

Small Business: Digital Growth



*PwC modelling estimates
\$49.2 bn
of untapped economic
potential (NPV, 10 years)*



*of this benefit could be
realised in rural and
regional Australia*

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1 What are the findings from this work?

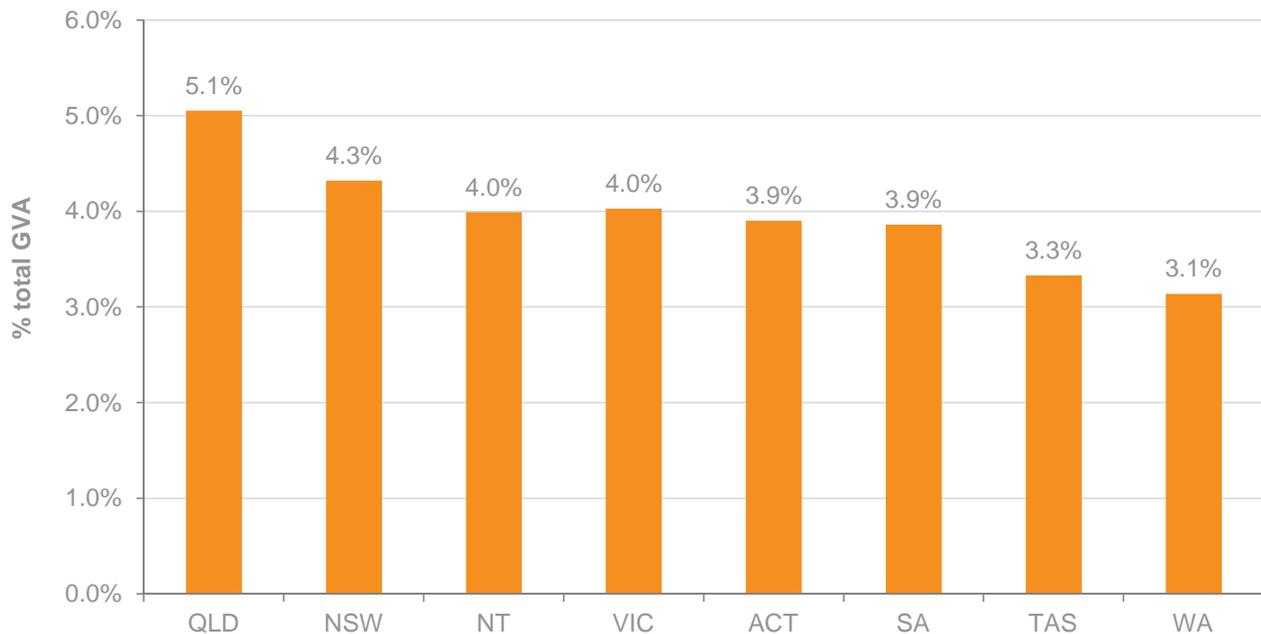
1.1 Our key findings

Small businesses and the economy generally, can realise significant benefits by embracing mobile and internet technologies to transform their operations.

Powered by PwC's Geospatial Economic Model (GEM), our analysis shows that small businesses can unlock an additional \$49.2 billion of private sector output over the next ten years by making better use of these technologies.^{1,2}

In each State and Territory across Australia, small businesses have the potential to help grow the economy.

Figure 1: Digital potential relative to baseline³



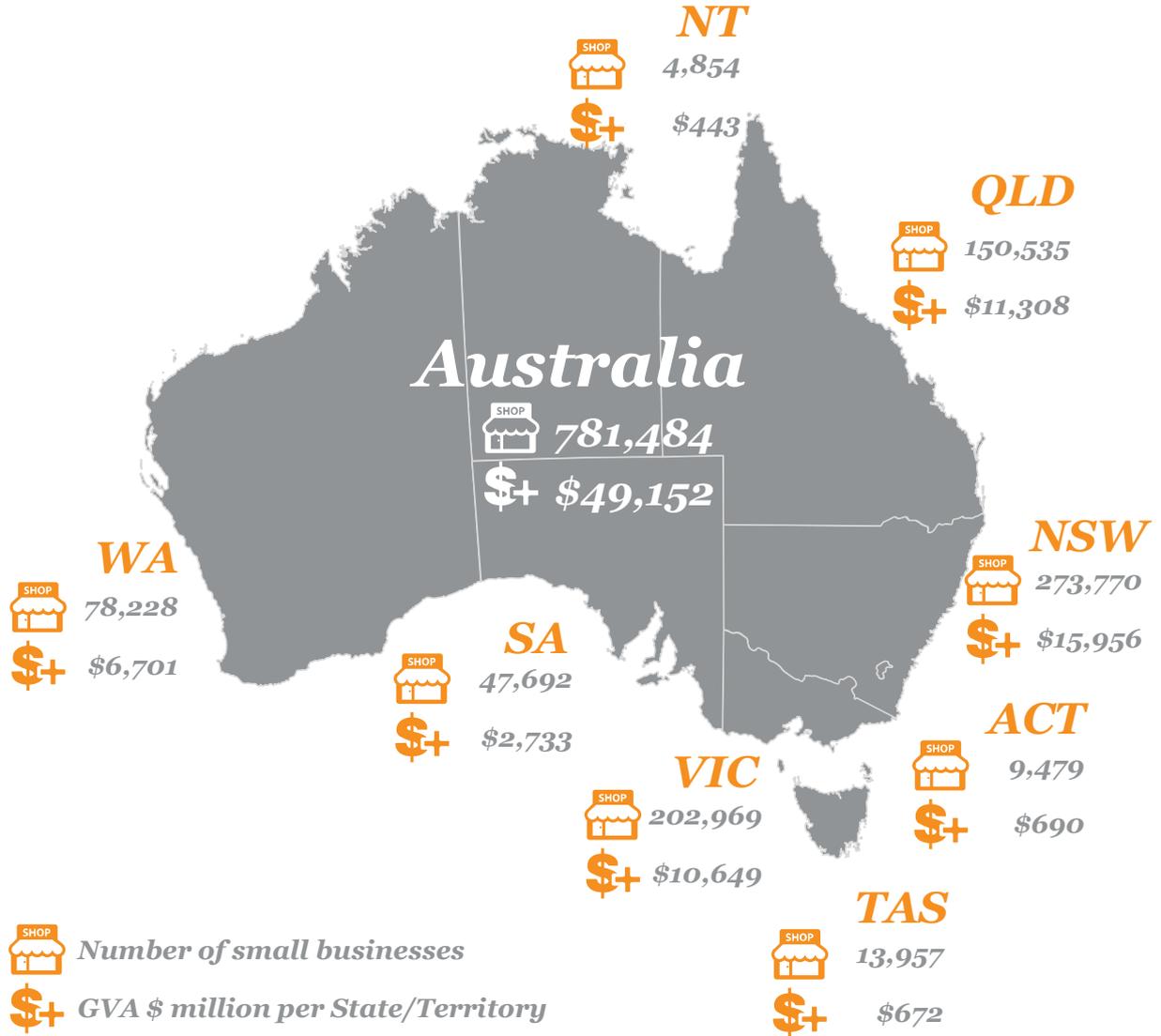
¹ For more information on PwC's GEM, go to: <http://www.pwc.com.au/consulting/analytics/gem.htm>

² Gross value added (GVA) in net present value (NPV) over a ten year period.

³ 10 year growth of economic output as a percentage of 2014 total private sector output.

The economy of each State and Territory is underpinned by different economic drivers. As a result, each has opportunities to contribute differently.

Figure 2: Digital potential of small businesses (NPV, 10 year)



What are the findings from this work?

Looking at this same figure in geographic terms, nationally every Federal electorate would contribute almost \$327.7 million of economic output over the next ten years (or approximately \$33 million per year). This would be roughly the same as a significant capital project like a major roadway or a hospital update.

Figure 3: Average digital potential per Federal electorate (NPV, 10 year)

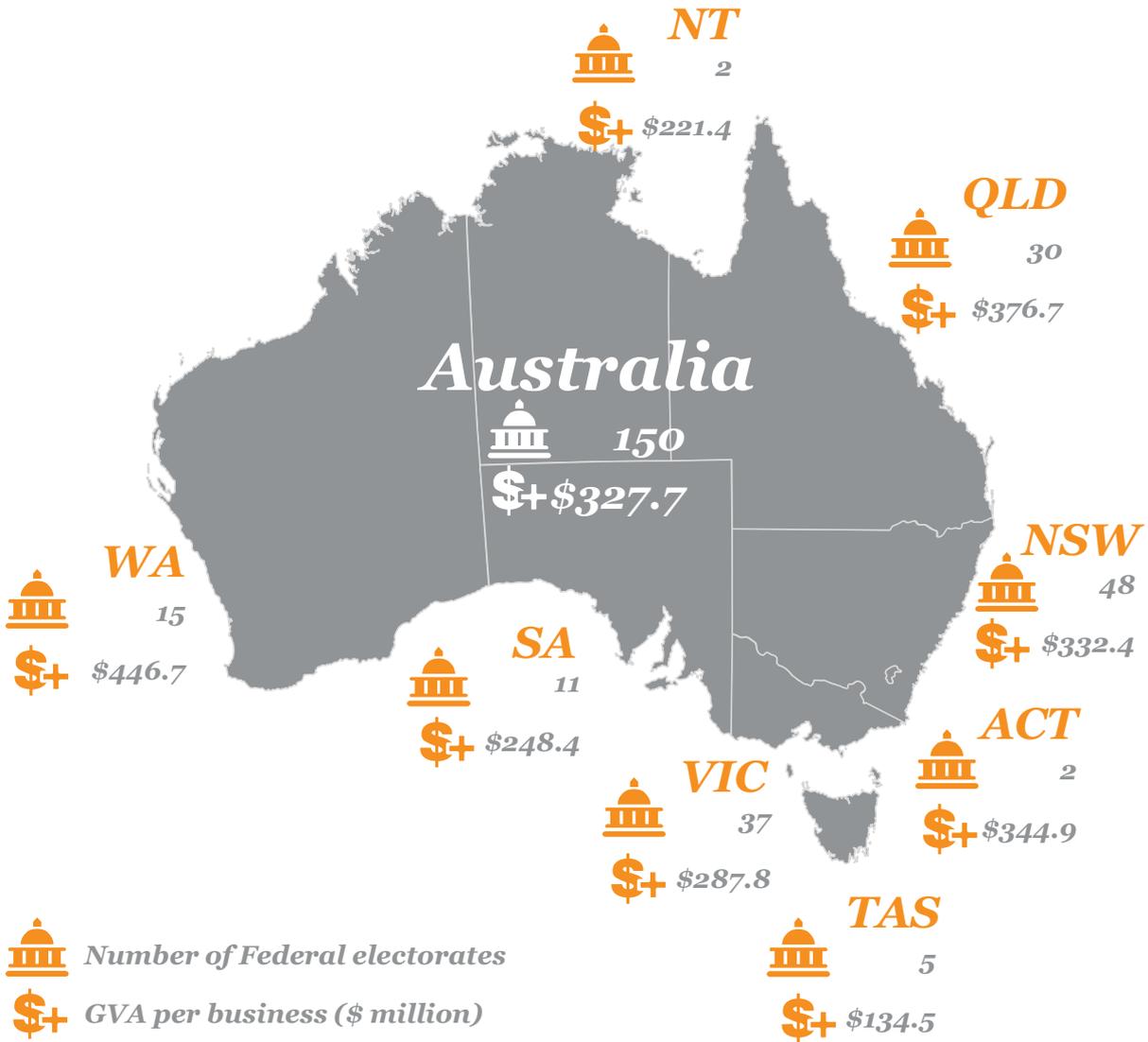


Table 1: Potential economic impact per small business (NPV, 10 year)

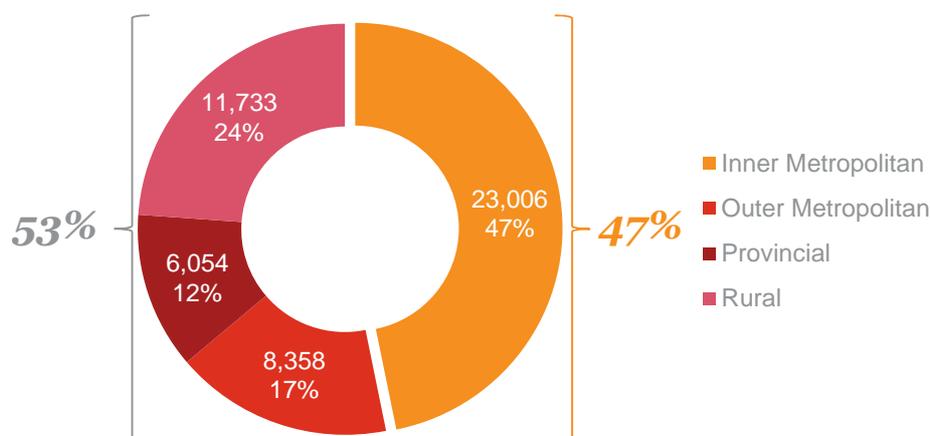
Industry	Sum of small business	GVA impact per industry (\$m)	% of total GVA	Rank
Information Media and Telecommunications	6,999	2,804	6.5%	1
Mining	3,309	6,233	4.9%	2
Arts and Recreation Services	8,801	584	4.8%	3
Rental, Hiring and Real Estate Services	31,744	2,052	4.8%	4
Health Care and Social Assistance	52,381	4,308	4.3%	5
Education and Training	12,145	2,999	4.2%	6
Transport, Postal and Warehousing	38,738	2,899	4.0%	7
Manufacturing	46,379	3,826	3.9%	8
Wholesale Trade	39,502	2,279	3.7%	9
Financial and Insurance Services	31,840	4,739	3.6%	10

And the benefits are not limited to large businesses, tech-companies, or those based in capital cities. Small and medium businesses across a wide range of industries and locations stand to benefit.

GEM provides unparalleled insights into where potential economic gains are located. For the first time, an economic analysis allows us to explore where potential economic gains are located, down to every State/Territory and Federal electorate.

Our modelling shows that while all regions and industries have much to gain, some have more to gain than others. For example, 53% of the potential economic benefit can be made by small businesses located outside Australia’s inner metropolitan centres.

Figure 4: Digital potential by urban and regional split (NPV, 10 year)



What are the findings from this work?

Furthermore, 17% of Federal electorates (or 25 of the 150) could account for 50% of the potential private sector boost to the economy.

Table 2: Top 25 Federal electorate realising digital potential

Rank	Federal electorate Location	GVA (\$ million)	Rank	Federal electorate Location	GVA (\$ million)
1	Sydney	3,760	14	O'Connor	665
2	Melbourne	2,552	15	Bennelong	660
3	Capricornia	1,803	16	Kingsford Smith	605
4	Flynn	1,467	17	Reid	555
5	Brisbane	1,332	18	Grey	529
6	Durack	1,206	19	Newcastle	502
7	North Sydney	1,044	20	Lilley	460
8	Perth	1,013	21	Calwell	439
9	Melbourne Ports	964	22	Griffith	435
10	Kennedy	892	23	Parramatta	428
11	Adelaide	800	24	Hunter	394
12	Curtin	742	25	Wentworth	377
13	Swan	702			
		Total			24,325
		Percentage of potential benefit			49.5%

1.2 Four key areas where small business can act to achieve these gains

1.2.1 Improve business strategy & management

Internet and mobile technologies benefit a wide range of business activities.

- Better understand your customers and competitors. Approximately 46% of small businesses use the internet to monitor the market or competitors, and 54% of small businesses report a positive impact from social media via good customer feedback, increased sales and better networking and advertising opportunities.
- Lower the cost and risks of trying new things. Businesses like Pozzible, Indiegogo, Kickstarter, and RocketHub make innovation easier by connecting individuals who pool money, technical expertise, and other resources to support projects and launch business ventures.
- Save time, lower cost and improve your understanding of your

business. Cloud based bookkeeping and accounting services such as MYOB and XERO help small businesses reduce the time spent on administration.

- Increase annual revenue. Small businesses that have high-levels of digital engagement (e.g. use search engine optimisation and marketing and multiple digital technologies) have better business outcomes compared to those with lower engagement, with some studies suggesting a 20% increase in annual revenue.

1.2.2 Improve supply chains

Internet and mobile technologies enable small businesses to significantly improve their supply chains, particularly by lowering the cost to find new suppliers and making better use of employee time.

- Get faster access to more suppliers. The internet allows small businesses to access more suppliers through web search and marketplace websites (e.g. Google, Yahoo, Alibaba, EBay, Gumtree) to source cheaper inputs.

- Lower labour costs. The internet lowers the cost of finding new employees (e.g. through Seek, CareerOne, LinkedIn) and provides access to temporary or contingent workforce options (e.g. Sidekicker, Freelancer, Airtasker). Emerging cloud based tools enables more efficient scheduling of employees.

1.2.3 Improve marketing, sales and distribution channels

Internet and mobile technologies enable small businesses to significantly increase their customer reach.

- Maintaining a web presence. Two thirds of small businesses already have a website. Leading internet companies provide a wide range of new website building tools to further reduce website development and maintenance costs (e.g. Wordpress, Squarespace, Material Design Lite). Having an online presence does not require a website. Free tools such as Google My Business allow businesses to be found online without a website, while social marketing services (e.g. LinkedIn and Facebook) also provide opportunities to connect with customers.
- Use the internet and mobile to boost sales. More than half of Australian small businesses use online channels for sales, which account for more than a third of all sales. While most online sales are to customers in local markets, more than a quarter of small businesses sell to overseas customers online.

1.2.4 Provide better customer experiences

Internet and mobile technologies create opportunities for small businesses to rethink how they produce products and/or deliver services.

- Improve workflow and collaboration. Mobile and cloud based technologies are changing the way work is done. Small businesses can use project tools such as Google Docs, Asana and SmartSheets to better coordinate work. Tools like Google Hangouts, Yammer, Skype and Slack provide cheap, instant communication between employees, or with customers.

- Do away with paper. Mobile and cloud based technologies are changing the way work gets completed and invoiced. Emails can be read on the road, and invoicing, banking and reporting can all be done through mobile devices at the point of delivery (e.g. tradies can invoice a client at the job site).

1.3 What can be done to unlock small business potential?

Unlocking the benefits of internet and mobile technologies will need a coordinated strategy from government, peak bodies and businesses built on three key pillars. Each of these pillars is discussed below.

1.3.1 Pillar 1: Targeted business supports

Small businesses are known to be very time poor. They know new technologies are available, but evidence suggests they may be relatively late adopters. Therefore when looking for ways to provide support:

- Find the right small businesses. Newer business (e.g. in operation for less than 2 years) may be more willing to adopt new technology to accommodate customer demand.
- Have the right message. Small businesses consider the total cost of adopting new technologies, so value propositions about new technology should be framed appropriately. For example, messages should include costs relating to training, maintenance and, if applicable, compliance.
- Use a messenger that small businesses trust. Small businesses often turn to their peers or professional advisors (e.g. accountants, IT providers) to learn about potential technology solutions and determine whether these would be appropriate for their needs. Industry bodies and networks can be the most effective at communicating digital technology awareness because they are seen as trusted sources of advice.
- Reduce regulatory barriers. Given the clear benefits of technology for small businesses, we need to reduce barriers that get in the way of

What are the findings from this work?

innovation. Commercial solutions are to be preferred and if regulations are necessary, then they should be proportionate, flexible and balanced.

1.3.2 Pillar 2: Develop digital skills

Small businesses are less confident about their knowledge and use of digital technology when compared to larger companies.

- Provide targeted training. Small businesses should be trained in digital skills across the entire implementation spectrum. For example, leadership and management models are changing with the rise of digital technology and skills programs will need to adapt.
- Make training flexible. Small businesses generally train only a single employee due to the perceived effort and costs associated with training. Small businesses should be encouraged to train several of their employees with necessary digital skills to provide flexibility and redundancy.
- Take a partnership approach. No single stakeholder can solve Australia's digital skills problem. For example, the European Grand Coalition for Digital Jobs is a multi-stakeholder partnership between business, government and education providers, in both the public and private sectors.

1.3.3 Pillar 3: Infrastructure

Small businesses will only realise the benefits of internet and mobile technology adoption if the underlying infrastructure (and the software running on the infrastructure) provides them with a suitable level of reliability.

- Improve broadband quality, particularly in regional areas. PwC's GEM has allowed us to overlay the economic analysis with data from the Department of Communications on broadband infrastructure quality. That data suggests that broadband infrastructure quality varies markedly between Federal electorates, with Federal electorates covering major urban areas having better broadband infrastructure than Federal electorates outside those areas.
- Consider how broadband roll-out can help generate economic opportunity given a Federal electorate's unique profile. The government is currently rolling out broadband nationally, so we can expect overall infrastructure quality to improve over time. Our modelling suggests that each Federal electorate has different economic drivers and therefore a different digital potential. For example, bringing better quality broadband infrastructure to the Federal electorates of Hunter, Newcastle, Perth and Swan could potentially unlock \$2.6 billion over 10 years.



2 How did we calculate the impact?

2.1 How we define a 'small business'

There is no commonly accepted definition of what counts as a 'small business'. In general, what counts as a 'small business' largely depends on: 1) who is asking, and 2) for what purposes.

For the purpose of this study, we defined 'small businesses' as businesses of less than 200 employees, excluding non-employing businesses (e.g. legal structures that do not employ workers). The reason for this is to:

- 1 Cast a wider net to ensure coverage of industries where labour might be a critical input.
- 2 Align to previous economic modelling and existing research and analysis.

It is worth noting, that our aim was to capture a broad range of small businesses in a variety of different industries. As such, our definition, and in turn key statistics like the number of small businesses, may differ others out in the public domain. For example, some cite the number of small businesses as more than 2 million. According to the ABS this statistic includes non-employing small businesses, which we have excluded for the purpose of this study.⁴

⁴ See ABS catalogue '8165.0 - Counts of Australian Businesses, including Entries and Exits, Jun 2007 to Jun 2011, Explanatory Notes (Glossary)' for more detail concerning non-employing businesses.

2.2 How we estimate the economic impact of technology

To achieve a similar level of productivity performance achieved by small businesses in the five major economies surveyed, Australian small businesses would need to make operational changes and innovations that contribute to multifactor productivity (MFP) growth.

To develop an estimate of the economic impact of technology on small business, we drew insights from a 2013 Boston Consulting Group (BCG) study, which analysed the impact of small and medium business technology adoption in five countries.

The BCG study estimated the impact of improved internet technology take-up rates in United States, Germany, China, India and Brazil whereby technology 'laggards' and 'followers' become technology 'leaders' (e.g. 15% of 'laggards' and 30% of 'followers' were to become 'leaders' in these five countries).

Implicit in its definition of 'leader' is that leading small businesses are using advanced internet and cloud based technologies in their day-to-day operations.

To estimate a modelling 'shock' of the potential benefits of internet and mobile technology, using the BCG study to 'anchor' our calculations, our approach of calculating an Australian equivalent impact consists of two parts:

- 1 Demand impacts: small business technology leaders in advanced economies tend to grow revenue faster than followers and laggard (BCG's survey results suggest by 7% and 13% respectively); and
- 2 Supply side impact: small business leaders using advanced technologies can potentially realise savings in terms of IT capital expenditure and IT operational expenditure. To

estimate this cost savings, we applied a technical assumption of a 50% reduction in IT capital expenditure and a 25% reduction in IT operational expenditure.

Because the BCG study focused on revenue growth, we converted the BCG findings into a relevant Australian gross domestic product (GDP) impact, expressed as a percent of GDP.

We then calculated the MPF growth impact and validated this estimate through Productivity Commission and KPMG studies. We found the additional MFP productivity growth for small businesses needs to be over 1% per annum to obtain similar levels of GDP impacts reported for five countries quantified by BCG.

We then applied this result to a computable general equilibrium (CGE) model to estimate the total (direct and flow-on) impacts to the economy from changes in technology take-up over time. Our CGE model contains explicit representations of intra-industry, intra-regional, inter-regional and international trade flows. The CGE model calculated a net growth in gross value add of over a ten year period.

Because the purpose of this study is to look at private sector small businesses, we have excluded two sectors, 'Electricity, gas, water and waste services' and 'Public administration and safety'. While important to the overall Australian economy, these sectors are typically quite regulated or are actively funded by government.

2.3 How we map the impact

PwC's Geo-spatial Economic Model (GEM) is a method of distributing an economic impact over a geographic location and presenting it in a more meaningful way, such as on a map.

To do this, we identified all the businesses within each Federal electorate by way of a correspondence from Statistical Area Level 2 (SA2) outputs. We then used the ABS's Count of Businesses by employee size, region and industry data to apportion output.

To display internet speed and quality data, supplemental custom data sets were obtained and aligned to the GEM modelling output identified above. The first related to internet usage, innovation and the extent of ICT usage in businesses processes by industry and businesses by employee size. The second related to barriers and drivers of innovation by industry and employee size. We estimated rating of Broadband Availability and Quality using the Department of Communications' MyBroadband data cube and PwC GEM analysis. Distribution Area level information was aggregated to Exchange Service Areas.

2.4 Fixed broadband quality and availability scales

The broadband quality and availability scales included in each of our State / Territory and Federal electorate analyses relate to those used by the Department of Communications in a 2013 report on broadband availability and quality. Details of each rating scale are provided below. Note that actual user speed will vary depending on factors such as user connection, technology, and network conditions.

Availability scale:

- **A:** Highest availability rating. Between 80-100% of premises in the Telstra Distribution Area (DAs) in this group have access to at least one fixed broadband technology.
- **B:** Between 60-80% of premises in the DAs in this group have access to at least one fixed broadband technology.
- **C:** Between 40-60% of premises in the DAs in this group have access to at least one fixed broadband technology.
- **D:** Between 20-40% of premises in the DAs in this group have access to at least one fixed broadband technology.
- **E:** Lowest availability rating. Between 0-20% of premises in the DAs in this group have access to at least one fixed broadband technology.

Quality scale:

- **A:** Highest quality rating: Typically premises in this group have very good access to high quality services available by FTTP or HFC or FTTN networks. ADSL services are generally available.
- **B:** Typically premises in this group have good access to high quality services available by FTTP or HFC or FTTN networks. A small proportion of premises may only have access to ADSL services.
- **C:** Typically a larger proportion of premises are likely to have access to ADSL services, while remaining premises may also have access to high quality services available by FTTP or HFC or FTTN networks. A small proportion of premises may have access to fixed wireless networks.
- **D:** Typically the majority of premises in this group are likely to have access to ADSL services only, while some of the remaining premises will also have access to high quality services available by FTTP or HFC or FTTN networks. A small proportion of premises may have access to fixed wireless networks.
- **E:** Lowest quality rating: Typically premises will only have access to ADSL services. This rating also includes regions that have no access to any form of fixed broadband service. A small proportion of premises may have access to fixed wireless networks.



Appendix A Reading list

Australian Bureau of Statistics, '8158.0 Innovation in Australian business, 2012-13', 8 May 2015, available at: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8158.0>

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