose of connecting to a specific service.

Many factors influence the choice of device:

- > What do you carry with you? Your mobile phone is always with you, but your laptop is not.
- > Proximity to the device: where is the device in the living room or the kitchen?
- How long does it take to access the content? Is it quicker to use your laptop, your smartphone or yourTV to access what you want?
- > The level of specialization: how specialized is the device when it comes to taking pictures or filming, listening to music or watching TV? How ergonomic is the device when it comes to things like the keyboard and the size of the screen?
- > What level of privacy does the device offer? Can you use it privately or is it a common device in a common environment?

For planned internet usage, which requires more focus and concentration, consumers generally prefer a bigger screen and a keyboard, especially when at home. For spontaneous internet usage, the smartphone is generally preferred to the laptop. Interestingly, the smartphone is also used a lot at home, replacing the laptop for short internet browsing.

### DIFFERENT USAGE, DIFFERENT DEVICES

The tablet offers a very simple and fast way to navigate and interact with different services. It is smaller than the laptop, easier to carry around and a great user experience. But it is still too large to fit into pocket and it lacks a real keyboard for longer writing sessions.

Among several larger households, the tablet has become a shared device because all family members want to use it.

Those who have their own tablet are more likely to start using it instead of a laptop when they need a mobile computer. This

behavior could become more common as more and more tablets enter the market. However the laptop will still have a strong position due to its relation to work-related tasks.

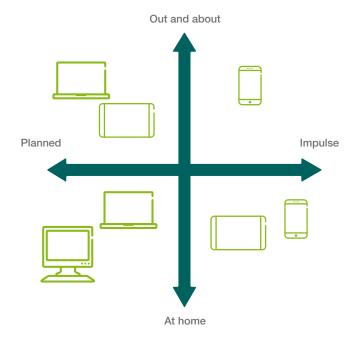
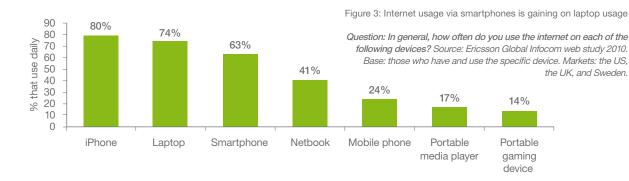


Figure 2: This model illustrates how the preference for internet devices, PCs, laptops, tablets and smartphones, varies depending on the circumstances.

Of those who have and use a laptop, 74 percent use it to connect to the internet every day. Of those who have and use a smartphone, 63 percent use it to connect to the internet every day. But if we look at those who have and use an iPhone, as many as 80 percent use it to connect to the internet every day, see figure 3.

Fixed broadband is the service with the longest history in the US, UK and Swedish markets, and it is also the most commonly available form of internet access. But mobile broadband for computers and mobile phones is becoming increasingly popular among consumers.





In the same markets mobile broadband for computers has increased to 30 percent in 2010 from 7 percent in 2007. This follows the increase in the ownership of personal laptops to 75 percent in 2010 from 37 percent in 2006. We know that when laptops become a personal possession, end-users prefer to have their own private mobile broadband connection, even if they live in a family. As for using the mobile phone for browsing at least once per month, it has increased to 33 percent in 2010 from 19 percent in 2007 among all consumer segments.

Even though these user patterns are stronger among early adopters, there has also been an increase in usage in the followers and late adopters segments. And this figure will increase as more people switch to smartphones.

Ericsson estimates that by 2016, the number of mobile broadband subscriptions will be close to 5 billion, with 95 percent on HSPA, CDMA and LTE networks.

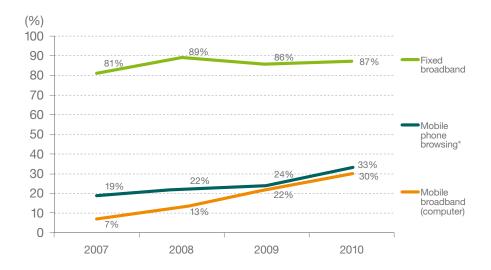


Figure 4: Connection types

Fixed broadband and dial-up connections are calculated based on availability in the household. Mobile broadband and mobile browsing are calculated as a share of those who use them. The averages are calculated on one-to-one weighting between countries. \*Mobile-phone browsing at least once per month. Source: Ericsson Global Infocom web study 2010. Base: all. Markets: the US, the UK, and Sweden.

## A NEW ERA OF DEVICES

A new breed of smartphones, like the iPhone and Android phones, has redefined the industry view of mobile broadband beyond laptops and dongles. These new application-centric smartphones have changed the way users regard their phones.

They are not only seen as a tool equally important as your keys or wallet; they are also extremely personal objects leading to strong emotional feelings. Smartphone users describe the relationship as one of love. The main reason for this change is that the new smartphones are fun to use, quick and very useful. The possibilities of using a smartphone with a touch screen and an intuitive interface providing access to an endless choice of applications contribute to consumers' strong attachment to the phone.

The switch to smartphones marks a shift in behavior, attitude and usage. And the new smartphones are for everyone, not only the tech-savvy or professionals. They keep people connected to the internet, are highly personal, and offer

endless choices to suit personal interests via the application stores.

The smartphone is reducing the time/convenience barriers for internet connections. Users access the internet for short periods throughout the day – often in new places and situations that were previously offline.

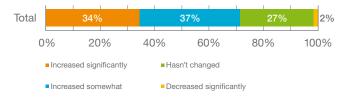
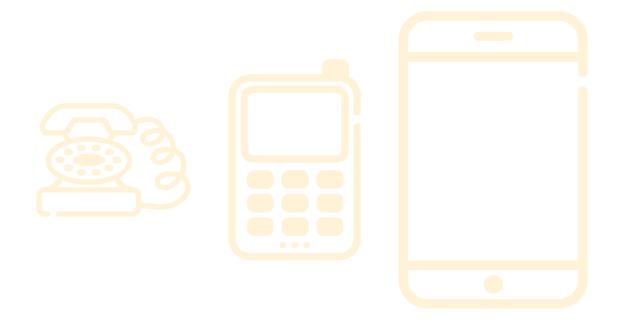


Figure 5: Smartphones are driving internet usage

Question: Has the total time you spend on the internet changed since you got your smartphone? Source: Ericsson ConsumerLab Device Study 2010. Markets: the US.



## SMARTPHONES GAINING GROUND

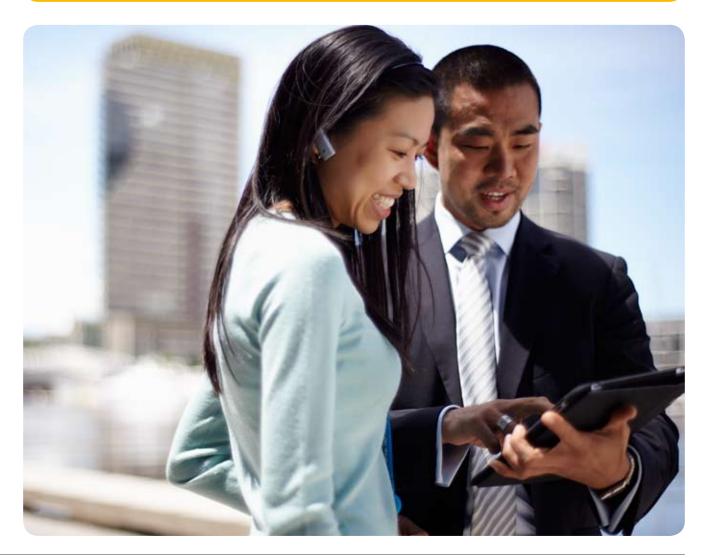
Of smartphone users in the US, 71 percent say they have increased the total time they spend on the internet somewhat or significantly since they got their smartphone. But a majority of the app users in the US, 79 percent, use a web browser as well, so apps alone can't fulfill all internet needs.

Smartphones account for an increasingly large share of the total internet usage. Smartphone users in the US spend almost two hours per day accessing the internet from their smartphone. This clearly shows that the new type of smartphone is a device that has a crucial effect on how we access and use internet

Multiple communication channels and services for both private and work-related usage allow the consumer to seamlessly stay in touch with loved ones and stay connected to work. About 70 percent of respondents in the US said that they used their smartphone both for private and work-related tasks.

In contrast, when using a laptop more time is needed and you use it in a more planned way. Laptops are still important for tasks that require a controlled environment and a larger screen or keyboard. But 45 percent of respondents in the US claim that they spend less time using the laptop or netbook since they started using a smartphone.

One important observation is that smartphone users quickly get used to its advantages, and 86 percent of users surveyed in the US are convinced that their next phone will be a smartphone. The new type of smartphones effect customers' expectations on other internet devices because of their quick and easy access and use of internet content and services. Customers get used to this and expect the same from other devices.



## MOBILE BROADBAND IN WORK LIFE

Internet everywhere has become a prerequisite and is no longer an option. Mobile broadband is not only for fun and entertainment, it is more and more becoming a necessity. It is a natural part of our lives for keeping in touch with family and friends and being up to date at work.

In a recent ConsumerLab study with 1900 consumers that use mobile broadband for work, it was clear that internet everywhere is a prerequisite for business – not an option. 92 percent in the study say that it is important to be able to use mobile broadband everywhere, regardless if it is via laptops or smartphones.

The benefits of using mobile broadband at work for both laptops and smartphones could be classified in two groups:

### **FUNCTIONAL BENEFITS**

- > Mobility: Being reachable and being able to reach
- > Always have access to information
- > Constant and immediate communication
- > Easy access and set-up
- > Back-up and security of work material
- > Quick response rates in work interaction

73 percent in the study say:

IT IS IMPORTANT TO ME THAT I CAN ALWAYS BE REACHED AND REACH OTHERS WHEREVER I AM.

81 percent in the study say:



WHEN I NEED INFORMATION THE FIRST PLACE I LOOK IS THE INTERNET.



### **IMAGE BENEFITS**

Mobile Broadband helps build the image of being:

- > Professional
- > Alert
- > Reliable
- > Competitive

40 percent in the study say:

SINCE I GOT
MY MOBILE
BROADBAND
THE WORK THAT
I DO HAS BECOME
MORE RECOGNIZED
BY THE PEOPLE
I WORK WITH.

The functional and the image benefits have a positive impact on work performance.

FUNCTIONAL BENEFITS

IMAGE BENEFITS

IMPACT ON PERFORMANCE

Figure 6

According to the study the positive impact on performance is:

- > Increased amount of new business
- > Higher efficiency improved profit margins
- Reduced risk of errors in reporting (e.g. ordering system and administrative systems)
- > Fewer disruptions in the working pace

Mobility and efficiency are stated as the main reasons for using mobile broadband. Quick responses, time management and staying in touch increase efficiency.

78 percent say using mobile broadband makes them more efficient at work.

40 percent also believe that their work efforts have become more recognized since they started using mobile broadband.

## MOBILE BROADBAND IN HIGH GROWTH MARKETS

## CONSUMER NEEDS VARY BETWEEN MARKETS AND LOCATIONS

Research shows that consumer needs in relation to the internet vary and follow a development curve as illustrated in the figure 7. In markets/locations with no internet access, plain access is what people crave for. Following the introduction of an internet connection disruptions are common and users therefore want stable access. Then, when internet usage becomes more advanced higher speed is desirable. Finally, when speed is satisfying, people want to have their laptops and mobile phones connected at all time from all locations. Thus, mobility is only attractive in markets where basic functionality such as access, stability and speed are in place.



Figure 7

In areas where there is no internet, easy internet access is what makes mobile broadband attractive. In small towns where existing internet connections are few, slow and unstable, easy access and higher speed are the main advantages of mobile broadband. In cities, where usage becomes even more advanced the main benefits of mobile broadband are related to higher speed and mobility; the same requirements as we see in developed markets.

## LOOKING AT URBAN CHINA & INDIA

### **CHINA**

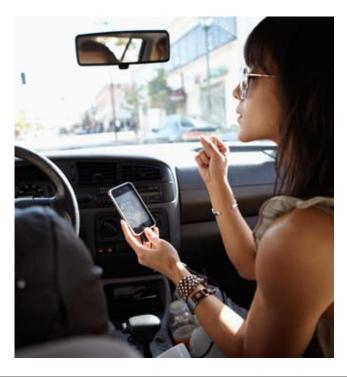
Internet usage has become a necessity. Developing countries and urban China are no exceptions. In a 2010 Ericsson ConsumerLab study, 48 percent of urban Chinese said it was important for them to be able to access the internet anywhere.

China has the largest number of internet users – 457 million at the end of 2010 – and internet use in cities is as advanced as it is in other developed markets. As people move a lot of their daily activities and personal connections online, internet usage and dependence on it have grown each year. Despite the

growth, internet access and PC/laptop penetration are still lower than in developed markets. But there is potential for large-scale growth as prices go down and awareness about equipment and services rise.

Urban China is mobile phone-centric. With lower access to computers people use their mobile phones to stay connected. Mobile phone internet usage is booming in urban China with the introduction of more advanced phones and attractive price plans from operators. Mobile chatting via QQ, an instant messaging tool similar to MSN Messenger, has been embraced by the young, supported by mobile applications that make Chinese characters easier to type and simplified browsing tools that encourages more mobile internet use.

Mobile internet is expected to continue its growth as urban Chinese become wealthier, prices drop and mobile technology improves to support mobile internet more effectively. According to Ericsson ConsumerLab's 2010 study, nine out of 10 current users said they would increase usage or continue their current use in the next 12 months. And 52 percent of all urban Chinese respondents expressed an interest in mobile broadband, and among laptop users the interest was as high as 71 percent.





Ericsson is the world's leading provider of technology and services to telecom operators. Ericsson is the leader in 2G, 3G and 4G mobile technologies, and provides support for networks with over 2 billion subscribers and has the leading position in managed services. The company's portfolio comprises mobile and fixed network infrastructure, telecom services, software, broadband and multimedia solutions for operators, enterprises and the media industry. The Sony Ericsson and ST-Ericsson joint ventures provide consumers with feature-rich personal mobile devices.

Ericsson is advancing its vision of being the "prime driver in an all-communicating world" through innovation, technology, and sustainable business solutions. Working in 175 countries, more than 90,000 employees generated revenue of SEK 203.3 billion (USD 28.2 billion) in 2010. Founded in 1876 with the headquarters in Stockholm, Sweden, Ericsson is listed on NASDAQ OMX, Stockholm and NASDAQ New York.

The content of this document is subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document