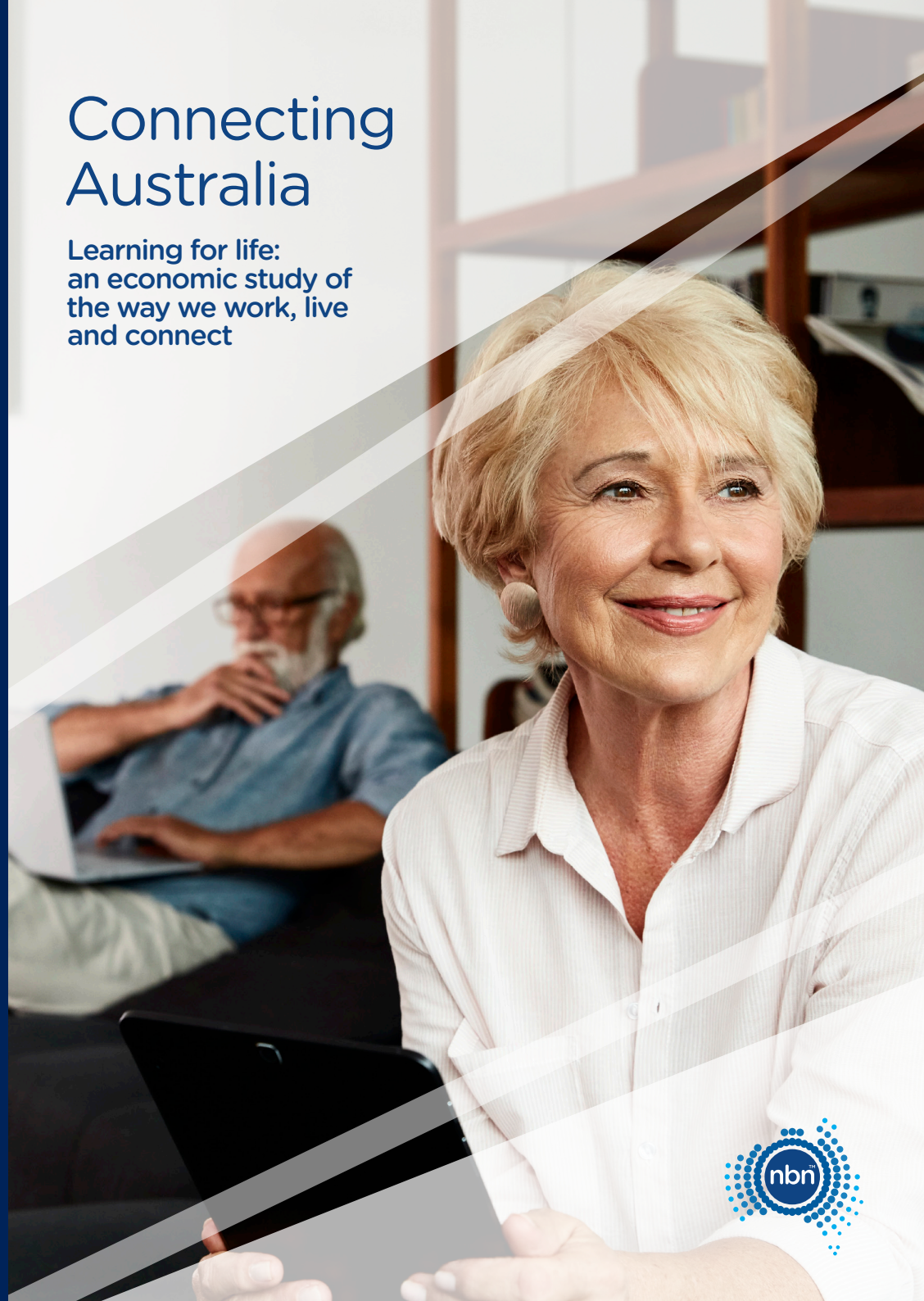


Connecting Australia

Learning for life:
an economic study of
the way we work, live
and connect



August 2018

This report was published by NBN Co, the company building Australia's broadband access network. The research was performed by economics and data-analytics advisory firm AlphaBeta, which serves clients across Australia and Asia. AlphaBeta worked with strategic communications firm 89 Degrees East and a number of data providers, including global market research company Ipsos, to support the analysis. Please visit www.alphabeta.com, for detailed methodology.

This document is provided for information purposes only and is a summary only of the report from AlphaBeta. Any third parties must make and rely on their own inquiries and review of the AlphaBeta report.

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Introduction

Greater connectivity has helped to open up a world of learning and educational opportunities for Australians, regardless of their age or postcode.

Since the rollout of the **nbn**[™] broadband access network, more Australians are enrolling in online courses and engaging in non-formal learning, such as watching tutorials, completing courses, learning a language and using the internet to search for information.

For me, this is one of the most exciting developments since we launched the **nbn**[™] access network. Access to quality education creates opportunities and possibilities for growth and change. If you have the desire, you can learn and access excellent universities from around the world, on whatever topic or interest you have. Access to online education has the potential to reduce the gap between the 'haves and the have-nots'.

Older Australians are proving education doesn't stop when you leave school, and they are jumping online in droves to learn.

Regional Australians are embracing connectivity over the **nbn**[™] access network, and the opportunity to study and learn from their home town as well as flexible learning opportunities means more regional Australians are enrolling in online courses.

The **nbn**[™] access network is helping to level the playing field in accessing education and creating opportunities for Australians to reach their true potential.

Bill Morrow
Chief Executive Officer
NBN Co

A nation in transition

When the Australian Bureau of Statistics undertook the 2016 Census, it captured a snapshot of the social and economic impact of one of the largest nation-building projects in Australia's history: the **nbn**[™] access network.

With this comprehensive data, we could now measure how Australia's economy and society had changed in regions connected to the **nbn**[™] access network and those that were not yet connected.

Economics and data-analytics advisory firm AlphaBeta was able to measure the "**nbn**[™] effect" by analysing the behaviour of 24 million people and 11 million households.

This research establishes an important statistical baseline to measure the impending impact of Australia's digital transformation over the years and decades ahead.

Over the coming months, we will report further detailed results on the impact of the **nbn**[™] access network on:



Health



Female entrepreneurship



Social connection



Industry



Conducting the research

Methodology

The fact that some households now have access to the **nbn**TM access network while others are still waiting to be connected provides a timely opportunity to measure the impact of the **nbn**TM access network on people's lives.

AlphaBeta used multiple sources to gather evidence. The analysis drew on data from both the 2016 Census and a bespoke national Ipsos survey.

The 2016 Census data represents the whole Australian population. AlphaBeta and Ipsos ensured that the survey sample comprised a mix of people representative of the true Australian population by placing specific quotas on age, income, gender and geography, as per best practice.

Differences in the demographics of non-**nbn**TM access network-connected and **nbn**TM access network-connected regions were controlled for, such as income, education levels and regionality.

Census data collected from:



24 million
Australians



10 million
households



2000
regions

nbnTM access network rollout data was used to crossmatch and compare ABS data for regions with a strong **nbn**TM access network presence against areas of low **nbn**TM presence.

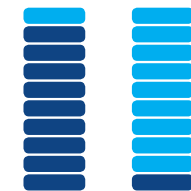
AlphaBeta compared areas where the **nbn**TM access network rollout was more than 90 per cent complete with areas where the rollout was less than 10 per cent.

Using actual **nbn**TM rollout data for this study significantly improves the robustness of the results and distinguishes it from other studies.

Economic impact was then estimated using a computable general equilibrium model, allowing AlphaBeta to detect the impact of the **nbn**TM access network on how people connect, work and live.

nbnTM access network rollout completion data

90% complete **10%** complete



VS

Areas of economic impact as a result of the **nbn**TM access network



Industry productivity



Teleworking



Online education



Economy growth



Jobs growth



How we learn

Growth in non-formal and online education

Connectivity on the **nbn**[™] access network is providing Australians with the opportunity to continue to learn throughout life, regardless of age or postcode.



more Australians are learning online since the rollout of the **nbn**[™] access network

Since the rollout of the **nbn**[™] access network, more Australians have enrolled in online courses and engaged in non-formal learning such as watching tutorials, completing courses, learning a language and using the internet to search for information.



1 in 3 **nbn**[™] users vs **1 in 5** non-**nbn**[™] users

Australians with access to the internet and living in an area where there has been 90 per cent rollout of the **nbn**[™] access network are 1.6 times more likely to spend more than one hour a day on the internet for non-formal learning compared with non-**nbn**[™] connected users.

nbn[™] users **1.6x**

more likely to spend over one hour per day learning online

Thirty-two per cent of **nbn**[™] connected users (one in three) spend at least one hour a day on the internet on non-formal learning, compared to 20 per cent (one in five) of non-**nbn**[™] connected users.

nbn[™] users

2x more likely to be enrolled in an online course



nbn[™]-connected users are twice as likely to be enrolled in an online course than non-**nbn**[™]-connected users. Additionally, users in **nbn**[™] connected areas are more likely to intend to enrol in online courses in the future.



Older Australians

Growth in older and regional Australians learning online

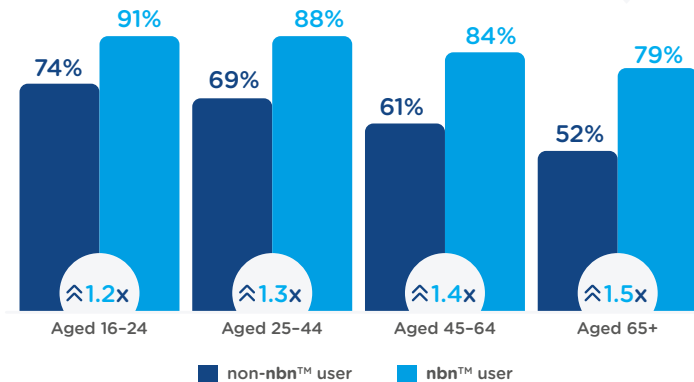
Access to high-speed broadband is encouraging older Australians to engage with non-formal education and continue their learning throughout their lives.

Australians over the age of 65 are the fastest-growing new adopters of non-formal education. In this age group, 79 per cent of **nbn**TM-connected users are engaged in non-formal education, compared with 52 per cent of non-**nbn**TM-connected users.

The **nbn**TM access network has increased non-formal learning across all ages, but particularly among over-65s

“Non-formal learning” includes using the internet to search for information, watch online tutorials, and learn new languages

Increased adoption of non-formal learning via the internet due to the **nbn**TM access network is greatest among people aged 65 and over



New ways of learning

Growth in regional Australians learning online

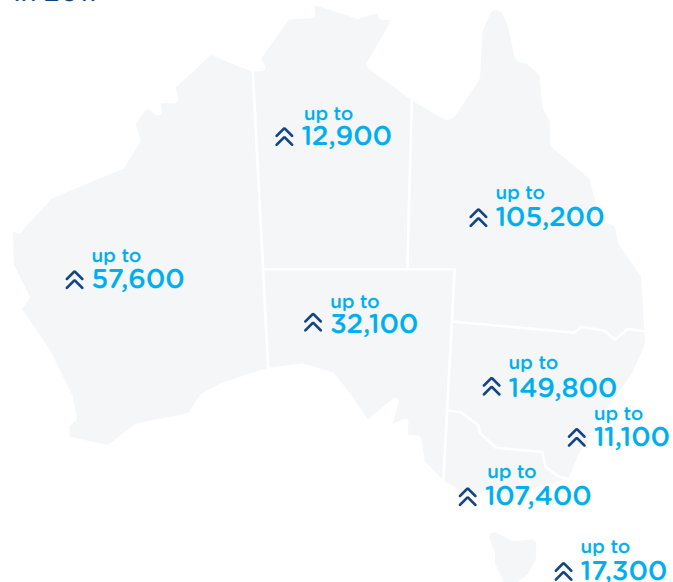
The **nbn™** access network is helping to change how learning and education is developed and accessed throughout Australia. Regional Australians are embracing the opportunity to remain in their communities while also accessing quality learning and education online.

1.8x In regional areas, **nbn™**-connected users are 1.8 times more likely to use the internet for non-formal learning compared to non-**nbn™**-connected users.

1.5x In metropolitan areas, **nbn™**-connected users are 1.5 times more likely to use the internet for non-formal learning compared to non-**nbn™**-connected users.

1.4x Regional **nbn™**-connected users are 1.4 times more likely to enrol in future online education, compared to metropolitan **nbn™**-connected users who are, in turn, 1.2 times more likely than non-**nbn™**-connected users in metro areas.

Additional Australians enrolled in online courses in 2017



Lifelong learning

Faezeh Parkes is a 67-year-old Melbourne-based woman who describes herself as a citizen of the world. Having worked within the education system for a number of years, Parkes has seen firsthand the impact the **nbn™** access network can have on a person's learning, no matter what age they are.

When she was 62, Parkes decided to become an actor, which now allows her to travel the world. Using the **nbn™** access network, she was able to upskill herself through online acting classes, as well as learn scripts and apply for roles. Through this new challenge, Parkes is able to live in the moment, go with the journey and connect with people worldwide.



Economic impact

Growth in online education

The **nbn**TM access network has had a positive impact on the economy due to the productivity boost to workers through higher education.

Impact of online education over the **nbn**TM access network on the Australian economy

2018 >> 2021

+\$1.7 billion
boost to economy

A significant increase in online education, attributed to the **nbn**'sTM access network impact on workers' productivity, is estimated to boost the Australian economy by up to \$1.7 billion in 2021.



+12,500
full-time workers

In 2021, it is also estimated that as the first '**nbn**'-enabled' students graduate over the coming years, the "**nbn**" effect" will help drive nearly 12,500 additional full-time workers and increase wages for skilled workers by \$105 million.

^+\$105 million
increase in wages