



SUBMISSION

Submission to the Productivity  
Commission's Inquiry into Data  
Availability and Use

AUGUST 2016

---

## Contents

<b>About this submission</b>	<b>2</b>
<b>Overview</b>	<b>2</b>
<b>Key recommendations</b>	<b>4</b>
<b>Background</b>	<b>5</b>
What is data?	5
The costs and benefits of data	6
<b>Policy recommendations</b>	<b>7</b>
Overarching principles	7
Data for consumers	8
Protection of personal data	8
Encouraging consumer confidence	9
Commercial data	10
Sharing or trading data	12
Highest benefits through broad availability	12

---

The Business Council of Australia is a forum for the chief executives of Australia's largest companies to promote economic and social progress in the national interest.

## About this submission

This is the Business Council's submission to the Productivity Commission's inquiry into Data Availability and Use. This submission primarily addresses four aspects of the inquiry's terms of reference:

- options for increasing availability of public sector data
- options for increasing availability of private sector data
- options to improve individuals' access to data about themselves
- ways to enhance and maintain individuals' and businesses' confidence and trust in the way data is used.

## Overview

Use of data, and associated technologies, can generate significant economic benefits.

PwC estimates that data-driven innovation added an estimated \$67 billion in new value to the Australian economy in 2013.<sup>1</sup> Better use of data can also greatly improve firms' productivity, with some estimates suggesting an increase in the order of 5 to 10 per cent.<sup>2</sup>

Most of the economic benefit of data ultimately accrues to consumers, through lower prices, access to benefits often at no cost, more convenience, greater personalisation and reduced information asymmetry. The benefit to customers could be more than double the benefit to organisations.<sup>3</sup>

Data use needs to balance the benefits of data with the risk of inappropriate collection, sharing or use of data. Governments and organisations must be careful to ensure the integrity and protection of data, especially personal data that can identify individuals.

The Business Council sees this inquiry as an opportunity to examine how best to balance these considerations and maximise the benefits of data to the consumer and community.

Although the Business Council believes that increased data collection and use has the potential to generate substantial community benefits, this does not imply that there should be a one-size-fits-all approach to availability and access. In particular, although this inquiry has been asked how to increase availability of data, making data publicly available will not always yield the highest net benefits for consumers and the community.

---

<sup>1</sup> PwC, *Deciding with Data: How Data-fuelled Innovation is Fuelling Australia's Economic Growth*, September 2014, <http://www.pwc.com.au/consulting/assets/publications/data-drive-innovation-sep14.pdf>

<sup>2</sup> A McAfee and E Brynjolfsson, 'Big Data: The Management Revolution', *Harvard Business Review*, October 2012.

<sup>3</sup> BCG, *The Value of Our Digital Identity*.

Indeed, in some cases, the optimal approach will be no access and protection of data, or access on specified terms. The best approach could also change, as the value of data use and data properties could evolve over time.

Instead, the Business Council recommends that the Commission's inquiry should be guided by a set of principles that allow different levels of availability and access for different types of data.

- Consumers should have a reasonable level of access to their personal data. The objective of consumer access is best met through fit-for-purpose regulation to protect essential rights, complemented by businesses' voluntary efforts to respond to their customers' preferences.

Access to customer data is currently provided through privacy legislation. Many businesses already provide detailed data (like consumption data) to their customers through intuitive, often digital tools, as part of their competitive offering. Any measures to increase consumer access beyond the existing framework should be industry-led, rather than regulatory, to ensure businesses continue to compete and innovate on how best to provide consumer information.

- Commercial data is the result of private sector investment and innovation, generated to benefit the enterprise's customers. This data needs to be protected, or the investment and innovation may not occur. In some instances, commercial data – that otherwise should be kept internal – should be made available so that markets can function (for example, financial performance information for listed companies).

The Commission should not recommend data reporting requirements for companies beyond the minimum required for markets to function. Excessive data provision requirements can impose costs on a business and its customers that outweigh other possible benefits.

- Data that generates the highest benefits through sharing or commercial trading on specific terms should be exchanged through market mechanisms. Third party access to private sector data should not be mandated.
- Subject to community comfort, governments should encourage greater availability of public sector data. When done appropriately, this can promote greater transparency, increased effectiveness of government services and broader innovation. The Business Council recommends health system data for priority examination.

Technology, uses of data and community attitudes to data are evolving rapidly. The speed of change poses a challenge for regulation to be relevant, fit for purpose and aligned with community expectations.

For this reason, regulatory frameworks that govern access and availability of data (like privacy laws) should be frequently tested, and subject to periodic, structural review. Excessive regulation could have the consequences of chilling data-related investment, denying consumers the benefits of data.

Industry-led approaches to data will often be more effective than regulation because businesses can innovate and adjust faster than regulation.

### **Different approaches to access are needed to maximise the wider community benefits of data**

Depending on the dataset, benefits to the community could be maximised by:

- not sharing data. Keeping certain data internal to an organisation allows the organisation to provide valuable services to consumers or the community, and maintain trust. The costs of making the data available (financial, reputational, security and privacy) would outweigh any benefits. Examples include national security data, confidential unit record data, customer data not authorised for sharing, or operational and trade secrets.
- sharing or commercial trading on specific terms. This allows the data owner/holder to minimise risks and costs by limiting or prescribing use of the data. Examples of this data include data provided for research purposes, aggregated commercial data (like industry benchmarks), or customer data provided only to the customer on request.
- making data publicly available. Where the spillover benefits to external parties outweigh the costs to the data owner of making the data available, data should be freely available. Examples of this data include the performance of the economy, health systems and weather forecasts.

Many public sector datasets will generate large spillover benefits. For example, Lateral Economics estimates that greater use of public sector administrative data could generate an additional \$16 billion of economic value, through greater efficiency, contestability and accountability of public services.

### **Key recommendations**

1. Regulatory frameworks that govern access and availability of data should be periodically reviewed to ensure they are fit for purpose, relevant and aligned with community expectations.
2. Access by consumers to their own personal data should be increased through industry-led initiatives, rather than greater regulation.
3. A shared effort by government, business and other organisations is required to improve consumers' education and awareness about avenues of access already available to them.
4. Data reporting requirements for companies should not be increased beyond the minimum required for markets to function, to avoid undermining incentives for investment and innovation.
5. Third party access to private sector data should not be mandated, to avoid undermining investment and innovation in data, which ultimately benefits consumers.
6. Subject to maintaining community trust, government datasets should be made more available, where this generates net benefits. Health system data should be a priority area for examination.

## Background

### What is data?

Companies, governments, organisations and individuals collect and maintain a range of data, such as:

- performance and operational data that is typically not personally identifiable (including financial performance)
- customer or citizen data (also called ‘volunteered data’)
- employee data
- supplier data
- observed data (either human behaviour or the environment), often aggregated and not identifiable
- inferred data (either human behaviour or the environment), again often aggregated and not identifiable.

A number of the categories identified above could include personal data.

The role of data has changed significantly over the last two decades:

- Continuous connectivity has enabled mass digitisation.
- Devices and applications that collect and generate data (such as mobile phones, social media, sensors and drones) have become more affordable and more widely used.
- Advances in computing power, and the development of more sophisticated analytical tools, have improved the ability to analyse large sets of data.
- Cloud computing has enabled greater decentralised access to data.

These advances in technology have meant that data is now massive, ubiquitous and vastly more useful. It has also resulted in the emergence and increasing availability of goods and services that collect, store, process, analyse and present data.

This trend is likely to continue: the Organisation for Economic Co-operation and Development estimates the total amount of data in the world will multiply by a factor of 40 by the end of the decade.<sup>4</sup>

---

<sup>4</sup> OECD, *Data-Driven Innovation: Big Data for Growth and Well-Being*, 2015, <http://dx.doi.org/10.1787/9789264229358-en>

## The costs and benefits of data

The use of data incurs costs, including the costs of collecting, storing, accessing, formatting, processing, analysing, presenting or transmitting data. Although costs are generally reducing<sup>5</sup>, the use of data can still require significant investment.

Depending on the dataset, there can also be costs in sharing the data or making it available. These can be financial, administrative, opportunity or reputational.

There is also some risk of inappropriate collection, sharing or use of data. Organisations need to be diligent to ensure compliance with legal frameworks, and ensure that they are operating in line with community expectations.

On the other hand, data generates economic benefit in a number of ways:

- greater automation of processes. Greater use of data, and associated algorithms, can replace or support human decision making.
- improved efficiency. Providing and processing data in real time means that goods and services can be produced more efficiently.
- improved capacity for research. Broader, richer datasets mean that greater insight can be drawn than from narrow samples.
- innovation of new business models, products and services.
- greater personalisation. The availability of more data about the behaviour of consumers, individually and in aggregate, means that goods and services can be more personalised.
- reduced information asymmetry. Asymmetry of information – between buyers and sellers, and principals and agents – is being addressed simply by having more data available.

Available evidence suggests that firms which use data-driven innovation raise their productivity by five to 10 per cent, and are six per cent more profitable, compared to competitors who do not use data-driven innovation.<sup>6</sup> In fact, a retailer that embraces best-practice use of data could increase its operating margin by more than 60 per cent.<sup>7</sup>

Data is also a key enabler of more empowered consumers. The majority of economic benefits generated by use of data goes to customers, consumers and citizens.<sup>8</sup> In fact, the benefit to consumers is estimated to be more than double the benefit to organisations.<sup>9</sup>

---

<sup>5</sup> McKinsey Global Institute, *Big Data: The Next Frontier for Innovation, Competition and Productivity*, June 2011.

<sup>6</sup> A McAfee and E Brynjolfsson, 'Big Data: The Management Revolution', *Harvard Business Review*, October 2012.

<sup>7</sup> McKinsey Global Institute, op. cit.

<sup>8</sup> ibid.

<sup>9</sup> BCG, op. cit.

The consumer surplus from personal location data (a specific subset of personal data) alone could be worth \$600 billion annually.<sup>10</sup>

## Policy recommendations

### Overarching principles

The Business Council welcomes this inquiry as an opportunity to examine how best to balance the potential costs and risks of data in a way that maximises the benefits of data to the consumer and the wider economy and community.

Because the costs, risks and benefits will be different for each dataset, the approach to access and availability will differ for each dataset.

The remainder of these policy recommendations are presented according to the Business Council's recommended levels of availability (from not publicly available to publicly available):

- data for consumers
- commercial data
- data that generates highest net benefits through sharing or commercial trading on specific terms (public and private data)
- data that generates highest net benefits when broadly available.

Across all areas, regulatory frameworks that govern access and availability of data (like privacy laws) should be frequently tested, and subject to periodic, structural review.

Technology, uses of data and community attitudes to data are evolving rapidly. The speed of change poses a challenge for regulation to be relevant, fit for purpose and aligned with community expectations.

Excessive regulation could have the consequences of chilling data-related investment, denying consumers the benefits of data. For this reason, industry-led approaches to data offer a way to manage the risks associated with data, and are better placed than regulation to innovate and adapt in response to changes in technology, use and community preferences.

**Recommendation 1:** Regulatory frameworks that govern access and availability of data should be periodically reviewed to ensure they are fit for purpose, relevant and aligned with community expectations.

---

<sup>10</sup> McKinsey Global Institute, op. cit.



## Data for consumers

Consumers should generally have access to their personal data, and access to data required for markets to operate transparently. Where consumers choose to provide data about themselves, they should have a measure of control and transparency over that data.

The objective of consumer access is best met through fit-for-purpose regulation to protect essential rights (like privacy legislation), complemented by businesses' voluntary efforts to respond to their customers' preferences.

### ***Protection of personal data***

Many organisations understand that their use of data is entirely based on trust from consumers. Customers need to trust that firms are judicious in the personal data they collect, that any data will be used appropriately and that personal data will be protected and secured – otherwise, they will withdraw the provision of their data.

To proactively respond to what consumers want, many businesses voluntarily provide consumers the ability to opt out of collection of their data, or provide tools to give consumers greater control (see **Case Study 1**).

#### **Case Study 1: AGL IQ**

The energy company AGL has invested in a range of market-leading digital offerings that enable customers to track their energy data, and which enhance their comfort, convenience and control. For example:

- The My AGL IQ® service allows customers to monitor their energy usage via an online portal, and compare the energy performance of their home to similar homes in the local area.
- The world-leading AGL Energy app presents information on a customer's electricity, gas and rooftop solar in a single interface. Customers with digital meters are able to view their data in near-real time, in 60-minute intervals, for comparison by day, week, month or year.

These tools use data to provide consumers greater understanding and choice over the services they receive from AGL, and greater transparency and control over their consumption.

Voluntary efforts by business are backed up by an existing robust framework in the *Privacy Act 1988* (amended recently in 2014), which gives consumers several strong controls, including:

- the avenue to request any information any business holds on them, in a format requested by the consumer (subject to a reasonable cost test)
- the ability to choose to transact anonymously
- a guarantee that personal data provided offshore will receive the same level of privacy protection as if it were kept in Australia.

Other regulations provide rights additional to the Privacy Act: for example, the Australian Energy Market Commission's 2014 rule change to improve the availability of information to customers.

It is important to have a nuanced understanding of consumers' perspectives on privacy. There is a clear difference between consumers' stated preferences and revealed consumer behaviour.<sup>11</sup> As outlined by Boston Consulting Group, 'while consumers voice concern about the use of their data, their behaviours – and their responses to a survey conducted specifically for this report – demonstrate that they are willing, even eager, to share information when they get an appropriate benefit in return'.<sup>12</sup>

Many consumers are willing to share their personal data, as long as: they perceive they are receiving a fair return for it; they have some measure of control; and they are confident it is not being used for inappropriate purposes.

For this reason, use of personal data should not be inhibited. As put by Boston Consulting Group, 'ultimately, prohibitions designed to protect individuals can actually hamper or delay innovations that would benefit them'.<sup>13</sup> Instead, any measures to increase consumer access beyond the existing framework should be industry-led, rather than regulatory, to ensure businesses continue to compete and innovate on how best to provide consumer information.

**Recommendation 2:** Access by consumers to their own personal data should be increased through industry-led initiatives, rather than greater regulation.

### ***Encouraging consumer confidence***

Potential community concern can be addressed through a cooperative approach by business, government and other relevant interest groups to build community confidence in uses of data.

Business, government and other interest groups (such as privacy organisations or consumer groups) have a shared responsibility to collaborate and build consumer confidence in the data market and system.<sup>14</sup>

In particular, considering potential community uncertainty around data, government has a critical role as a trusted institution. The Business Council recommends that the Australian Government improve its efforts to educate and raise consumer awareness around the benefits of data, and empower consumers to manage their own risk, where they can.

---

<sup>11</sup> <http://www.pewinternet.org/2012/02/24/privacy-management-on-social-media-sites/>

<sup>12</sup> BCG, op. cit.

<sup>13</sup> BCG, ibid.

<sup>14</sup> World Economic Forum, *Personal Data: the Emergence of a New Asset Class*, 2011.

Another key precondition of consumer confidence is the ability to maintain the safety and security of data, especially personal data.

Cybersecurity also benefits economic growth, since national losses from cybersecurity incidents are estimated potentially as high as \$17 billion per year.<sup>15</sup>

As the Business Council has said previously, 'Australian businesses are way out in front, and have been extending their world-leading culture of safety in the workplace to safety online. Businesses are ready to collaborate with government and research institutions to improve on existing practices, and improve standards that set a higher benchmark than is required by regulation.'<sup>16</sup>

The Cyber Security Strategy released by the government in April 2016 established a collaborative approach from government, business and the research.<sup>17</sup> Business is well placed to advise on what approaches to cybersecurity are robust enough to minimise risk, but flexible enough to respond to changes in technology and avoid excessive cost.

**Recommendation 3:** A shared effort by government, business and other organisations is required to improve consumers' education and awareness about avenues of access already available to them.

## Commercial data

Keeping some data internal to an organisation allows the organisation to generate a sufficient return on the initial investment on the data, delivering benefits to customers. The costs of requiring the data to be available (financial, administrative, opportunity or reputational) would outweigh any benefits.

If this data is made available without adequate recompense, data holders would likely reduce their effort in data collection and innovation and thus reduce the overall value creation, including to their consumers.

Excessive policy or regulatory intervention to force commercial data to be available could be highly damaging to innovation and investment. Additional investment in data may be forgone because it is not sufficiently attractive, meaning the total benefits to consumers are reduced. Where the value of data is ambiguous or speculative, private businesses will be uncertain about investing in data-related innovation, and the risk of chilling investment is higher.

In some instances, commercial data – that otherwise should be kept internal – should be made available so that markets can function (for example, financial performance information for listed companies). Data is often required to be made available to governments or consumers for the purposes of consumer protection.

---

<sup>15</sup> Cisco, *Australian Government Cyber Security Strategy Review – the Cisco Response*, <https://www.cisco.com/web/ANZ/assets/pdf/cisco-cybersecurity-response.pdf>

<sup>16</sup> <http://www.bca.com.au/media/cyber-security-strategy>

<sup>17</sup> <https://cybersecuritystrategy.dpmc.gov.au/assets/img/PMC-Cyber-Strategy.pdf>

The Australian Consumer Law establishes a robust framework for consumer protection.

There are suggestions internationally that new regulation can improve consumer protection by encouraging small changes in consumer behaviour (drawing from ‘nudge’ theory).<sup>18</sup> Nudge-related regulation aims to maximise data available, often to influence consumer choices.

However, ‘market institutions are rapidly evolving to a situation where very often the buyer and seller have roughly equal knowledge’, due to the proliferation of technology and communication tools that allow consumers to coordinate and share information with each other on goods and services.<sup>19</sup> Regulatory problems like moral hazard can start to be addressed by the market through cheap, ubiquitous information.

In that context, it is not clear that additional regulation is necessary to mandate data availability, for the purposes of enabling markets to function.

The existing regulatory framework is also sufficient to address foreseeable problems in areas such as competition. (In fact, data may be *less* likely to entrench market power than in relation to other assets because there are a greater number of substitutes and lower barriers to entry). As the Commission has already identified, ‘the sustainability of models to extract rent from monopoly control of information is an open question ... Existing regulation may be adequate to address restraints of trade that come from control of data and networks.’<sup>20</sup>

In fact, as information asymmetry continues to decrease, there may be potential to remove some existing regulation.

For this reason, data reporting requirements for companies should not be increased beyond the minimum required for markets to function.

**Recommendation 4:** Data reporting requirements for companies should not be increased beyond the minimum required for markets to function, to avoid undermining incentives for investment and innovation.

---

<sup>18</sup> See, for example, R Finigan, ‘The Potential of Behavioural Economics: Beyond the Nudge’, *The Conversation*, 28 July 2015, <https://theconversation.com/the-potential-of-behavioural-economics-beyond-the-nudge-43535>

<sup>19</sup> A Tabarrok and T Cowen, ‘The End of Asymmetric Information’, *Cato Unbound*, 6 April 2015, <http://www.cato-unbound.org/2015/04/06/alex-tabarrok-tyler-cowen/end-asymmetric-information>

<sup>20</sup> Productivity Commission, Digital Disruption.

## Sharing or trading data

In some situations, the benefits of data are maximised by sharing or trading on specific terms.

For example, GlaxoSmithKline provided their work to researchers on the structures behind 13,500 chemical compounds that may inhibit the malaria parasite.<sup>21</sup>

In other instances, companies are willing to make data or databases available to other industry participants, on a commercial basis. There may be significant investment required to collect, collate, store, format, present and analyse data, and a commercial return may be needed to cover the cost of providing the data or to justify the initial investment.

Sharing or trading is best done through a market that allows buyers and sellers to reach agreed pricing and terms.

Some mechanisms for a data market are beginning to emerge, such as bilateral trading, or third party brokerage. Any regulatory interventions should minimise the impact on the development of a data market.

It is essential that any policy proposals arising from this inquiry do not undermine the primacy of legitimate commercial negotiations as the avenue by which companies share proprietary data with each other.

In particular, third party access to private sector data should not be mandated.

**Recommendation 5:** Third party access to private sector data should not be mandated, to avoid undermining investment and innovation in data, which ultimately benefits consumers.

## Highest benefits through broad availability

Finally, in other cases, the benefits of data will be maximised by encouraging public openness of the data. Many (but not all) of these datasets are those held within the public sector.

The benefits of data are generated by opening it up to allow for innovation and generation of value by other users, where this does not lessen the incentives to invest in the data in the first place. When done appropriately, this can promote greater transparency, innovation in and effectiveness of government services and innovation in the economy more widely.

McKinsey estimates the global value of greater openness of public sector data could be around \$3 trillion annually.<sup>22</sup> Based on this figure, Lateral Economics suggests that the

<sup>21</sup> Bain & Company, *Using Data as a Hidden Asset*.

<sup>22</sup> McKinsey & Company, *Open Data: Unlocking Innovation and Performance with Liquid Information*, October 2013.

benefit to Australia of greater open data could add \$16 billion to Gross Domestic Product – around a one per cent increase.<sup>23</sup>

The Australian Government has made progress in encouraging open data: since 2013, the number of open datasets available increased from 514 to 5200<sup>24</sup>, the valuable Geocoded National Address File has been made publicly available<sup>25</sup>, and in December 2015, the government's Public Data Policy Statement committed to the release of public sector data in a machine-readable format by default.<sup>26</sup>

Subject to community comfort, governments should encourage greater availability of public sector data. The Business Council recommends this could occur for data that relates to the health system (see **Case Study 2**).<sup>27</sup>

### Case Study 2: Data in the health system

Better measurement and reporting of cost and performance of the health system will provide improved data and incentives for health providers to target improvements and increase the productivity of the health system.

Australia has relatively limited transparency of health system performance compared to other nations. For example, a 2015 analysis of publicly available metrics on nationwide hospital performance found four available metrics in Australia, compared to 94 in the UK and 115 in the United States. In addition, Australia has only five national clinical registries that have national coverage including joint replacement, renal dialysis and various forms of organ transplantation. Clinical registries play a vital role in collecting data on hospital and clinician performance and returning benchmarked data to allow hospitals to compare their performance, and that of their clinicians, with peers.

There are initial steps that can be taken to promote greater transparency within already agreed frameworks and mechanisms. This includes promoting greater reporting of data by hospitals to clinical quality registries under the National Safety and Quality Health Service Standards. There is also an opportunity to publish institution-level hospital and health agency performance data for the full suite of indicators agreed and reflected in the National Health Performance Authority's *Performance and Accountability Framework 2012*.

<sup>23</sup> Lateral Economics, *Open for Business: How Greater Open Data Can Help Achieve the G20 Growth Target*, June 2014, [http://apo.org.au/files/Resource/open\\_for\\_business\\_how\\_open\\_data\\_can\\_help\\_achieve\\_the\\_g20\\_growth\\_target\\_2014.pdf](http://apo.org.au/files/Resource/open_for_business_how_open_data_can_help_achieve_the_g20_growth_target_2014.pdf)

<sup>24</sup> M Turnbull, *Speech to the Locate15 Conference: The Power of Open Data*, speech, 11 March 2015, <http://malcolmturnbull.com.au/media/speech-to-the-locate-15-conference-the-power-of-open-data>

<sup>25</sup> H Owens, *Geocoded national address data to be made openly available*, blog post, 7 December 2015, <https://blog.data.gov.au/news-media/blog/geocoded-national-address-data-be-made-openly-available>

<sup>26</sup> Australian Government, Department of the Prime Minister and Cabinet, *Australian Government Public Data Policy Statement*, 7 December 2015, [https://www.dpmc.gov.au/sites/default/files/publications/aust\\_govt\\_public\\_data\\_policy\\_statement\\_1.pdf](https://www.dpmc.gov.au/sites/default/files/publications/aust_govt_public_data_policy_statement_1.pdf)

<sup>27</sup> Business Council of Australia, *Overview of Megatrends in Health and Their Implications for Australia*; Evans et al., 'Development of Clinical-Quality Registries in Australia'.

Where private sector data generates highest net public benefits through openness, many companies already make this available (see **Case Studies 3 and 4**<sup>28</sup>). Companies are best placed to identify instances where private sector data would hold public benefits that outweigh the costs (financial, administrative, opportunity or reputational) of making it available.

#### **Case Study 3: IAG Research Centre**

IAG's Research Centre studies various aspects of safety. Engineers analyse cars, motorcycles and building products, while technical specialists analyse a variety of data. The centre undertakes road crash tests and studies self-parking cars.

The research provides greater insight into the safety of products, so IAG can better understand the risk profile of these products.

IAG has recognised, however, the public benefit of the information. Data from the research centre is made available to other organisations, like vehicle manufacturers, to improve the safety of those on the roads.

#### **Case Study 4: Google Trends**

Through the service Google Trends, Google publishes trends in what users are searching in the Google search engine or on YouTube. A range of tools are provided to assist with analysing and presenting data in various ways, isolating specific variables (like location or topic) or comparing a time series back to 2004.

The service is available for free.

Google Trends is able to be used by other businesses in a range of ways to generate additional value. In fact, PwC estimates that retail sales forecasts based on Google Trends were more accurate than historical sales data, in 75 per cent of testing scenarios.

**Recommendation 6:** Subject to maintaining community trust, government datasets should be made more available, where this generates net benefits. Health system data should be a priority area for examination

---

<sup>28</sup> PwC, *Using Google Trends to Predict Retail Sales*, 2015, <http://www.pwc.com/us/en/retail-consumer/publications/assets/pwc-using-google-trends-to-predict-retail-sales.pdf>.

BUSINESS COUNCIL OF AUSTRALIA  
42/120 Collins Street Melbourne 3000 T 03 8664 2664 F 03 8664 2666 [www.bca.com.au](http://www.bca.com.au)

© Copyright August 2016 Business Council of Australia ABN 75 008 483 216  
All rights reserved. No part of this publication may be reproduced or used in any way without acknowledgement to the Business Council of Australia.

The Business Council of Australia has taken reasonable care in publishing the information contained in this publication but does not guarantee that the information is complete, accurate or current. In particular, the BCA is not responsible for the accuracy of information that has been provided by other parties. The information in this publication is not intended to be used as the basis for making any investment decision and must not be relied upon as investment advice. To the maximum extent permitted by law, the BCA disclaims all liability (including liability in negligence) to any person arising out of use or reliance on the information contained in this publication including for loss or damage which you or anyone else might suffer as a result of that use or reliance.