

# MARKET TRENDS

Telecommunications plays a central role in the daily life of practically every person on earth. It is fundamental to the global economy and increasingly important to the environment. Over the last decade, mobile became a ubiquitous communications service, enabling people from all regions and walks of life to connect at an unprecedented level.

With the widespread adoption of mobile communications for voice and text messaging, the impetus to add more voice subscribers has started to diminish. Growth will continue with more than two billion new mobile voice subscriptions expected over the coming years but these will mainly come from low-usage customers in developing areas or users with multiple subscriptions. This dilutes average revenue per subscription but the underlying growth in minutes of use per user is stronger than the subscription dilution. Thus the total voice traffic continues to grow.

Mobile broadband is fast becoming the main growth driver for operators and equipment suppliers globally. Consumer behavior is changing with the introduction of mobile broadband prompting innovation in a number of areas and driving the need for ever greater bandwidth and data speeds. The industry focus is shifting from connecting places and people to connecting devices and applications.

There are many devices whose utility is enabled by mobile broadband, including mobile phones, personal computers and a growing number of electronic devices and software applications. Wireless connectivity will make broadband mobile and affordable to the majority of people. Particularly in the case of machine-to-machine communications, it will also enable

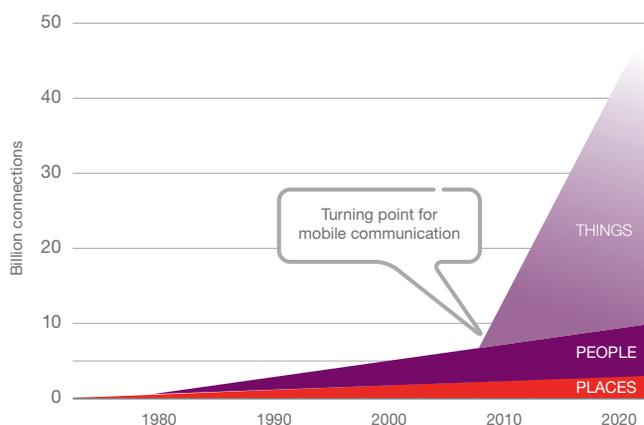
applications for a variety of industries and uses (e.g. smart grids, transportation, financial services and healthcare.) This is far beyond the capability and scope of today's networks.

We envision 50 billion network connections over the next decade, compared with some 5 billion currently. The underlying network technologies must be enhanced to accommodate such a vast number of connections. We expect Ericsson to benefit from this as network operators and service providers:

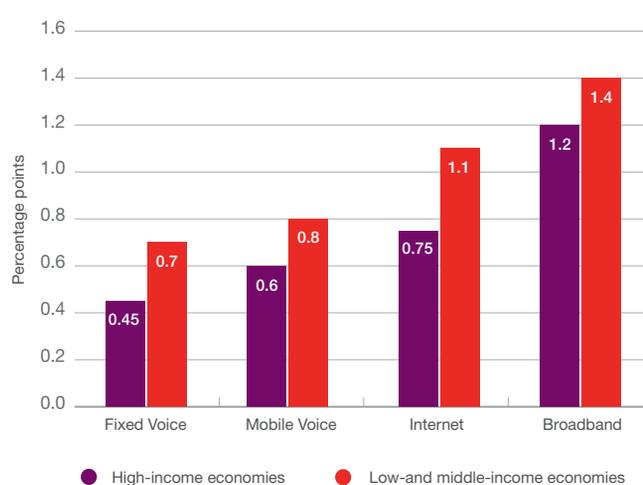
- > Accelerate the transition from legacy technologies to IP-based technologies.
- > Respond to rising demands for services that aid economic, societal and environmental development.
- > Invest in mobile and fixed broadband access, multi-service edge routing, IP multimedia subsystems (IMS) based services and Metro optical and/or radio transport.
- > Prioritize suppliers that combine technology with services for lower total cost, faster time-to-market and reduced project risks.
- > Outsource more of their network-related activities and operations for increased flexibility and focus more on the consumer experience.

These are all areas where the Company is well positioned and continues to invest heavily. Ericsson is now focused exclusively on serving network operators and service providers while device manufacturers and consumers are addressed via two joint venture companies, i.e. ST-Ericsson and Sony Ericsson.

## VISION OF 50 BILLION CONNECTIONS



## ICT BOOSTS GDP GROWTH



GDP growth for every 10 percent penetration increase

**ICT, especially mobile, positively affects GDP levels as well as the environment**

Even though the benefits of a connected society are difficult to precisely quantify, telecommunications has become as essential to any nation’s infrastructure as water, transportation or electricity. As already well demonstrated by telephony, there is clear evidence that the ubiquitous availability of affordable ICT services has a positive effect on any country’s economy. The ICT industry generates approximately 2 percent of global CO<sub>2</sub> emissions. However, ICT could potentially reduce the other 98 percent by 15 percent or more.

A higher GDP level obviously enables more broadband adoption but studies of the relationship between broadband penetration and economic development indicate that broadband plays an even more fundamental role than telephony in accelerating the economic and social development of a country. Mobile broadband networks, along with suitable devices and appropriate applications, can accelerate broadband penetration by avoiding the relatively more expensive and time-consuming deployments of fixed networks.

**Mobile communications market**

Mobile communication is the service of choice for consumers across the world and we believe there is considerable potential for further growth with the introduction of mobile broadband. During 2010, Ericsson expects mobile subscriptions to grow to more than 5.2 billion, mainly driven by voice in developing markets and broadband in more developed markets.

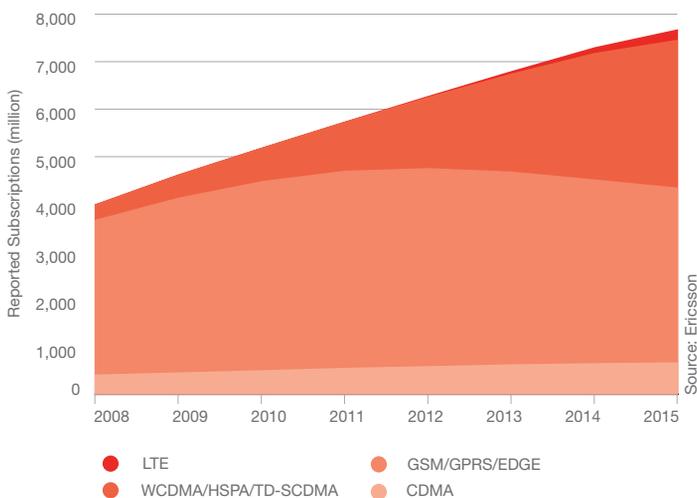
Although at a slower pace than in previous years, mobile communications continued to grow in 2009 with over 600 (670) million new subscriptions added. The number of mobile phones shipped was approximately 1,100 (1,190) million, mainly due to less subscriber additions and longer replacement intervals. Based on vendor reports and Ericsson estimates, the

mobile systems market is estimated to have declined by more than 10 percent due to the economic slowdown and weaker demand for GSM. However, we believe investments in mobile communications are below optimal levels – suggesting the possibility of increased spending once the economy recovers.

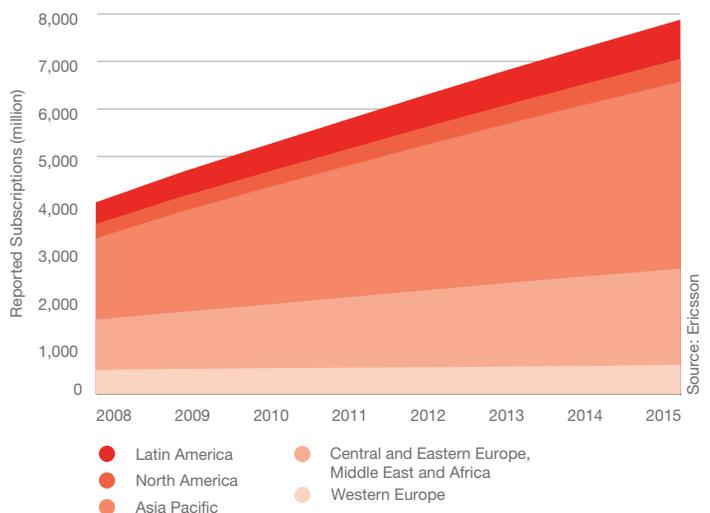
At the end of 2009, the 4.6 (4.0) billion mobile subscriptions worldwide represented a global subscription penetration of 64 (59) percent (the actual number of mobile users is probably some 20-25 percent less due to inactive and multiple subscriptions). The High Speed Packet Access (HSPA) version of 3G/WCDMA is now deployed in 303 (247) commercial networks across 130 (110) countries. Ericsson supplies 144 (115) of these networks, serving the majority of mobile broadband subscribers.

The number of subscribers covered by commercial 3G/WCDMA networks remains well below half that of 2G/GSM. Subscribers to mobile broadband services worldwide reached 360 (180) million by the end of 2009. The vast majority of the 360 million are handheld devices and the figure is set to soar with the mass consumer adoption of mobile internet devices such as smartphones and netbooks. This additional demand presents a significant opportunity for network infrastructure and systems integration, areas in which Ericsson has a market-leading position.

**MOBILE SUBSCRIPTIONS BY SYSTEM STANDARD**



**MOBILE SUBSCRIPTIONS PENETRATION BY REGION**



## Fixed and mobile broadband main market drivers

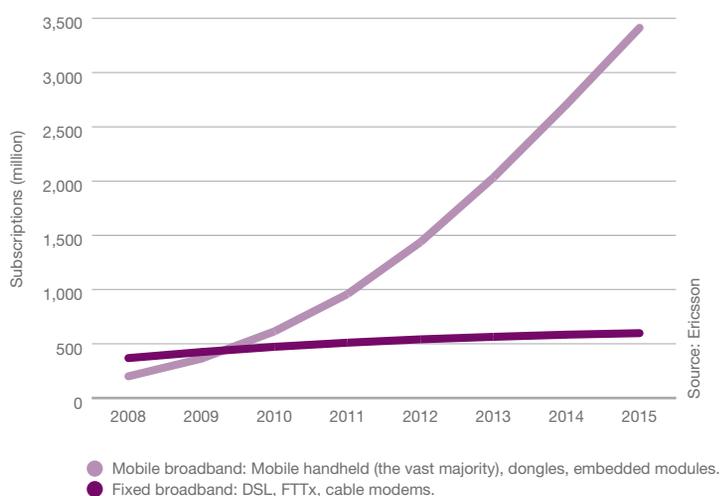
The number of fixed and mobile broadband subscriptions is expected to increase five times between 2009 and 2015 to approximately 4 billion, of which the vast majority will be subscriptions for mobile broadband. Broadband internet access revenues for fixed operators (including cable operators) are expected to grow from around 25 to around 30 percent of total revenues in the next five years. Similarly, data's share of mobile operators' revenue, which is currently some 25 percent, is expected to account for a progressively larger portion of global mobile revenues over the next five years.

These projections assume the cost for mobile data services aligns with subscriber expectations, i.e. data must be priced lower than voice when comparing the amount of bandwidth consumed. Hence, operators may implement cost-efficient solutions for delivering more network capacity with revenues based on service value rather than the amount of capacity. This motivates a next-generation network that offers fixed and mobile convergence and leverages IP technology for a lower cost, higher performance broadband service.

However, operators' willingness to invest in modernizing their networks can be inhibited by governmental regulations on how they can monetize their investments. For example, open access policies seek to facilitate the entrance into broadband markets for new competitors by requiring existing operators to lease access to their networks at regulated wholesale rates. The basic idea is that the more competitive consumer broadband markets are, the better the service offering, i.e. at lower prices, to more consumers. The alternative approach is to avoid forcing operators to lease network assets to competitors as it can undermine the incentive to invest.

The major challenge is identifying regulatory policies and practices that promote ubiquitous availability without undermining competition by mandating how an operator can monetize usage and capacity consumption.

### BROADBAND SUBSCRIPTIONS



## Mobile broadband creates bottlenecks in parts of the network

The deployment of access nodes that connect devices at ever faster speeds increases subscriber uptake which can quickly create bottlenecks in other parts of the network especially on the backhaul part of the transport network.

Backhaul capacity needs to be provided more dynamically and efficiently than is possible with traditional backhaul solutions. Support of multiple services is required to ensure continuity for existing services as well as allowing new services. Operators want to maximize investments in existing infrastructure while leveraging the capabilities of new technologies.

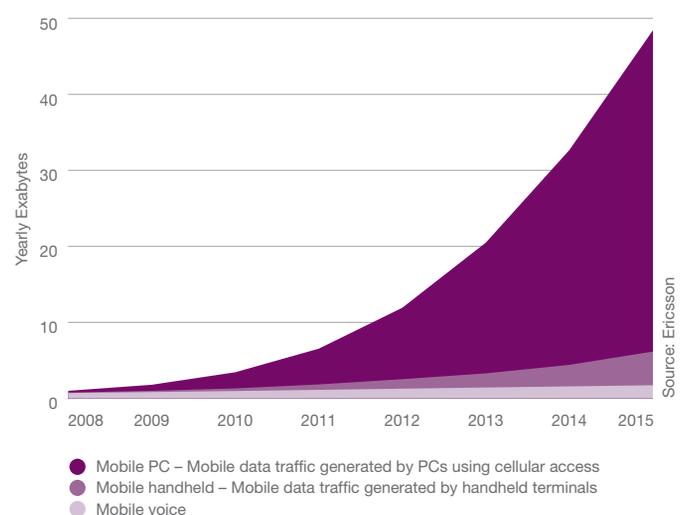
Roughly two-thirds of backhaul globally is provided via microwave radio with the notable exception of the US and China where fiber is the preferred method. The dynamic nature of multi-service broadband access requires changes in the network technology used – a change from TDM/STM/ATM structures to IP/Ethernet. Ericsson already has a market-leading position in microwave radio systems and with the acquisitions of Marconi and Redback, the Company is well positioned with optical transmission systems and IP/Ethernet products.

## Convergence and network transformation in focus

Placing greater emphasis on smarter networks and bundled service offerings, operators are starting the conversion to all-IP broadband networks. An increase in broadband access, routing and transmission deployments, combined with next-generation service delivery and revenue management systems, means operators will be able to offer a broader range of services to key customer segments. Each segment (business, consumer and wholesale) requires a different and varying mix of fixed, mobile and converged services.

Ericsson has developed a network architecture that meets consumer desires and operator requirements for converged

### SUBSCRIBER TRAFFIC IN MOBILE ACCESS NETWORKS



services, covering the device ecosystems, fixed and mobile broadband access, transport, control, applications, revenue management, services and operations management. All the components have been integrated for a high performance and scalable end-to-end solution.

Ericsson's full-service broadband solution has been built from in-house development, e.g. mobile broadband and IMS, and is complemented by the acquisitions of IP-routing products (Redback), optical transport (Marconi), deep fiber access systems (Entrisphere) and IPTV (Tandberg). The Company has also developed a comprehensive network transformation service that leverages professional services such as consulting and systems integration.

### The internet is changing TV

The vision of the television industry is a simple one: to let you watch whatever, whenever and wherever you want and to help you discover other interesting programs and share your favorites and comments with other people. We believe that the best way to achieve this is to use internet technology enhanced with telecom-grade performance.

Consumers are already using the internet to find new ways of accessing TV, with interactive on-demand capabilities now a basic expectation. Despite this trend, we do not expect operators to become marginalized as bit pipe providers. Efficient bit pipes will be needed, but to differentiate their services, operators will need to continue to leverage their network capabilities. This is where IMS comes into play to provide the reliability and combination of services required for a portfolio of applications which differentiates from the competition.

Today some 1.2 billion (850 million) households have television services, of which only 25 (20) million are currently served by IPTV. This number is expected to grow to above 130 million by end of 2015. In the same time period, DSL-

based broadband access is forecasted to grow from some 300 million to 400 million households and cable-TV-based broadband access is estimated to grow from 90 million to more than 100 million households. FTTx-based broadband access is estimated to increase from 35 million to some 100 million households. Building on the acquisitions of Tandberg Television and Entrisphere, the Company continues to invest in a leading position in IPTV and FTTx broadband access.

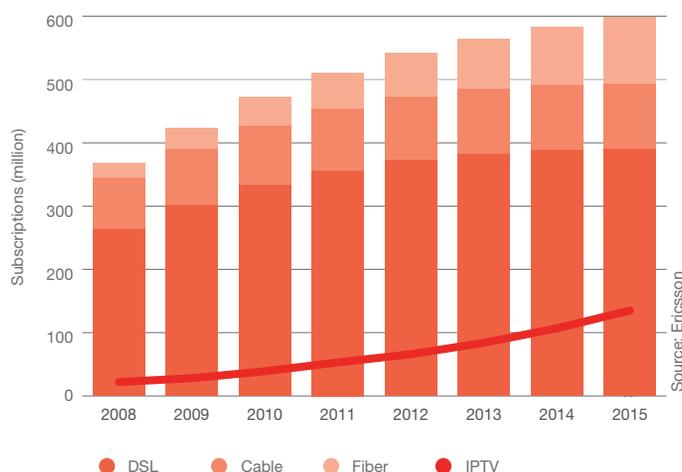
### Mobility is changing the internet

Today, less than 40 percent of mobile subscribers are also internet users. However, the increasing use of high-speed applications in the fixed environment is stimulating a parallel expectation on the mobile side. When people become accustomed to using bandwidth-intensive applications at home or in the office, they tend to want them everywhere they go.

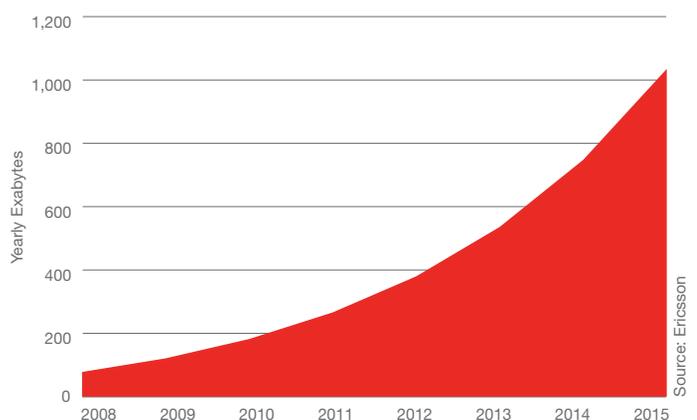
Multimedia-capable mobile internet devices and affordable mobile broadband access are driving a change in usage. Users will be able to create and discover content of personal interest and instantaneously share ideas and information with friends and colleagues. We see mobile internet devices helping to accelerate consumer demand for wireless internet access. This will have the greatest impact on emerging markets, where household PC penetration is only about 10 percent compared with well over 60 percent in developed markets. This is particularly significant as there are more than three times as many households in emerging markets as there are in more developed markets.

The Company has established a product unit to provide mobile broadband connectivity for notebook PCs and other mobile internet devices. Three of the world's largest notebook manufacturers are already using Ericsson embedded modules. In addition, Intel, among others, has signed an agreement to use Ericsson's mobile broadband technology.

FIXED BROADBAND SUBSCRIPTIONS BY TECHNOLOGY



FIXED DATA TRAFFIC – LAST MILE ACCESS



## Operator consolidation and network sharing

Operator consolidation continues in all regions globally. In the Americas, consolidation has substantially reduced the number of operators. In Europe, mergers continue along with other collaborations such as network sharing and outsourcing of network operations. In other regions, operator consolidation has led to the emergence of rapidly growing pan-regional operators, particularly in the CEMA markets (Central and Eastern Europe, Middle East and Africa). Western European-based operators continue to invest in operators in developing markets such as Brazil and India. There have also been attempts to combine certain Indian operators with African operators but with little progress so far.

Despite the trend for operator consolidation, the number of mobile operators has actually increased in many regions over the past few years, with the notable exception of the Americas. The introduction of mobile number portability in many markets has simplified service substitution, leading to fierce competition and declining market share for the top two players in each market. Consequently, mobile operator margins are under pressure from the more intense competition which requires lower costs to compensate.

Network sharing offers potentially significant capex and opex savings to operators. However, the overall impact of network sharing should ultimately be neutral for mobile equipment vendors. To a certain extent, short-term disruption of capital expenditure plans or re-negotiation of contracts with the network sharing companies may be offset by faster coverage buildout, an earlier entry into expansion phases and increased sales of professional services, particularly network integration and managed operations. Over the longer term, the majority of savings come from shared plant and property rather than equipment as the equipment has to be dimensioned for the total traffic load of the combined networks.

Ericsson is well positioned to benefit from operator

consolidation with a suite of solutions for network sharing and a well proven capability for outsourcing network operations, consulting and systems integration as well as a strong presence with consolidating companies.

## Opportunities in Professional Services

Outsourcing of network operations is another form of consolidation. Operators are able to tap into the global scale and efficiency offered by a company like Ericsson via managed services. Ericsson is well positioned to benefit from this trend for operator consolidation with a suite of professional services and a well proven capability for outsourcing network operations.

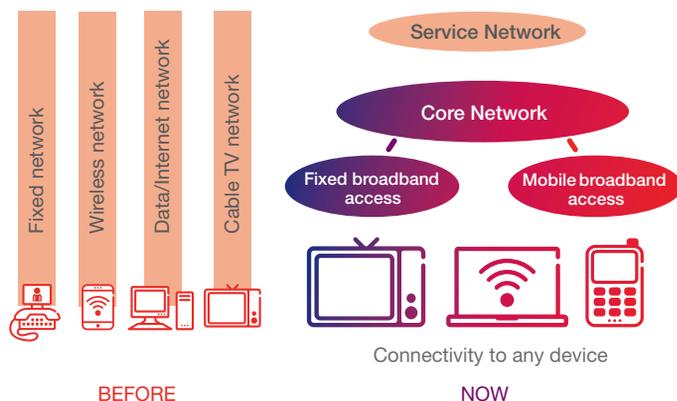
Demand for professional services (i.e., managed services, consulting, systems integration, network optimization and modernization) is growing rapidly. The demand for professional services is increasing, driven by operators' desire to optimize capex investments, take out unnecessary costs and deliver a competitive end-user experience.

The potential market for managed services is larger than the market for network equipment and related deployment services. A mature operator is estimated to typically spend some 5–6 percent of revenues on network equipment and 10–12 percent on operating its network.

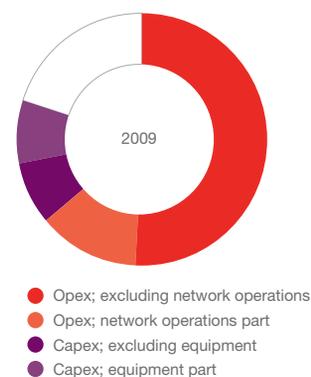
More than two-thirds of network operational expenses today are believed to be handled in-house by operators but network operations are increasingly being outsourced as operators realize the competitive advantages and potential cost savings. Therefore, the available market for managed services is expected to continue to show good growth prospects

Over time, as networks evolve, grow and become more versatile, their complexity increases and so does the number of operations and business support systems. This creates many opportunities to help operators streamline both networks and operations. One aspect of streamlining is reducing the number

## ARCHITECTURE CONCEPT-NETWORK TRANSFORMATION



## CAPEX AND OPEX SHARE OF OPERATOR REVENUES



of support systems needed for the network. The other aspect of streamlining comes from outsourcing operations. Operators may also ask for advice and best-practice to create efficiency in their own operations. An indicator of this streamlining or efficiency trend is the increasing demand for consulting and systems integration services like revenue assurance, operations and business support systems transformation and service assurance.

### Replacement rates affect mobile handset sales

With subscriber additions slowing, mobile phone replacements have increasingly become the key market driver, now accounting for roughly two-thirds of shipments and an even higher proportion of sales.

Mobile phone replacement tends to go in tandem with contract renewal. In mature markets, this is often operator driven via subsidies that lower or eliminate the upfront cost of buying a new phone in exchange for multi-year subscription commitments. Many operators are now pushing SIM card only plans to reduce phone subsidies for lower value subscriptions and prioritizing subsidies for smartphones and mobile internet devices that carry much higher value subscriptions. This is slowing the demand for replacement phones, especially in the low- to mid-end price range, as consumers postpone upgrading their mobile phones.

In emerging markets, operators often subsidize multi SIM card plans rather than handsets. This has stimulated the market for ultra low priced phones rather than curtailing subscription growth or mobile phone usage. With inflationary and other economic pressures rising in these markets, consumers are buying more refurbished or unlicensed phones. Manufacturers of illicit phones enjoy cost advantages because they do not pay for licenses, test their products for safety or provide warranties or offer sales support. Some countries, such as India, are especially concerned about personal safety and national

security of unlicensed phones, but enforcement is far less strict in most other emerging markets.

Sony Ericsson has refined its product portfolio and value proposition to target an increased share of the replacement market.

### Effects of the macro-economic slowdown

While not a trend, the economic recession affected Ericsson's business development for networks, but with improving operational efficiency, a market leading position, scale and a solid balance sheet, the Company is in a good position to meet continued tough market conditions.

The macro-economic developments are externally driven and beyond the control or the influence of the Company. But the Company does control the cost structure and is adjusting to a more challenging market environment including the effects of a global recession.

## MOBILE PHONE SHIPMENTS

