

The **Allen Consulting** Group

Australian Mobile Telecommunications Industry

Economic Significance

September 2003

Research commissioned by AMTA



Executive summary

Australia's mobile telecommunications industry has been a strong performer over the last ten years and recent innovations provide a platform for continued strong performance. Mobile telecommunications have become a part of every-day life for individuals, business and the community. From small beginnings in 1993, the Australian mobile telecommunications industry today has an estimated 14 million subscribers, in over 50 per cent of households, used by at least 65 per cent of the Australian population.

To better understand the economic significance of the mobile telecommunications industry in Australia, the Australian Mobile Telecommunications Association (AMTA) engaged The Allen Consulting Group to undertake research. This report brings together detailed information on the participants in the industry and the industry's growth, and presents examples of how mobile phones have enhanced the way people do business and manage their daily lives. It also presents measures of the economic significance of mobile telecommunications to the telecommunications industry and the economy.

The mobile telecommunications industry

The mobile telecommunications industry is made up of three major sectors.

The *hardware sector* is responsible for building and maintaining the network infrastructure required for mobile telephony as well as providing end-user hardware such as handsets. The hardware sector comprises a number of large global firms as well as many smaller firms, particularly providing end-user equipment.

Carriage service providers (CSPs) are suppliers of telecommunication services to the public using carrier network infrastructure. In 2001-02, there were more than a dozen CSPs operating in Australia.¹ This included four mobile network carriers, Telstra, Optus, Vodafone and Hutchison, who own and operate six mobile networks as well as resellers and Virtual Mobile Network Operators (VMNOs). The CSP sector is the largest individual sector in the mobile telecommunications industry.

Retailers are the third sector of the mobile telecommunications industry. They offer mobile services to end-users on behalf of the CSPs. Customers can purchase mobile telecommunications hardware and services from two types of retail outlets: speciality outlets that may be branded by a CSP or outlets that sell mobile telecommunications as part of a broad range of products.

The report focuses on the hardware sector and CSPs.

Economic significance of mobile telecommunications

The mobile telecommunications industry is a high revenue, high cost industry that makes a substantial and growing contribution to the wider telecommunications industry and the Australian economy. The following indicators demonstrate this:

¹ Australian Communications Authority (ACA), 2002, *Telecommunications Performance Report 2001-02*, Melbourne, p. 161.

- *Industry Gross Product for the CSP sector in 2001-02 exceeded \$5 billion.*^{2,3}
 - Industry Gross Product (IGP) is a measure of the economic contribution of a specific industry to the economy or value added..
 - This was more than the automotive vehicle component manufacturing sector and the accounting services sector, and almost one third of the entire accommodation, cafes and restaurants industry.
- *The industry contributes substantially to government revenues through charges and levies and through the full range of Commonwealth and State generic industry taxes and charges.*
 - It is estimated that on-going industry specific payments made by the mobile telecommunications industry to government are in the order of two per cent of revenue per year or \$168 million.
 - The industry has contributed almost \$2.9 billion to government through payments made to access spectrum.
 - The industry contributes to effective industry operation through payments, some voluntary and some compulsory, that support various industry associations and schemes, for example the Telecommunications Industry Ombudsman and the National Relay Service.
- *Employment in the mobile telecommunications is growing.*
 - Over 32 000 people worked in the industry (on a full-time, part-time or casual basis) in 2001-02. This was almost a 50 per cent increase on the number of people who worked in the industry in 1996-97.
 - In 2001-02, the mobile telecommunications industry paid over \$1 billion in wages.
 - Mobile telecommunications accounted for over one third of total telecommunications employment in 2001-02. By comparison, in 1996-97, mobile telecommunication employees accounted for just under one quarter of total telecommunications employment.
- *Capital expenditure by the industry has been substantial.*
 - In 2003, the industry will invest an expected \$1.4 billion in capital to support new networks and expansions and upgrades to existing networks. This is in addition to regular operating expenditures.
 - Since 1997, capital expenditure on new networks has exceeded \$8 billion.⁴ These investments underpin expansions to mobile network coverage that make mobile services available to more people in more places as well as supporting the development of innovative services.
- *Revenue in the mobile telecommunications industry exceeds \$8 billion annually:*

² The estimates of IGP in this section are derived from a combination of sources. Mobile network carrier IGP is taken from IBISWorld publication J7122 Mobile Telecommunications Carriers in Australia. Mobile resellers IGP has been derived from IBISWorld publication J7123 Telecommunications Resellers in Australia and ABN AMRO publication Telecom Networks- Australia: Industry Overview.

³ The figures presented in this section are in nominal terms. Given the downward trend in prices, it is likely that the real growth in IGP would be higher than that indicated in the nominal figure.

⁴ IBISWorld publication J7122 Mobile Telecommunications Carriers in Australia. p. 17.

- A preliminary estimate is that the mobile telecommunications industry revenue for 2002-03 is \$8.54 billion (including the mobile network providers and end-user hardware revenue).⁵
- In 2001-02, mobile revenue amounted to \$8.09 billion, (including terminating revenues and handset sales) representing 27 per cent of total telecommunications revenue.

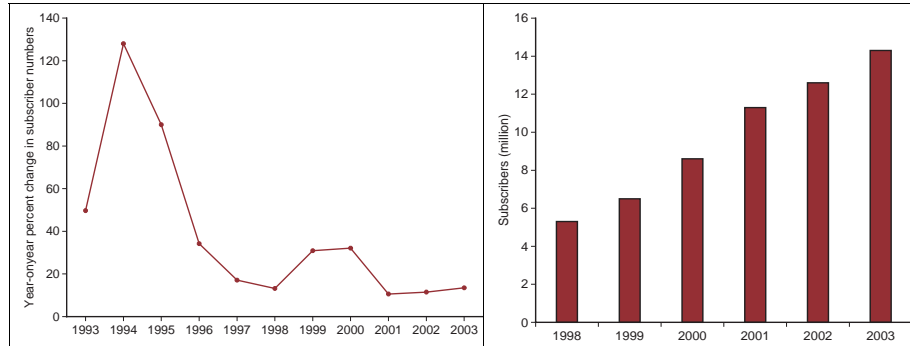
Expectations of continuing industry development

The measures of economic significance of the mobile telecommunications industry identify that the industry has experienced strong growth in its first ten years. The industry itself has evolved substantially over this time. There are a number of observed and emerging trends that suggest industry development, driven by competition, innovation and a focus on meeting customer, needs will continue.

Subscriber numbers have shown strong growth since the early 1990s (see figure E.1). Peaks in subscriber growth appear to be associated with the introduction of new networks. The 2G GSM network was introduced in 1993 and the subscriber growth increased by 128 per cent in 1994. The jump in subscriber growth rates in 1999 occurred alongside the introduction of the CDMA network. The 3G network commenced in 2003. The impact of this new network on growth rates will be observed over the coming years. The growth rate in mobile subscriber numbers between 2002 and 2003 was 13.5 per cent.

Figure E.1

MOBILE TELEPHONE SUBSCRIBER NUMBERS AND GROWTH



Source: Australian Competition and Consumer Commission (ACCC), Mobile Services Review 2003: An ACCC Discussion Paper, April 2003; and ABN-AMRO, *Australian Telecommunication Market 2003*, December 2002. Data for 2003 was provided by industry.

Statistics show that the Australian mobile telecommunications markets, benchmarked across all OECD countries, offers a very high degree of competition. In February 2002, the competitiveness of mobile telecommunications pricing was measured across 27 countries. The study showed that Australia ranked fifth in the level of competitiveness for business mobile services and third for residential mobile services. Competition in an industry impacts on price level, quality of service and innovation. There is evidence that competition in the mobile telecommunications industry has driven price decreases, which in turn have had flow-on effects on customer behaviour. For example:

⁵ Information provided via Issues Paper responses and publicly available information.

- over the period 1996-97 to 2001-02, the cost of mobile telephony decreased by almost 30 per cent;
- industry development has included a number of notable changes to what were customary patterns of mobile use. Three key changes are:
 - an emerging trend in some customer groups is to have a mobile phone service and no fixed telephone at home. This is in contrast to the more traditional approach whereby households have had a mobile telephone *in addition to* a fixed telephone.
 - increased use of data, such as SMS, compared to voice services. In 1998 data revenue accounted for only one per cent of total carrier revenue. However, in 2002, this had increased to 7.5 per cent with forecasts for this trend to continue.
 - strong growth in the number of pre-paid subscribers. In 1999, pre-paid subscribers accounted for 12 per cent of all mobile users in Australia. This had increased to 38 per cent in 2003. It is reported that pre-paid subscribers now make up between 55 per cent and 60 per cent of all new subscribers.⁶
- new industry sectors are emerging, including VMNOs, content aggregators and independent wireless communications infrastructure and service providers.

Innovation

A number of factors contribute to the on-going innovation in the mobile telecommunication industry. These include a competitive market and strong capital investment in networks that support new technologies and meet the needs of customers.

For businesses, individuals and the community, the full impacts of these innovations will be seen over time as they become more widely adopted and further refined. For example, for customers, mobile digital convergence has had enormous impacts on the breadth of services available through mobile telecommunications. The recent innovations allow mobile telecommunications to include colour images, video, sound, text and animated graphics. These innovations have been incorporated by the industry into personal and business applications and mean that the potential uses of the mobile telephone go far beyond the more traditional functions of making and receiving telephone calls and text messages.

For the industry, innovation can drive substantial changes in the way the mobile telecommunications industry operates, including the emergence of new industry sectors. The launch of mobile data services in late 2001 enabled the mobile and internet worlds to converge — namely the telecommunications, infotainment and IT/wireless productivity industries.

Social contribution

As set out above, data on measures such as IGP, employment, and payments to government clearly demonstrate the economic contribution of the mobile telecommunications industry to the telecommunications industry as a whole and to the Australian economy. However, those measures do not capture the many ways in which mobile telephony contributes to improvements in the quality of people's lives.

⁶ Source: advice provided by AMTA.

For many people, mobile telecommunications is more than a tool to make voice calls: the extensive coverage, array of services and information available mean that the mobile phone can make 'life mobile'. A significant benefit of mobile telecommunications continues to be the accessibility and freedom to reach people on the move and for them to be able to maintain contact with other people. This is particularly important for businesses and has driven the development of a range of innovations that support voice and data communications via mobile telephony.

From an individual perspective, mobile phones can provide some security and safety benefits. There are many cases where people have been able to use a mobile phone to convey their need for help. New innovations in mobile telephony include for example the police in Western Australia operating a dedicated SMS service for people who are communication impaired.⁷

These types of innovations for business and individuals mean that the role and thus importance of mobile telephones in our society is growing. To further understand the nature and extent of the impact of mobile telecommunications on Australian society, AMTA intends to commission a major research project on this issue in 2004.

Future reports

This is the first AMTA sponsored report to examine the economic significance of the mobile telecommunications industry. Ideally, this type of report would be produced regularly and become a key source of information on the industry. As this is the first year in of producing a report on the economic significance of the mobile telecommunications industry, AMTA and The Allen Consulting Group would welcome comments on the methodology used and on the material presented in the report.

⁷ Optus Media Release, 'Optus joins forces with the WA Police' 6 June 2003.

Glossary

ABS	Australian Bureau of Statistics
ACA	Australian Communications Authority
ACCC	Australian Competition and Consumer Commission
ACLA	Annual Carrier Licence Charge
AMPS	Analogue Mobile Phone Service
AMTA	Australian Mobile Telecommunications Association
APRU	Average Revenue Per User
CDMA	Code Division Multiple Access
CSP	Carriage Service Provider
DCITA	Department of Communications, Information Technology and the Arts
GDP	Gross Domestic Product
GPRS	General Packet Radio Service
GSP	Gross State Product
GSM	Global System for Mobile Communication
IGP	Industry Gross Product
IVM	Interactive Voice Messaging
IVR	Interactive Voice Response
LAN	Local Area Network
MMS	Multimedia Message Service
MPIRP	Mobile Phone Industry Recycling Program
NHMRC	National Health and Medical Research Council
SMS	Short Messaging Service
OECD	Organisation for Economic Co-operation and Development
TDMA	Time Division Multiple Access
USO	Universal Service Obligation
VMNO	Virtual Mobile Network Operator
WAP	Wireless Application Protocol
WASP	Wireless Application Service Providers
WCDMA	Wideband Code Division Multiple Access
WHO	World Health Organisation
'2G'	Second Generation Technology
'3G'	Third Generation Technology