Australian Government
Productivity Commission

Factsheet #2
5-year Productivity Inquiry
Advancing Prosperity
Volume 4

Australia's data and digital dividend

Data and digital technologies can create productivity by:

- **Reducing costs** of production and consumption — such as search, replication, transport, tracking or verification costs.
- Creating **new products and services** or allowing products and services to become more tailored and timely.
- **Allowing labour to be freed up** so workers can move into new areas.

Many businesses and individuals accelerated their digital uptake during COVID-19 with shifts to online activity. This included knowledge-based organisations transferring their existing digital processes from office-centric to online, retailers augmenting their physical sales with online sales, and various services being delivered digitally (such as telehealth, education and entertainment). The associated productivity gains are likely to continue as businesses and individuals learn more about operating and working online.

Recommendations

Improving **regional internet connectivity** will ensure regional and remote economies are flourishing and local residents can access increasingly digitised essential services, such as telehealth, education, banking and government services.

- There is a 'patchwork quilt' of connectivity across regional and remote areas. Infrastructure Australia reports that 23 of Australia's 48 regions have broadband and mobile connectivity infrastructure gaps.
- **More transparency** around digital infrastructure funding decisions and evaluation of previous investments would improve the efficiency and effectiveness of future funding allocations. Evolving broadband, mobile and satellite technologies mean the market for internet connectivity may now be sufficiently developed to allow for a more competitive method of funding allocation. Market testing should be undertaken to see if a **market-based tender mechanism** for delivering the Universal Service Guarantee, including for regional connectivity, is feasible (recommendation 4.1).

Better **use and sharing of data** can improve product and service quality, cut costs, and generate new products and services.

- The Consumer Data Right rollout is underway (implemented in banking and energy, and soon in telecommunications). Upcoming changes will allow approved third parties to initiate actions on behalf of consumers with their consent, such as to make payments and switch providers.
- A secure **single digital identity for individuals, with expanded applications** (including state government and private sector uses), would improve services (by streamlining identity verification) and security (by reducing the need for third parties to store personal information, which can lead to breaches) (recommendation 4.2).
- **More access to and use of public data by trusted private parties** could benefit businesses and consumers by streamlining processes and improving products and service delivery. The Data Availability and Transparency Act 2022 (Cth) should be gradually extended to achieve this (recommendation 4.3).
- Increasing the **safe sharing and use of data collected by government-funded service providers** should begin with publicly funded health data. This includes identifying relevant data that could be safely shared to benefit patients, setting technical standards for data sharing to promote interoperability, and using funding levers to incentivise service providers to gather and share data. Safe sharing of data held by other government-funded service providers (e.g. education, childcare, aged care, community services) should be investigated (recommendation 4.4).

Good cyber security and ethical practices in using technology and data are essential for supporting consumer trust and confidence, particularly in emerging technologies that may have significant productivity benefits. Government policy can facilitate this, but any intervention needs to be balanced against the risks of disincentivising investment and innovation.
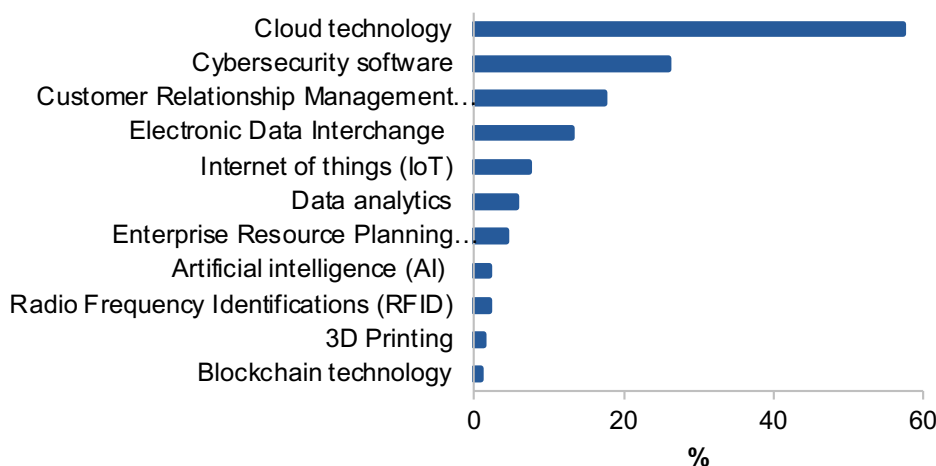
- As a 'light touch' measure, the Australian Cyber Security Centre is already providing information and training for business, but small business take up of cyber security software and guidance is low.

- Regulation is required for high security risk situations. The Government has implemented critical infrastructure security legislation, but more time and information is required to understand its appropriateness and effectiveness. There is no evaluation or review process included in the legislation.

- **A single online interface for cyber incident reporting** would avoid unnecessary duplication and reduce the costs of regulatory compliance (recommendation 4.5).

- Translating principles of ethical use of emerging technology into action will be a challenge for governments. Regulation involves trade-offs between avoiding potentially harmful outcomes and productivity gains. To strike the right balance, target intervention towards high-risk areas and implement in consultation with industry and technical experts.
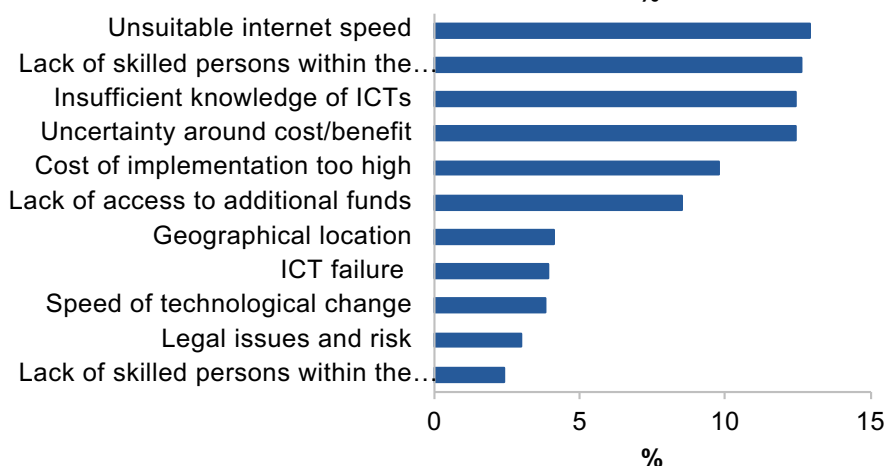
Industry has highlighted **digital and data skills** gaps as an important issue — forecasts suggest there will be demand for 1.2 million technology workers by 2035. The role for government in skills policy is broader than just this area, so relevant recommendations are covered in other inquiry volumes.

- Short courses and unaccredited training can be preferred by businesses for developing digital and data skills as they are often more relevant and flexible. Businesses and workers are already using options such as industry-delivered vendor certifications to upskill and reskill, and government support could further increase uptake where policies are targeted and evaluated for additionality (Volume 8).

- Skilled migration enables businesses to access a deeper talent pool for digital and data skills that cannot be met locally or with education and training in the short term. However, the occupation lists that underpin much of Australia's skilled migration system are not sufficiently flexible or up to date (Volume 7).

Key figures

Cloud technology
Cybersecurity software
Customer Relationship Management…
Electronic Data Interchange
Internet of things (IoT)
Data analytics
Enterprise Resource Planning…
Artificial intelligence (AI)
Radio Frequency Identifications (RFID)
3D Printing
Blockchain technology

0   20   40   60
%

> Use of foundational technologies, like cloud, is good — but more specialised technologies have lower adoption. Australian businesses trail other developed countries in the use of data analytics and artificial intelligence. (Volume 4, p. 11)

Unsuitable internet speed
Lack of skilled persons within the…
Insufficient knowledge of ICTs
Uncertainty around cost/benefit
Cost of implementation too high
Lack of access to additional funds
Geographical location
ICT failure
Speed of technological change
Legal issues and risk
Lack of skilled persons within the…

0   5   10   15
%

> Factors limiting business uptake of ICT are inadequate internet, lack of skills, low awareness and uncertainty about benefits, security concerns, cost and legacy systems. (Volume 4, p. 22)