Submission to the Digital Transformation Agency

Digital Transformation Strategy

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ATSE Australian Academy of
Technology & Engineering

DIGITAL TRANSFORMATION STRATEGY

The Australian Academy of Technology and Engineering (ATSE)[1] is pleased to contribute to the Digital Transformation Agency's refreshed Digital Transformation Strategy. ATSE agrees with the main points of the Agency's consultation discussion paper, and recommends seven priorities:

- Embrace a citizen-centric approach
- Nurture public trust in government handling of citizen data
- Establish a 'whole of government' data architecture
- Embrace emerging technologies (such as artificial intelligence and the Internet of Things)
- Create transparent and measurable milestones, deliverables and undertake international benchmarking
- Modernise service delivery by embracing current and emerging technologies
- Adopt online support systems

A new approach to digital transformation

The Digital Transformation Strategy refresh is taking place in the context of significant current events such as the COVID-19 pandemic, which has resulted in changing attitudes toward digital services and the rapid acceleration of data and technology-driven transformation.[2] It has been estimated that technology adoption by businesses in Australia has accelerated by at least 10 years as a result of the COVID-19 pandemic.[3]

The COVID-19 pandemic has highlighted the importance of Government capability and capacity to ensure the delivery of services and outcomes, alongside responding quickly to unprecedented and rapidly evolving events. Evolving citizen expectations have created the imperative for continuous digital transformation in government service delivery and policy, with the pandemic only exacerbating this expectation. However, delivering on digital transformation in government continues to be challenging, and the proliferation of modern technologies (such as software as a service, smart mobiles, Internet of Things, Big Data), forces information technology teams to rethink how best to deliver services to their constituents and deliver on their transformation missions.

A whole-of-government (including State and Territory Governments) commitment is needed to ensure that Australia realises the full potential of current and emerging digital technologies and digital transformation. Government must develop and maintain appropriate levels of content knowledge and technical skills, especially at senior levels, and make a strong, visible commitment to "Government as an exemplar" through this strategy led by the Digital Transformation Agency.[4]

ATSE sees a range of priorities and opportunities for a refreshed strategy, including civic engagement, data and public trust, data architecture, emerging technologies, measurable milestones and deliverables, international benchmarking, modern service delivery, and online support systems.

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[1] The Australian Academy of Technology and Engineering is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

[2] https://www.dta.gov.au/digital-transformation-strategy/digital-transformation-strategy-refresh

[3] https://alphabeta.com/wp-content/uploads/2020/09/200922_australias-digital-resilience_report.pdf

[4] https://www.atse.org.au/wp-content/uploads/2019/09/Digital_Futures-Strategic_Plan-final.pdf

Civic engagement

To date, the digital transformation strategy has focused on maintaining currency in remote working, commerce, and service provision, among other things, and comes from a perspective of citizen interaction with government – i.e. the government reacting to citizen needs. The next phase should transition to government proactively reaching out to citizens using digital technology.

This citizen-centric approach should see the Government provide a single portal to all government services (for example: MyHealth Record, Medicare information, passport details, voting/electorate details, census data, tax information, human services details) and include linkages to State and local Governments for information such as driver's licenses and rate payments. This information must be easy to navigate and provide citizens access to all the services, information and data they need.

Data and public trust

Proactive connection between government and citizens will require the collection and analysis of data about citizens. For example, using cameras and relatively simple artificial intelligence (AI) and machine learning technology, it is possible to enforce social distancing in public spaces. However, for this to be acceptable, the Government needs to inspire trust in citizens that they will not lose or abuse the data. Trust must therefore be a significant focus going forward.

Data architecture

The Government has made progress on a whole-of-government enterprise architecture, notably through the establishment of the WofG Architecture Taskforce in 2019.[5] However, there is no visible indication of progress on a whole-of-government data architecture (for example, there is little information on the adoption of My Health Record and other connecting services). Tracking and reporting on whole-of-government data architecture should be a priority to enable further progress.

Emerging technologies

The ability to make cities, transport, health, education smarter using emerging technologies such as Internet of Things (IoT) is a major future opportunity for Australia. However, unless Government can address privacy concerns (as mentioned above) this will be a lost opportunity.

Milestones, deliverables and international benchmarking

The Digital Transformation Strategy needs to commit to specific and measurable deliverables which are currently not visible in the proposal. Each government agency should foster an adaptive culture to iteratively improve its digital transformation initiatives. Performance should be benchmarked against outstanding international case studies, for example:

- Paperless hospital systems in Korea have been in place for over 20 years at their two major hospitals – Seoul National and Samsung Seoul Hospital.
- Tele-health advances overseas – especially those responding to the COVID-19 situation.
- Traffic control systems in Stockholm.
- Digital voting, data collection and payment models in European countries.
- Intelligent Operations Centres (IBM IOCs) for management of cities in the USA.

Modernising service delivery

Government agencies should leverage current and emerging technologies to create innovative solutions to meet the evolving needs of citizens. Particular areas of emerging technologies include:

- **NBN broadband services** – since citizens now have access to a two-way audio/video connection to government, this opens up a raft of new possibilities for transformation of services and support.
- **Smart mobile phones** – these are widely in use in today's society and citizens are increasingly performing their business and government transactions from their mobiles. All government agencies need to ensure their websites and services delivery have smart phone compatibility.

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[5] https://www.dta.gov.au/blogs/developing-whole-government-architecture

- **Social messaging networks** – government agencies need to adapt their communications with citizens to recognise and respond to the rapid expansion of social messaging systems and smart phones.
- **Applications of modern artificial intelligence systems** –the UK Government Digital Service published joint guidance with the Office for Artificial Intelligence in 2020, on how to use and build artificial intelligence (AI) into the public sector.[6] This guidance covers how to assess if using AI will help government agencies meet user needs, how the public sector can best use it, and how to implement AI fairly, ethically and safely.
- **Internet of Things (IoT) technology** - In the USA, State Departments of Transportation have jurisdiction over public transportation and associated infrastructure. Due to the sheer number of assets they have to manage, some are increasing their investments in IoT solutions to provide more responsive services, such as road maintenance.

Online Support Systems

Government agencies should ensure that their websites and systems for messaging with citizens include modern 'pop-up' support systems that provide citizens with rapid access to support through:
- Digital communication channels such as online chat, or email
- Virtual agents (such as chat bots) with immediate response to citizen enquiries
- Diagnostic tools to automate parts of the problem-solving process

Further information

ATSE would be pleased to discuss any of the priorities outlined in this submission. Please feel welcome to contact Alix Ziebell, Director of Policy and Government Relations at alix.ziebell@atse.org.au for more information.

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[6] https://www.openaccessgovernment.org/artificial-intelligence-in-the-public-sector/76097/