

## Industry trends

# Where the industry is now

The mobile industry is a large and important sector with around six and a half billion connections across the globe – in other words, most of the world's population use mobile phones. The number of mobile phone users has doubled in the last five years, driven by an increasing range of smartphones for using mobile data, increasing demand for mobile services in emerging markets and lower prices.

### Scale

The mobile industry is a large and important sector with around six and a half billion connections, generating over US\$960 billion of annual service revenue every year. The majority of revenue, some 75%, comes from traditional services such as calls and texts (on average, around 17 billion mobile phone calls are made each day). However, over the last few years the demand for data services, such as mobile internet browsing and email on a smartphone, has accelerated, and today 25% of industry revenue is from data.

### Growth

The demand for mobile services continues to grow. In the last five years the number of users has increased by an average of 14% each year driven by rising living standards, population growth and cheaper mobile services and handsets. In 2012 93% of the world's population had a mobile phone, whereas ten years ago this was only 18%. Most of the growth in users has been from emerging markets, such as China, India and Africa. As a result around 73% of mobile phone users now come from emerging markets compared to 60% in 2007.

### Emerging vs. mature markets

Around 70% of mobile users are in emerging markets, reflecting the combination of large populations and less fixed line infrastructure. The remaining users are from wealthier mature markets, such as Europe and the US. In mature markets, most people have a mobile device, reflected in mobile penetration rates of around 125%, compared to around 90% in emerging markets.

### Competition

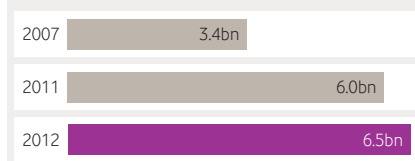
The industry is highly competitive, with many alternative providers, giving customers a wide choice of supplier. In each country there are typically at least four main mobile network operators, such as Vodafone, and one national fixed line operator. In addition, there can be numerous mobile virtual network operators ('MVNOs') – suppliers that rent capacity from mobile operators to on-sell to their customers. In some countries there can also be several independent mobile retailers that may compete with mobile network operators' own stores. Advances in technology have also led to internet based companies and software providers offering alternative communication services such as voice over internet protocol ('VoIP').

### Regulation

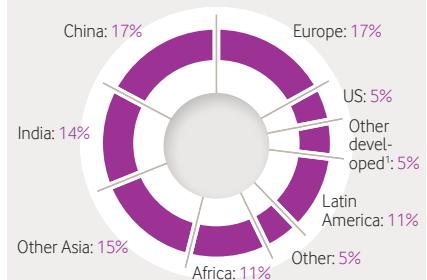
The mobile industry is very heavily regulated by national, regional and international authorities. Regulators continue to lower the cost for consumers of using mobile services by setting lower mobile termination rates (the fees mobile companies charge for calls received from other companies' networks) and to limit the amount that operators can charge for mobile roaming services. These two areas represent 13% of service revenue for Vodafone.

In an environment of intense competition and significant regulatory pressures, industry voice prices have tended to reduce over time – and in 2012<sup>1</sup> fell 12%. However, with more mobile phone users and some customers using their devices ever more frequently, global industry revenue remains on a positive trend and expanded 4% in 2012<sup>1</sup>.

### Mobile phone users

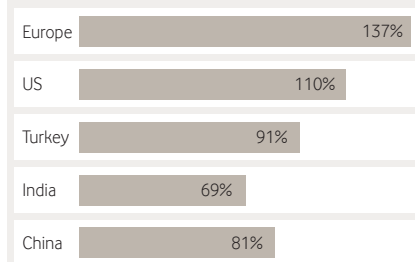


### Mobile phone users by market 2012



<sup>1</sup> Japan, Canada, Australia, New Zealand, Hong Kong, Singapore, South Korea, Taiwan  
Note: Figures are not comparable with prior year disclosure due to new data source

### Mobile penetration December 2012



Notes:  
The industry data on pages 20 and 21 is sourced from Strategy Analytics.

<sup>1</sup> Refers to calendar year.

# Where the industry is heading

The pace of change in the mobile industry over the last few years has been significant and is expected to continue. We anticipate growing sources of revenue from data services such as mobile internet usage; higher penetration of smartphones and tablets; new users from emerging markets; and major advancements in mobile network technology to deliver faster and better customer services. The demand for seamless converged fixed and mobile solutions using high speed networks is expected to accelerate.

According to industry analysts, data is expected to continue to be the fastest growing segment of the mobile industry. It is estimated that between 2012 and 2015<sup>1</sup> worldwide mobile data revenue is set to grow by US\$104 billion, compared to a US\$20 billion decline in voice revenue over the same period. The demand for data is being driven by a widening range of powerful and attractive smartphones and tablets, significant improvements in mobile network capability, and an increased choice of content and applications (apps).

## Most of the new demand for mobile services will be from emerging markets

Emerging markets, such as China, India and Africa, have the most potential for future revenue growth driven by rising populations, strong economic growth, lower mobile penetration and a lack of alternative fixed line infrastructure. According to industry analysts, by 2015<sup>1</sup> there will be 1.5 billion new mobile users across the globe, of which over 90% will be from emerging markets. In contrast the more mature markets in Europe are likely to exhibit modest growth, due to weaker GDP growth prospects, high mobile penetration and intense regulatory pressures.

## Convergence of fixed and mobile into unified communication services

Converged fixed and mobile solutions (such as combined mobile, fixed line, fixed broadband and TV) provide a range of benefits for the user, including simplicity, flexibility and cost savings. The demand for these services is already established among enterprise customers and it is now becoming more visible in the consumer market, in part due to consumers' needs to save money in a recessionary

European environment. We believe that this demand, combined with technological advances delivering easier connection of multiple data devices, will support strong growth in data-intensive applications over the next three to five years, and that this will need to be managed by access to next generation networks to support increased speed and capacity demands.

## Faster mobile networks

Today's mobile networks are typically a combination of 2G networks for traditional voice, text and basic data services, and 3G networks for fast mobile internet access and application downloads. The latest stage of mobile network development is superfast 4G which is already in place in some countries – providing maximum theoretical user speeds of up to 150 Mbps today (with typical user speeds up to 12 Mbps, compared with up to 6 Mbps on 3G).

## Technological innovation

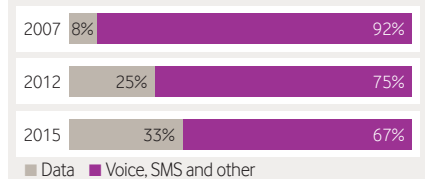
Alternative communication technologies, such as instant messaging services, are increasingly used by mobile consumers, particularly in mature markets, such as Europe. These services use data, rather than traditional voice and text. This trend will continue and in response operators, such as Vodafone, have begun to replace per unit charges for voice and text services with unlimited bundles and combine this with a fixed fee for data usage.

New applications for mobile services are being developed by the industry to extend the use of mobile beyond everyday communication, such as mobile payments via a handset or M2M services, including the location monitoring of vehicles, through a SIM card embedded in the vehicle.

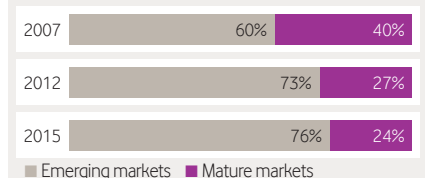
## Regulatory pressures

The industry is expecting to see continued downward revenue pressure from regulated cuts to termination rates, and voice and data roaming prices. European regulators are also seeking to encourage investment in high speed data services. However, the policies to achieve this have not been confirmed by either European or national regulators and therefore the impact on the mobile sector is difficult to judge.

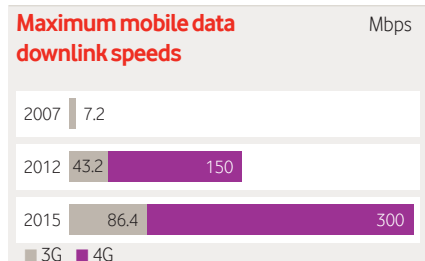
### Mobile service revenue by type



### Mobile phone users by market



### Maximum mobile data downlink speeds



Note:  
1 Refers to calendar year.