



Reinventing Australian enterprises for the digital economy

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Report by IBM Australia incorporating new research commissioned from the National Institute of Economic and Industry Research.

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Foreword



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This report reveals that over the next decade we will see significant gaps open up between enterprises that proactively transform their operations for the digital age and those that continue with business as usual.

Welcome to IBM's latest research into the impact of digital technology on business and government in Australia, and the changes that are coming in the near future.

In 2012, we looked at the macro effect that information and communications technology (ICT) – including high-speed broadband – will have on Australian industries, workplaces and society over the next 40 years. That report – *A Snapshot of Australia's Digital Future to 2050* – revealed just how important it will be for organisations to transform the way they operate if they are to survive and prosper in the digital age.

This year, we move from the macro to the micro and look at what this digital transformation means for individual enterprises. What is at stake for organisations? What trends will determine their future? What metrics do boards, CEOs and other executives need to monitor and improve? What will success look like in an increasingly digital economy?

To answer these questions, IBM commissioned original research from the National Institute of Economic and Industry Research (NIEIR) to form a view of the future for Australian enterprises across seven key sectors: financial services, retail, telecommunications, mining, public administration, health and higher education. We focused on these sectors because they make up almost half of our economy and because IBM's previous research has shown that each will be substantially reinvented by digital technology.

This report reveals that over the next decade we will see significant gaps open up between enterprises that proactively transform their operations for the digital age and those that continue with business as usual. These gaps can quickly become worth billions of dollars in value for large companies, or can represent sharp differences in the cost and quality of public services governments deliver.

This research also makes it clear that Australia's competitiveness will depend on getting smarter in the way we work, do business, live and govern. In fact, at IBM we think of the coming digital age as the era of "smart" – a time when success will be driven by how effectively enterprises can harness the power of technology and data to deliver unique value to customers and citizens with the speed, efficiency and ubiquity they demand.

Enterprises must act urgently and significantly change their business models to ensure they remain successful and effective over the next decade and beyond. But this is not just about survival. While NIEIR's modelling shows that many 'followers' will fall behind and even fail in the digital age, it also suggests that leading organisations – those that embrace change and pursue the right strategies for this new environment – are likely to enjoy outsized gains.

I hope you find this report useful as you consider the future of your enterprise. We look forward to discussing the implications of this work with you.

Andrew Stevens
Managing Director
 IBM Australia & New Zealand

Letter from NIEIR

I want to commend IBM for taking the initiative to commission this strategically significant research. The Australian economy is facing a period of generational change, particularly in the way Australian businesses operate and compete locally and internationally.

Information and communications technology (ICT) sits at the very heart of this business and economic transformation. The purpose of the research and modelling conducted by NIEIR is to demonstrate how important it is – for individual firms and for Australia's economic performance – to focus on achieving best practice ICT standards. In today's context, this also means integrating ICT at the very heart of business models and future strategies.

The outcomes from our modelling work are startling. We analysed seven sectors in detail, based on interviews with senior industry executives, a detailed review of each industry's metrics and the performance of individual firms or organisations in each sector. We conducted further research using international best practice models. Using NIEIR's modelling systems and economic databases, we then projected different ICT strategies based on leader and follower firms in each industry sector.

The report has important messages for individual firms and organisations, their industry associations, and the governments that provide the structures and policy environments in which they operate.

One of these lessons is that strategically integrating ICT into best-practice business models improves productivity, which in turn increases the profitability and competitiveness of individual firms. Furthermore, effective ICT strategies can open up new markets in Australia and internationally.

Each industry sector selected for the study makes a significant contribution to society and the economy. Leader firms in each sector have already improved their productivity, costs and services. As such, it is likely they will create a range of opportunities for a new generation of Australian firms to be competitive, build employment and find growth in their industries around the world.

The most striking message from this research is that it will become increasingly difficult for followers to regain their market position once they lose it to leaders that race ahead with more sophisticated customer and supply chain integration, and superior productivity. In turn, the research tells us that there is a real first-mover advantage for companies that act sooner rather than later when taking a leader position.

Dr Peter Brain
Executive Director
 National Institute of Economic and Industry Research



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Executive summary



It remains incredibly challenging for senior executives and board members to foresee exactly how these technologies will affect their individual enterprises.

Many business and government leaders recognise that digital technologies are creating significant changes in the economy and society. They have access to the internet, fixed and wireless broadband, smartphones, social media, the cloud, big data, sensors, machine-to-machine communications and now even computer systems that learn for themselves. These innovations are all reinventing the way we live and work.

Yet it remains incredibly challenging for senior executives and board members to foresee exactly how these technologies will affect their individual enterprises. In turn, this makes it hard to decide how and how much to change their strategies – especially if the organisation is currently very profitable or running smoothly.

IBM recognises this dilemma and has commissioned this report to help leaders consider the potential futures of their enterprises. It discusses how digital technologies are changing the business and government landscape, as well as the critical link between those technologies and Australia's competitiveness. It then uses sophisticated modelling to show potential paths for enterprises in seven sectors likely to be reshaped by digital technologies. The final section discusses potential next steps leaders can take.

AUSTRALIA'S COMPETITIVENESS AND DIGITAL TRENDS

The rapid rise of digital technologies comes at a time when Australia's growth in productivity is weak and its international competitiveness is slipping.

Annual labour productivity growth has languished at below 1 percent a year for the past decade, and over the same period Australia fell from being the seventh to the 20th most competitive nation in the World Economic Forum's global rankings. While some unusual factors have affected our productivity statistics – especially the mining boom, the breaking of the drought and the fact we retained a relatively large number of jobs during the global financial crisis – various government and business leaders have acknowledged that there is an urgent need to address Australia's productivity if we are to regain our competitiveness.

Transforming our major business and government enterprises to maximise the potential value offered by digital technologies – and to counter the threats they also present – will play an important part in reversing this slide. However, this will only happen if Australian enterprises take action and understand the fundamental changes these technologies are fuelling.

Six of the changes that are already occurring and which will become even more significant between now and 2025 are:

1. Heavy dependence on digital technology

Broadband internet access is becoming faster and more ubiquitous. Cloud computing, mobile devices and other innovations are also reinventing the way businesses and governments work and relate to customers.

2. Close connections with and between customers

New technologies have supported the development and adoption of social media, enabling unprecedented real-time connectivity between organisations and customers, and among customers. Technology is also making it possible for large enterprises to form more personal and tailored relationships with individual customers.

3. Customers and employers have new demands

As digital technologies make it possible to deliver value, interact with customers and work anywhere at any time, individuals increasingly expect to have this constant connectivity. These expectations will shift even further as today's children – the 'digital natives' – become consumers and workers.

4. Organisations are becoming flatter and more agile

As information flows grow, automation increases and speed becomes critical, organisations are dismantling traditional hierarchies in favour of flat, flexible structures.

5. Big data is changing decision making

Organisations are gathering and analysing more data to help them make better decisions more quickly.

6. Sources of competition are increasing

Digital technologies make it easier for Australian organisations to expand nationally and internationally, and to leverage global infrastructure such as cloud computing facilities. The flipside is a sharp rise in competition within Australia, as domestic groups expand and foreign groups can more easily sell to local customers.

MODELLING FUTURE PATHS FOR LEADERS AND FOLLOWERS

Our research forecasts how these and other trends will affect seven key industry sectors – financial services, education, health, natural resources, public administration, retail and telecommunications – which together represent approximately 45 percent of Australia's economy. The research then shows two potential future paths for enterprises within those sectors: the path of a leader or the path of a follower (in the commercial sectors), and a business-as-usual versus an accelerated response (in the government sectors).



As information flows grow, automation increases and speed becomes critical, organisations are dismantling traditional hierarchies in favour of flat, flexible structures.

The National Institute of Economic and Industry Research (NIEIR) has mapped these paths to show how 'gaps' or 'digital divides' will open up between enterprises depending on how they adapt their business models for the digital age. The following tables list examples of these gaps for sample banks and universities. In each case, the two model enterprises start from a similar position, then their performance diverges more and more as we move towards 2025. See the Methodology for a detailed discussion of this modelling.

Executive summary



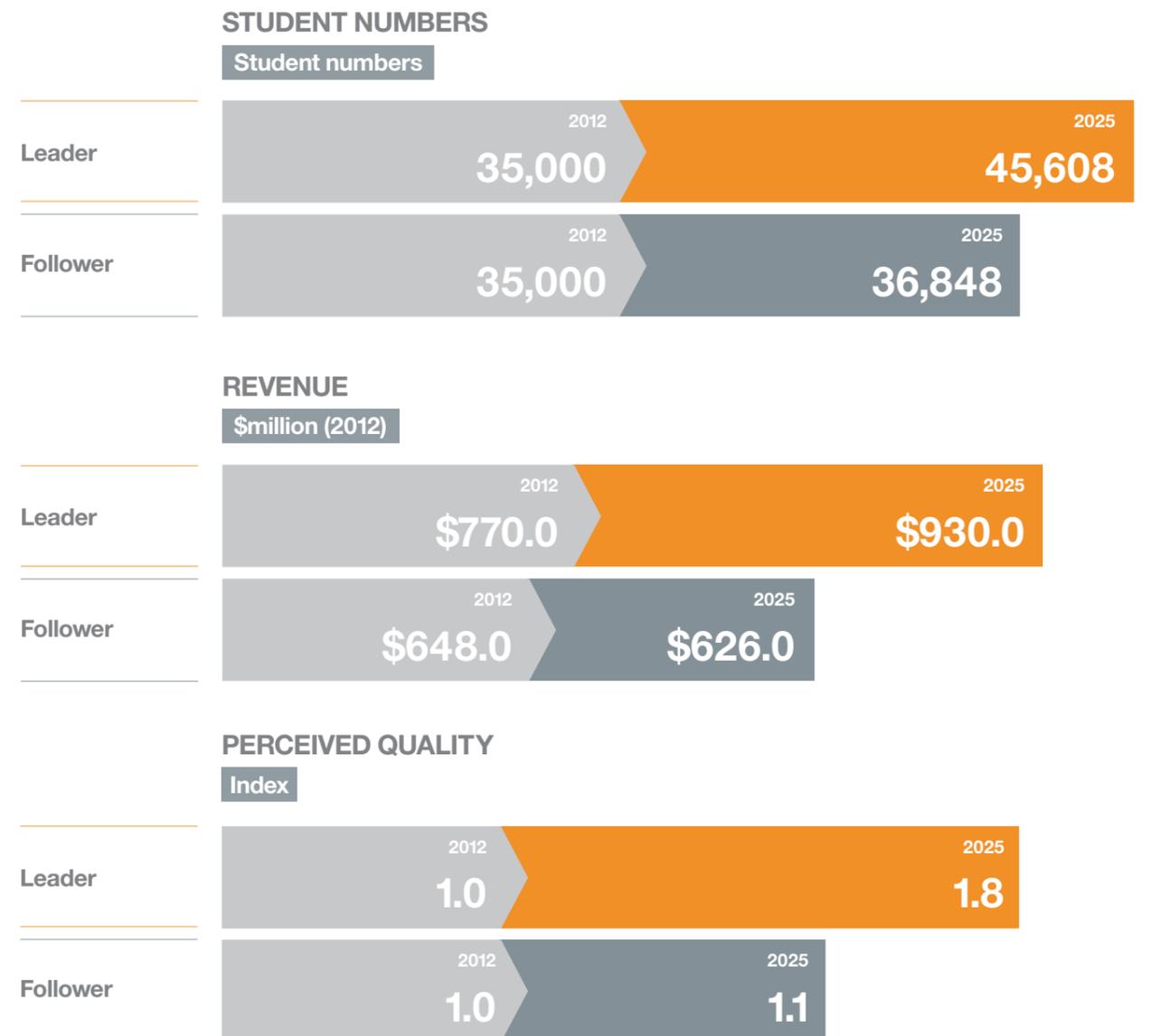
Financial services

Gaps between two banks based on digital strategy from 2012 to 2025.
Potential futures for two banks, each starting only slightly apart in 2012.



Education

Gaps between two universities based on digital strategy from 2012 to 2025.
Modelling for two mid-tier universities, each starting with 35,000 students in 2012.



Executive summary



Differences in market capitalisation for sample leaders and followers by 2025.

FINANCIAL SERVICES

\$billion

Market capitalisation – leader in 2025



Market capitalisation – follower in 2025



MINING

\$billion

Market capitalisation – leader in 2025



Market capitalisation – follower in 2025



RETAIL

\$billion

Market capitalisation – leader in 2025



Market capitalisation – follower in 2025



TELECOMMUNICATIONS

\$billion

Market capitalisation – leader in 2025



Market capitalisation – follower in 2025



TOTAL GAP

\$269.5 billion

Quantifying these gaps and then adding them together across a range of sectors starts to give a sense of the value at stake as Australia's economy goes digital. For instance, the combined difference in market capitalisation for leaders and followers in financial services, mining, retail and telecommunications could total \$269.5 billion within 13 years (see the table opposite). Put another way, by 2025 the leaders could have a combined market capitalisation of \$379 billion and the followers \$109.5 billion. And that only considers model enterprises from four sectors of our economy.

CHOOSING BETWEEN A VIRTUOUS CYCLE OF GROWTH OR A RAPID DECLINE

This study provides a unique lens through which to consider the potential future not only for major enterprises but for Australia as a whole. The analysis produced a number of key observations and implications, including the following points.

1. Success quickly compounds

A striking feature of our modelling is how quickly the gaps between leaders and followers grow and eventually become almost impossible for the followers to bridge. Leaders pull ahead with superior digital business models, and generate larger profits or surpluses which they then use to consolidate and extend their leads through further investment in elements such as innovation, high-quality staff and better customer service. In this virtuous cycle, small gains in early years compound to become significant differences.

2. Winners will increasingly take all

The difference between the performance of an organisation that has a suitable business model for the digital age and one that doesn't can be so great that followers are more likely to fail completely. Alternatively, they may merge into more successful groups rather than settle into a comfortable second or third place in their marketplace. This is the consequence of the compounding benefits discussed above, and means we can expect to see more digitally driven groups like Amazon dominate a market segment, while competitors like Borders fail completely. Public sector organisations will not be immune either; where agencies' costs become too high or their services become unattractive, governments may decide to outsource their functions to more efficient or effective private sector organisations.

3. The public sector can deliver improved services within cost constraints

For most health, education and public administration agencies, the future will involve doing more with less. However, our modelling demonstrates that this needn't mean delivering fewer – or lower-quality – services for citizens, as long as public sector agencies can achieve a step change down in cost levels and increase their reach and effectiveness through new digital business models.

4. We face a challenge to create new high-value jobs

Australia has a long history of using technological innovations to enhance its wealth. However, this has also created a need to develop new business models and reskill our workforce to ensure we maintain high-value jobs for Australians. As our economy has become more services-oriented, it has increasingly

focused on delivering higher-value services. The digital revolution will be the same. Our modelling shows that many leading enterprises will use technology and smarter business models to grow their sales or service outputs faster than they expand their workforces. In turn, we will need to develop new areas of business and increase exports to create new, high-paying jobs for Australians. The Australian Bureau of Statistics (ABS) forecasts that the number of jobs in Australia will rise from 11.6 million to 13.9 million by 2025, so our challenge is to ensure that as well as more jobs, there are more high-paying, fulfilling roles.

5. The time to act is now

This research highlights how much more change will be driven by digital technologies. The dramatic shifts we have seen in highly exposed industries such as media and music are just the beginning. We are at a tipping point between an analogue world and a digital one, and Australia's future prosperity will depend on transforming our major enterprises to ensure they remain relevant and successful in this new era. This means ensuring we maximise the number of leading enterprises in Australia and address the shortcomings of those that might become followers. As we highlight in Section 3, by 2015 most of our major business sectors will be substantially affected by the digitisation of the local and global economy. Almost all will be heavily reshaped by 2018.



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