New models for Digital Government: The role of service brokers in driving innovation

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New models for Digital Government Services: the role of Service Brokers in driving innovation

Griffith, C; Dormer, A; Jakubowski, L; Percival, T; Kaplan, S; Pounder, K; Armstrong, L.

About NICTA

NICTA (National ICT Australia) is Australia's Information Communications Technology (ICT) Research Centre of Excellence and the nation's largest organisation dedicated to ICT research. NICTA's primary goal is to pursue high-impact research excellence and, through application of this research, to create national benefit and wealth for Australia.

NICTA's research addresses the technology challenges facing industry, the community and the whole nation. We seek to improve the international competitiveness of both academic ICT research and industry innovation by tightly linking the two to achieve greater economic and social impact.

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Executive Summary

Digital Government strategies are being rolled out in many Australian and international jurisdictions, ushering in a fundamentally different approach to the design and delivery of public sector services. *Digital Government* makes digital services (usually delivered through internet and mobile channels) the default delivery channels for the majority of services, and places them at the centre of innovating, designing and operating government services.

Public sector or independent *service brokers* are increasingly important to delivering and designing these services. *Service brokers* are organisations or businesses that enable customers to interact with other organisations through easy-to-use and seamless interfaces.

In the digital realm, a public sector *service brokers* example is one that provides a customer-focussed portal, such as the Federal Department of Human Services' MyGov website.

Independent *service brokers* from the private or community sectors can also provide greater service choice and innovation in how people interact with governments.

Models for independent *service brokers* include Digital Mailboxes and Personal Safeboxes (eg Australia Post); public transport information *service brokers* (eg TripView, Tripgo and Google Transit), taxation *service brokers* (eg Xero and MYOB Online), community *service brokers* (eg HubCare) and access brokers for government services (eg public libraries, online access centres, etc) to assist those unable to access digital services.

It is likely that the ambitious goals for large-scale adoption of *digital government* will only be achieved if governments encourage the involvement of independent *service brokers* to complement the role of public sector *service brokers*. However, there is currently little guidance on best practice models for agencies seeking to collaborate with independent *service brokers* or the other way around.

This report addresses this critical knowledge gap by providing a practical guide to the *service broker* model. It explains the different roles of public sector and independent *service brokers* and provides case studies of *service broker* models. This will help to inform *digital government* strategies and policies to encourage the development of public sector and independent *service brokers.*

It also considers how the emergence of a marketplace of *service brokers* will raise important issues such as how customer data is managed and protected, identity assured and how research and analysis of the data generated by these digital services can help inform better public policies and service improvement.

NICTA's has highlighted a number of best practice reforms and policies to promote the development of independent *service brokers*. It recommends government agencies should:

- Review existing service arrangements to identify opportunities for independent *service brokers* for service delivery.
- Separate their different roles as a 'wholesaler of services' (eg a platform provider) from their role as a 'retailer of services' that are delivered to customers or end users.
- Design and invest in technology systems to support the integration of independent *service brokers* as a core capability.
- Cost the delivery of their services through their own retail channels, such as face-to-face, telephone, website or apps.
- Adopt federated identity assurance techniques so users can choose the most convenient method to securely access different online services.
- Implement appropriate but not overly prescriptive privacy and security safeguards that supports both public trust and innovation.

1. Digital Government

Digital Government is a term used to describe the next development stage of a process commenced by eGovernment and Gov 2.0 initiatives within the last two decades. *Digital Government* describes an ambition to place digital services and innovation at the very centre of government operations and service delivery.[1]

The concept of electronic Government (or eGovernment) emerged in the mid 1990s with the move to get government information and services online. This was primarily a one-way model with each government agency producing often multiple websites to push information and services out to citizens.

Over the last five years, Gov 2.0 strategies have encouraged governments to adopt a greater level of openness to outside contribution in the design and development of services and policy making, as well as encouraging the reuse of public information in new and creative ways.[2]

Since then, governments have started to embrace more customer-focused and integrated approaches to manage services across multiple delivery channels including the web, mobile, call centres and face-to-face. These initiatives have made it easier for customers to find and use services irrespective of the structures of government, and support 'joined-up services' informed by the principle of 'just ask once'.[3]

> The Australian Government has set targets for 80% of the public to use digital channels to access government services by 2020 and that all high volume services be available online by 2017.

Many Australian governments have or are developing *digital government* strategies. The OECD and United Nations have also developed principles and maturity models to guide *digital government* strategies.[4] Some of the key features of *digital government* include:

- *Moving from a citizen-centric to a citizen-driven model* of developing and managing government services where citizens have greater choice and influence in how they interact with government.
- Adopting a 'Digital by default' policy where governments *make digital services the default channel* for delivering services and interacting with people and organisations outside government.
- Redesigning government services to *become fully digital from beginning to end*, and transforming or replacing existing processes to become more efficient and effective.
- Supporting the *increasing use of mobile devices* by the public to access information and services from government.
- Developing *new governance arrangements* complementing more traditional hierachical management models with more 'collaborative and participatory governance' systems.
- Building the capability of the public sector through *developing new skills*, bringing in outside expertise, promoting more collaboration and encouraging innovation.
- Adopting an *agile* approach to designing, procuring and building computer systems to ensure cost-effective, on-time delivery of essential functionality.
- Continuing the *open release of government information*, with appropriate security and privacy protocols.
- Enabling a *data driven process for collecting and analysing information* on the use of and feedback about government services that helps inform policies, make corrective actions and set priorities.

Digital government also usually involves setting targets for the uptake of digital services by the public and the proportion of government services that are 'digital by default'. For example, the European Community has set a target that 50% of citizens and 80% of businesses should be using digital channels for government services by 2015.[5] The Australian Government has set a target for 80% of the public to use digital channels to access government services by 2020. More recently it has determined that all high volume services (those with more than 50,000 interactions) be available online by 2017.[6]

Digital Government initiatives have also been informed by numerous studies that show there are significant efficiency benefits that can be realised by the transition of government services from more expensive traditional channels such as face-to-face and mail to online and mobile services that involve a greater degree of self-service.[7]

While there has been considerable progress with some *Digital Government* initiatives, there have been significant challenges as well. These include:

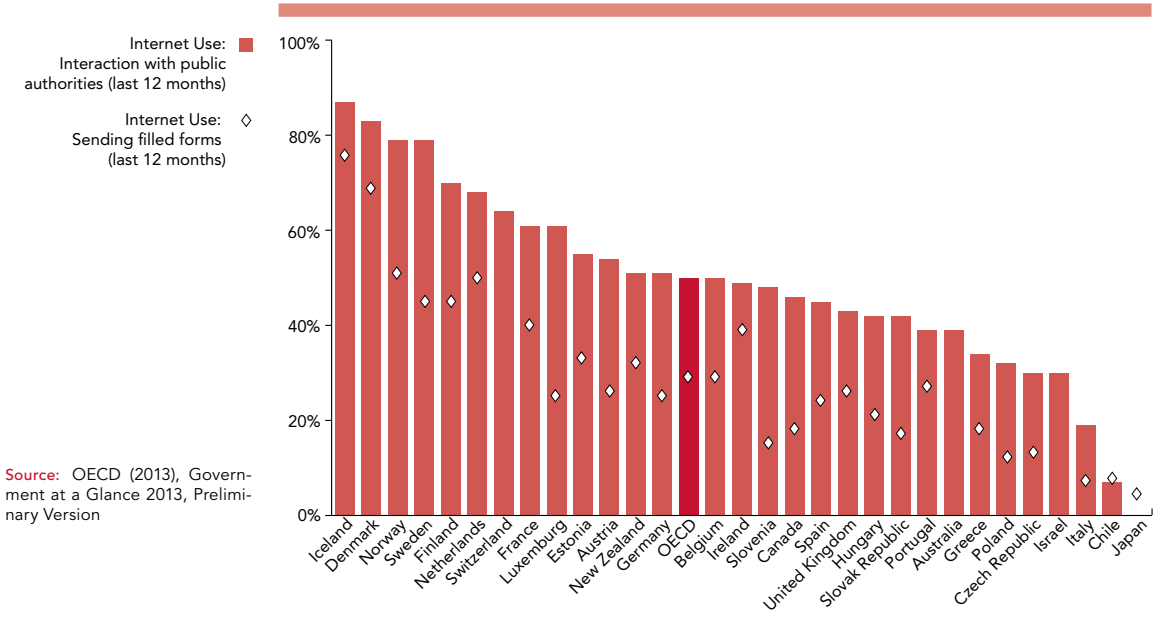
- The *low rate of adoption* of government online services in Australia with below 50% of people using digital channels.[8]
- The low level of internet use by many Australians who are heavy users of government services (3.7 million Australians or 17% of the adult population).[9]
- The *unsatisfying customer experience* with the lack of relevance and usability of government online services being an impedient for adoption. A recent study for the European Community showed that 28% of their citizens that have used a government online service were at risk of dropping out due to their experience.[10]
- The *cost and complexity of changing* or integrating legacy government computing systems environments can be a barrier to reform.

A recent UN report identified that Australia was trailing leading countries such as US, UK and South Korea in providing integrated customer-focused online government services.

- The *lack of skills and capabilities* within government agencies to support these new ways of operating.
- The promotion of a *culture of innovation* using new technology within traditionally risk-averse environments.[11]
- The *non-integrated development* of several 'one-stop shop' initiatives and systems by different levels of Government (national, state/territory and local government).[12]
- The lack of *appropriate processes and protocols to share data* between agencies to support better customer services and public benefit while protecting privacy and unnecessary centralised data collection.

While a 2014 UN survey identified Australia's position as a leader in eGovernment based on assessment of development in areas such as online services, telecommunications and human capacity, it ranked 12th in providing integrated customer-focused services to citizens, well behind leading countries like the United States, United Kingdom and South Korea.[13]

To help address these challenges, some governments have established a lead agency to drive Digital Government initiatives and champion the experience of users in their interaction with government. These agencies, often staffed with people drawn from the external digital services sector, also help guide and support other government agencies to develop best practice digital service standards.[14] International examples of such lead agencies include the Government Digital Service in the United Kingdom and the US Digital Service in the United States.[15]



Source: OECD (2013), Government at a Glance 2013, Preliminary Version

International comparison of public use of government online services, Source: United Nations E-Government Survey, 2014.

2. Service Broker model

Service brokers have a key role in progressing *Digital Government* objectives and helping customers interact with government agencies and other organisations in a simpler and more seamless manner. They are usually focussed and accountable in two directions: not just for the quality of customer experience but also the service outcome achieved for their client. *Service brokers* for government services can be public sector agencies or external independent organisations or businesses.

Some governments have established an internal *service broker* capability to develop integrated customer portals and related services on behalf of other government agencies. In the UK, for example, the Government Digital Service agency manages the government's web portal while the Australian Department of Human Services is responsible for managing the MyGov portal for the Australian Government. Many of these public sector *service brokers* are also responsible for managing integrated customer services across multiple channels, including shopfronts and call centres. Similar public sector *service brokers* have been established by several Australian state and territory governments (eg Service NSW, Smart Service Queensland, Service Tasmania and Canberra Connect).

There is an equally important role for external *service brokers*, from both the private or community sectors, to deliver *digital government* services. The concept of using independent *service brokers* to deliver government services is not new. The Australian Government's Job Services Australia (formerly Job Network) is a high profile example where employment placement services were contacted to a range of independent service providers such as Mission Australia, Salvation Army and MAX Employment.[16]

Independent *service brokers* offer people choice and convenience in how they engage with different government agencies and other community and commercial service providers. They are also able to innovate and develop alternative ways of providing services that can be more intuitive and engaging.

The role of independent *service brokers* is an extension of the concept of 'government as a platform' where government's core role is to provide the underlying information systems to allow other organisations to develop services for the public. Under this model, governments need to be able to separate out and rationalise their different roles as a wholesaler versus a retailer of information and services. Tim O'Reilly, a digital technology advocate, believes that, 'Government is a convener and an enabler–ultimately, it is a vehicle for coordinating the collective action of citizens. The real secret of success in Government 2.0 is thinking about government as a platform. If there's one thing we learn from the technology industry, it's that every big winner has been a platform company: someone whose success has enabled others, who've built on their work and multiplied its impact.' [17]

This model provides an alternative way of providing government services that can be more agile and responsive to customer needs. *Service brokers* offer the opportunity to make *Digital Government* more flexibly demand-driven and customer-focussed rather than a one-way service pushed out by governments. It also presents opportunities to drive efficiencies and financial savings for government agencies by targeting these services more accurately.

The growing use of independent service broker can also be seen as the next stage for *Digital Government* service delivery strategies. The OECD has described *Digital Government* involving three stages moving 'from government centred, to user-centred to people driven e-government'.[18] Creating a contestable market where people can choose their preferred *service brokers* will help drive this final stage of *Digital Government*.

'If there's one thing we learn from the technology industry, it's that every big winner has been a platform company: someone whose success has enabled others, who've built on their work and multiplied its impact.'

Tim O'Reilly (2009)

3. Service Broker case studies

3.1 Public sector Service Brokers

Governments have implemented a number of different models to establish public sector *service brokers* with various levels of success. The Irish Government established a pioneering Public Service Broker called 'Reach' in 1999 to act as a common entry point for all government services.[19]

Reach set up a 'customer data vault' that citizens could use to manage interactions with all national government agencies, as well as local government and health boards that opted in. This ambitious scheme was unfortunately ahead of its time, and abandoned due to lack of strong governance and support from other government agencies, barriers due to legacy technology systems and the low level of internet use by the Irish population (at that time).[20]

The United Kingdom and France have implemented more traditional customer service portals that aggregate information from government agencies and provide a single sign-on facility for a range of government services. The UK.GOV (formerly DirectGov established in 2004) and Service-Public.FR service has taken a longer-term, more gradual approach to rationalising the plethora of agency websites, promoting the use of a single sign-on facility to provide secure access to different agency computer systems and avoiding the pitfalls of building big centralised computer systems.

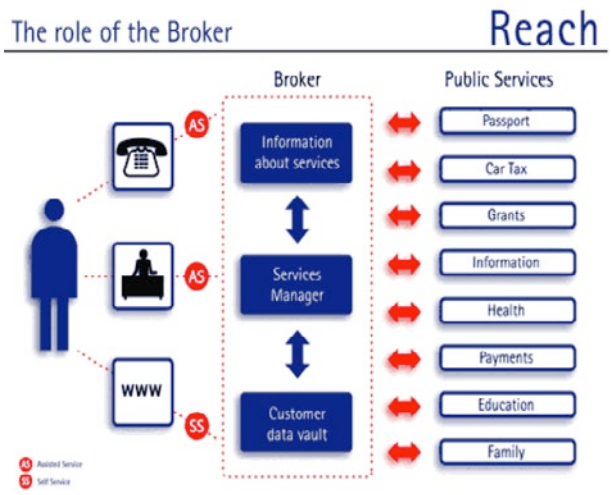


Diagram of the Irish Government's Reach Service as a public sector service broker.

3.2 Taxation service brokers

One of the most successful traditional models of using independent *service brokers* to mediate government services in Australia has been the use of private tax agents. Over 70% of personal tax returns and 90% of business tax returns are lodged via tax agents, one of the highest levels of use of tax agents internationally.[21]

Level of personal tax returns filed by tax agents in OECD and Selected Non-OECD Countries. OECD (2011).

Most of these tax returns have been managed by tax agents using proprietary software packages that can share data directly to the Australian Tax Office (ATO). To this end, tax agents have significantly improved compliance and accessibility for taxpayers.

However the role of tax agents is now itself being disrupted through the growing use of the direct electronic lodgement of personal returns using new ATO online applications, with over 2 million such returns being submitted in 2013.[22]

At the same time, business taxpayers are increasingly adopting online financial service providers such as Xero and MYOB Online that allow customers to directly lodge tax returns from their cloud-based systems. This is changing the role of tax agents from being the main intermediatory with the ATO to becoming an adviser in how a business uses a cloud based financial system to file a tax return.[23]

3.3 Digital Mailbox & Personal Safeboxes

A 2012 research report indicated that over the next few years digital mailbox services – secure delivery services that provide functionality beyond traditional bill consolidators – will begin to accelerate the transition from paper delivery; and challenge who controls the hub for customer communications, payments, and promotions.[24]

Several European countries have successfully developed Digital Mailbox services (also referred to as Personal Safeboxes) as a form of *service broker*.[25] These services have mostly been developed by or in collaboration with the national postal service seeking to transition their traditional mail business to the digital environment. They provide secure transmission and storage of bills, receipts, bank statements and notifications, as well as enabling users to store other valuable documents.

A key feature of these services is that they can be used to provide legal proof for the delivery of electronic documents, allowing for the use of electronic signatures and are more secure than ordinary email services. They are usually provided free to users with the cost borne by the organisations sending messages and documents. The E-Bok Digital Mailbox service in Denmark, for example has been successful in attracting over two-thirds of the adult population as users, in large part driven by the Danish Government's use of the service for the delivery of public sector payslips and other forms of government correspondence.[26]

In 2013 Australia Post has launched a Digital Mailbox service in Australia although use by government agencies and utilities has been limited to date.

Denmark's E-Bok Digital Mailbox service has become the default way of receiving government notices.

3.4 Community service brokers - HubCare

Service brokers also operate in the community services sector, across areas such as childcare, aged care, disability support and housing. They work with both government agencies that fund and regulate these services, as well as private and community organisations that deliver the services directly to the end-users. HubCare is a leading Australian example of a *service broker* in the childcare and community services sector.

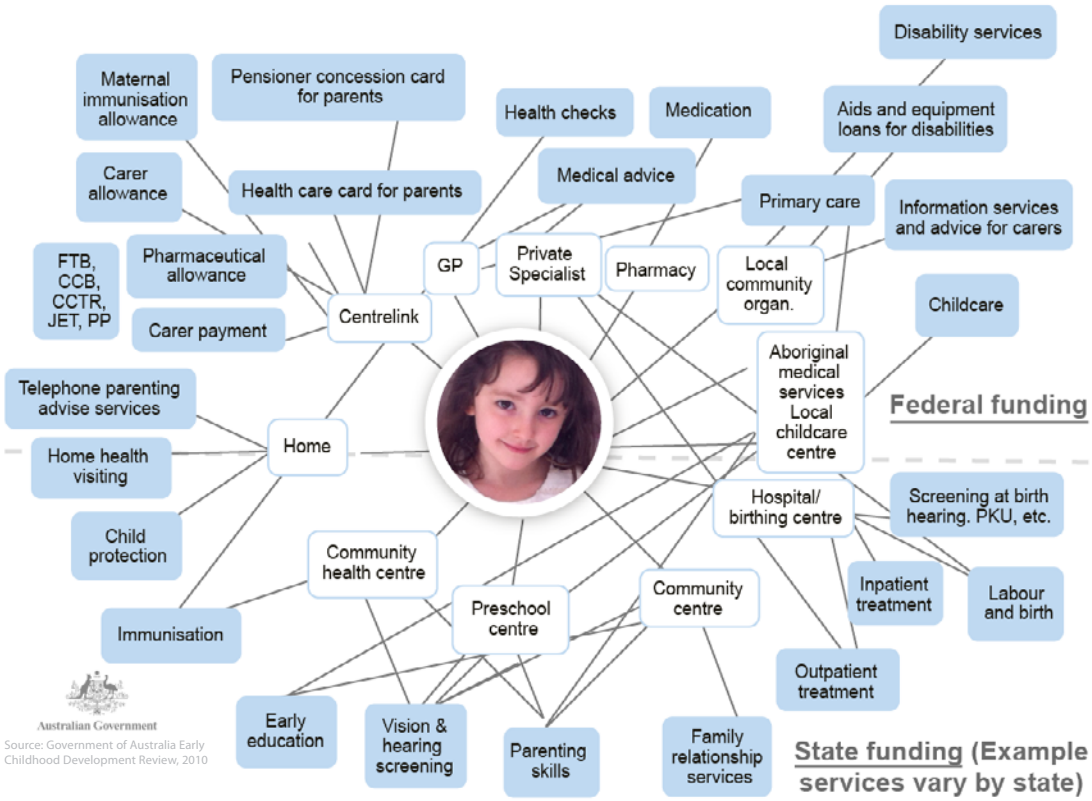
HubCare is an Australian company that allows parents and guardians to more easily manage their childcare services and payments, share personal information about a child and receive childcare subsidies from the Australian Government.

HubCare is a leading Australian example of a service broker in the childcare and community services sector.

Over eight years it has expanded to become a national service supporting the operation of 1,200 early childhood services for 1.4 million parents, guardians, children and workforce.

For childcare service providers, HubCare allows them to more easily engage with parents and guardians, manage the delivery of their services and interact seamlessly with multiple government departments and jurisdictions.

For government agencies, HubCare presents them an efficient means of paying parents and guardians, collecting and reporting essential information as well as preventing fraud.[27]



A map of the range of services available for a family with a young child that HubCare is seeking to integrate.

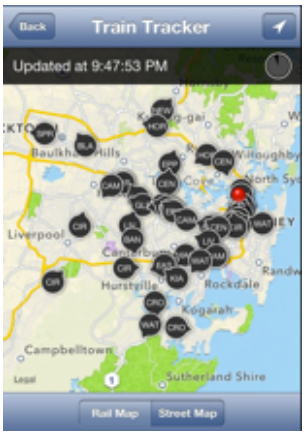
For government policy makers, Hubcare also offers useful information for strategic planning and service optimisation, such as, school capacity planning and utilisation.

HubCare is currently being extended to support other services such as determining real-time availability of childcare places, promotion of healthy eating and physical activity for children, as well as sharing of information about children at risk.[28]

The HubCare example shows the innovation that independent *service brokers* can bring in providing 'joined-up' customer initiatives to community services that straddle not only government agencies and jurisdictions, but also other community and commercial organisations.

3.5 Public transport information service brokers

Service brokers have emerged to provide public transport information services. In Australia, the publishing of public transport information has traditionally been tightly controlled by public transport authorities.
In NSW for example, there has been a dramatic relaxation of this arrangement with the opening up of public transport information and deliberate promotion of *service brokers* to more efficiently and effectively deliver this information to the public.[29]



Source: TrainTracker App showing Sydney Railway services in real-time.

The NSW Government in 2013 released its transport timetable information as 'open data' leading to the development of several popular consumer apps such as TripView, as well as for trip planning services such as Google Transit. This initiative was followed by the staged release of data services showing the real-time location of Sydney buses to a small group of developers that provide transport apps for smart phone, selected through a competitive collaboration process.[30]

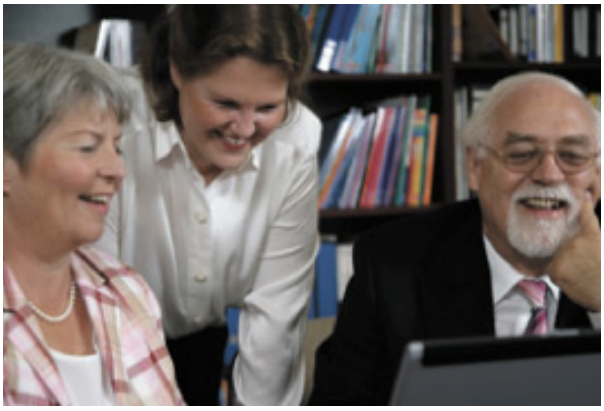
The open release of information was initially resisted internally as there was a perception that independent providers were competing with rather than complementing agency websites and smart-phone apps.[31] However, the experience has subsequently been positive and has demonstrated the value of making this data available to the public.

In the United Kingdom, the open release of public transport information has led to a similar proliferation of independent providers of transport information. In September 2014, the UK Department for Transport announced its decision to close down its own public transport journey planner website called Transport Direct stating that it 'found that equivalent travel information services are now widely available online from several other sources'.[32]

3.6 Access Brokers for Government Services

There is also an important role for a different type of *service broker* that provide access to government digital services for the many people who do not currently use the internet. This group includes 3.7 million adult Australians who do not use the internet due to a range of factors related to lack of interest, confidence, skills and cost of access. It also includes another group of people who are connected to the internet but do not use government services due to lack of awareness, ease of use and confidence in security and related safeguards.[33]

While existing awareness, training and nudging initiatives will encourage some users to take-up government digital services, they will not satisfactorily address the scale of this challenge.[34] Existing models of *Access Brokers* include public libraries and community centres that provide free or subsidised online access and training to the general public.



Devonport Online Access Centre in Tasmanian provides internet training and access for the local community.

A range of community and commercial organisations are exploring new ways to give this large group of people the relevant digital skills, confidence and physical access to the digital services. Australia's Infoxchange, a provider of technology and services to Australia's NGO sector, is developing new ways to support subsidised online access through partnerships with government and commercial service providers, technology companies and other community sector organisations.[35]

These new approaches include providing "free" network access to government and related health and education services where the cost of connectivity is bundled with the overall cost of service delivery. With this approach, the benefit of reaching people using a digital channel to efficiently deliver a service outweighs the cost of connectivity.

4. Managing customer data

With the emergence of different types of *service brokers*, the public will use several, depending on their needs and preferences. There will in effect be a marketplace of *service brokers* that will both complement and compete to deliver services to the public.

The development of this marketplace has important implications for how customer data is managed, protected and used. The current practice of public sector *service brokers* is to create a central customer account for each citizen or business through a secure website that is linked to services offered by itself or by other government agencies. With this model, customers are allowed to view a summary of their personal data as well as update or send notifications about their contact or related personal information.

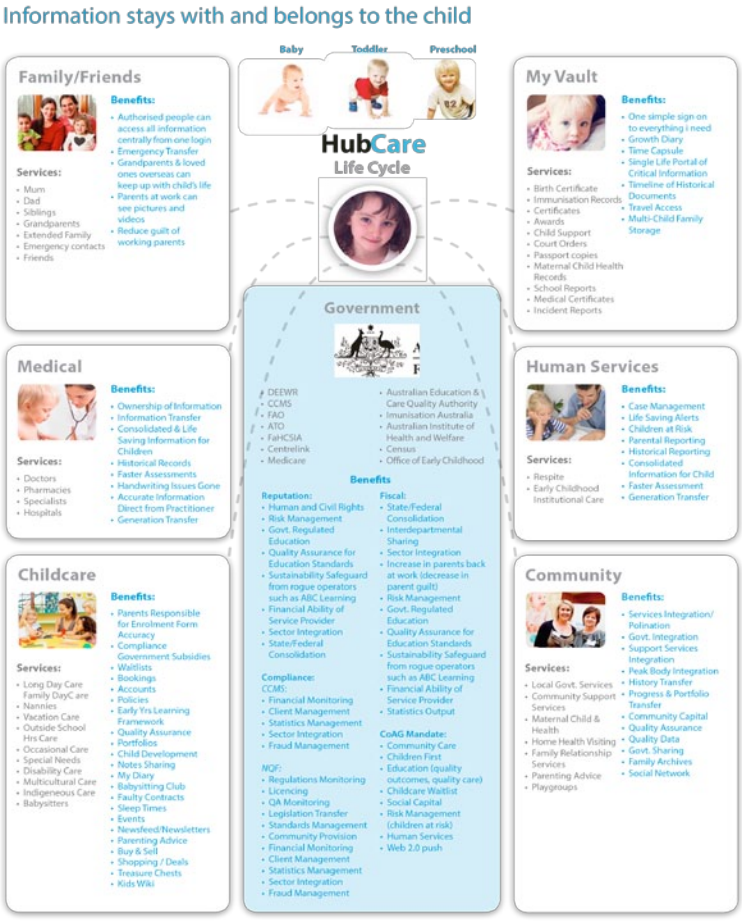
With the emergence and growth of independent *service brokers,* the public will be given greater choice in how their information is managed and their ability to control it. Customer information will be distributed and duplicated across many *service brokers* and related service providers. Such a distributed model will work best if the public have visibility about where their data is held and can elect to share common information from a preferred source of truth. *Service brokers* will also need to create and maintain public trust that personal information is secure and kept private.

Some organisations are developing the concept of a 'Customer Data Vault' where key information about an individual is entrusted to an independent service that brokers how this information is exchanged with a range of government and commercial organisations. Under this model, a person could control how much or little information is shared with other organisations. For example, a person may decide to share change of address information but not their detailed medical history. A number of *service brokers* are exploring how 'Customer Data Vaults' could be developed. This includes Mydex, a social-enterprise in the United Kingdom and HubCare in Australia.[36]

NICTA is developing techniques to analyse distributed customer data that preserves privacy

The concept of distributed customer data held by *service brokers* also poses both challenges and opportunities to use this information for research purposes. The analysis of anonymised personal data is becoming increasingly important in providing evidence for the impact of public policies such as a welfare reform or public health intervention. This analysis can also be used to better inform the design and delivery of a range of government and community services. Current government practices are to restrict access to customer information, even if has been de-identified, due to concerns about the extent of personal consent for other uses and the risk of re-identifying personal information.

Solutions for these challenges are being investigated by research organisations and independent *service brokers*. For example, NICTA is developing techniques for the analysis of distributed customer information that preserves privacy by not exposing or copying personal information.[37] Other techniques are being developed to create 'synthetic data' which is new information that is generated from but not copied from personal data.[38]



HubCare's model of a child's information record .

5. Enabling the Service Broker - recommendations

Digital Government has the potential to gain great benefit from leveraging the capabilities and strengths of *service brokers*. Opportunities to test and evaluate new models for service delivery and citizen engagement using independent *service brokers* is needed. There is also a role for encouraging the use of different models of *service brokers* for particular purposes.

NICTA's review of service broker models for this Report has highlighted a number of best practice reforms and policies that governments can implement to promote the development of independent *service brokers*.

It recommends:

- Government agencies should *review existing service arrangements to identify opportunities* for independent *service brokers* for service delivery. This should include trials to test and evaluate suitable partners. In some situations, the option of the government not providing part or all of a service directly to the public should be considered.[39]
- Government agencies should *separate their different roles* as a 'wholesaler of services' (eg a platform provider) from their role as a 'retailer of services' that are delivered to customers or end users. This will help remove either intended or unintended barriers to creating a level playing field for independent *service brokers*.[40]
- The future design of government technology infrastructure should include the possible *integration of independent service brokers as a core capability.* Future service delivery investment plans should be constructed in a way to ensure that government services allow for different forms of delivery – both via government itself but also through outside organisations or businesses. The funding of agency technology systems should also move towards a transactional model where cloud computing services are used to avoid investing in unnecessary capacity.
- In achieving the above, government agencies should *cost the delivery* of their services through their own retail channels, such as face-to-face, telephone, website or apps. By understanding the true cost of service delivery, agencies will be able to make better decisions about whether services can be provided through alternative delivery arrangements (provided all relevant safeguards are in place).[41]
- Federated *identity assurance techniques should be developed* - where identities and authentication services can be shared so users can choose the most convenient method to access different services. Some governments are starting to test and adopt identity assurance services such as Google and Facebook. [42]
- Governments also need to be *careful to ensure public confidence and trust is maintained* in the introduction of *service brokers* through appropriate security and privacy provisions. At the same time they also need to be mindful of being too prescriptive or creating rules that impede innovation in service delivery or don't encompass technological change.

Government agencies should separate their different roles as a 'wholesaler of services' versus a 'retailer of services'

Annual volume of transactions by department

All departments

Department	Digital take-up*	Total cost*	Data coverage*	Transactions per year
HM Revenue and Customs	91.1%	£556m	74.2%	1,104,803,406
Department for Transport	57.1%	£283m	76%	133,084,208
Home Office	4.83%	£1.43bn	66.7%	126,270,884
Department for Work and Pensions	17.2%	£3.80bn	93.2%	108,752,470
Department for Business, Innovation and Skills	83.6%	£259m	59.4%	41,648,005
Department of Health	42.4%	£273m	61.8%	34,836,612
Department for Environment, Food and Rural Affairs	87.5%	£96.4m	79.2%	22,499,325
Ministry of Justice	21.5%	£5.00m	54.2%	8,354,051
Cabinet Office	100%	£32.1k	91.7%	4,502,262

UK Government's Transaction Explorer website shows each agencies volume of transactions, digital take-up and delivery costs.

Appendix 1:

OECD Principles for Digital Government Strategies: 2014

Bringing Governments Closer to Citizens and Businesses[43]

Pillar 1: Engage citizens and open up government to maintain public trust

Principle 1. Promote the use of ICT for greater transparency, openness and inclusiveness

- Make ICTs a key part of the strategy to foster transparency, openness and inclusiveness of government processes and operations.
- Take steps to address existing digital divides and avoid emergence of new forms of digital exclusion.

Principle 2. Encourage engagement and participation in a multi-actor context

- Use ICT opportunities to be inclusive and engage with public, private and civil society stakeholders to create public value in the policy-making process and in service design and delivery.
- Establish a digital governance ecosystem.
- Create a data driven culture in the public sector.

Principle 3. Establish the right conditions to strengthen confidence in digital government services

- Take the necessary steps to strengthen public confidence on privacy protection and security.
- Establish criteria for balancing privacy and security considerations with the benefits of the Internet to its users (external and internal).
- Balance the need to be a provider of timely and reliable official information with the opportunities that come with sharing imperfect data.
- Review existing regimes for privacy and security and align them with related national and international efforts, including on measuring impacts.

Pillar 2: Adopt joined-up approaches to deliver public value

Principle 4. Adopt a government-wide digital government strategy

- Develop and adopt a strategy to ensure a coherent use of ICT within and across policy areas and levels of government in support of a common vision.
- Promote engagement of various stakeholders in providing input for the definition of the strategy.
- Seek complementarity, alignment and mutual reinforcement between digital government strategies and other public administration reforms and relevant sector strategies.

Principle 5. Ensure leadership and political commitment

- Secure top political level support and commitment to the national digital government agenda.
- Ensure that the vision statement embedded in the strategy is linked to broader public sector reform and policy objectives.

Principle 6. Establish effective organisational and governance frameworks

- Identify clear responsibilities within the public administration to ensure overall co-ordination.
- Establish organisational mechanisms and governance frameworks to co-ordinate use of ICTs within and across levels of government.
- Establish a framework for interoperability.
- Adopt mechanisms that enable proper 'check and balances' to reinforce accountability.
- Strengthen international co-operation to better serve citizens and businesses across borders.
- Share knowledge to learn from success stories, but also from failures.

Pillar 3: Strengthen capacities to ensure return on ICT investments

Principle 7. Articulate the business case for ICT projects to sustain funding and implementation

- Manage ICT projects through strong and clear business cases.
- Encourage and manage stakeholder participation in the articulation of business cases.

Principle 8. Reinforce institutional capacities to manage and monitor implementation

- Introduce structured approaches to manage implementation of ICT projects and to minimise risks.
- Pursue a framework for evaluation and measurement of value creation.
- Seek to reinforce the capabilities of public sector orkforce and mobilise partnerships with the private and non-governmental sectors as necessary.

Principle 9. Focus on strategic decisions on the use of ICT resources

- Appraise current assets to take strategic decisions on the use of ICT resources.
- Ensure that national procurement strategies match options for procuring ICT services and products to government needs and capability

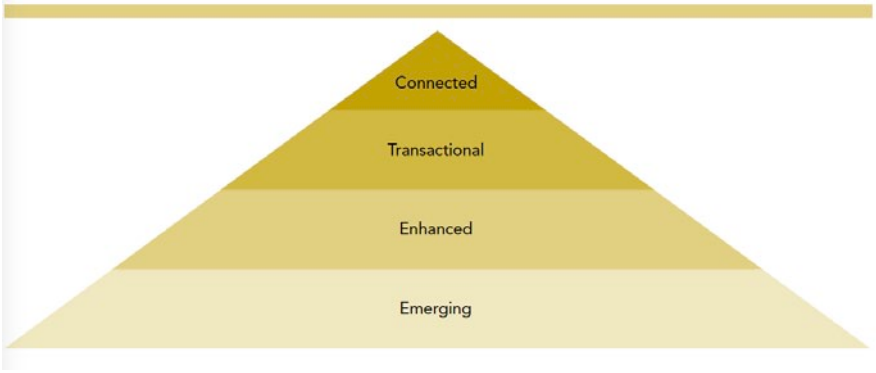
Principle 10. Review and update legal frameworks to adapt to changing contexts.

- Examine legal and regulatory framework and strive for clarity and consistency.

Appendix 2:

United Nations Four Stages of Online Services Development

The United Nations Department of Economic and Social Affairs has identified four stages of online service development for eGovernment services. These are designed to describe the journey from Emerging to the most advanced stage of Connect eGovernment services.[44]



Stage 1 Emerging information services
Government websites provide information on public policy, governance, laws, regulations, relevant documentation and types of government services provided. They have links to ministries, departments and other branches of government. Citizens are able to obtain updated information in the national government and ministries and can follow links to archived information.

Stage 2 Enhanced information services
Government websites deliver enhanced one-way or simple two-way e-communication between government and citizen, such as downloadable forms for government services and applications. The sites have audio and video capabilities and are multi-lingual. Some limited e-services enable citizens to submit requests for non-electronic forms or personal information.

Stage 3 Transactional services
Government websites engage in two-way communication with their citizens, including requesting and receiving inputs on government policies, programmes, regulations, etc. Some form of electronic authentication of the citizen's identity is required to successfully complete the exchange. Government websites process non-financial transactions, e.g. filing taxes online or applying for certificates, licences and permits. They also handle financial transactions, i.e. where money is transferred on a secure network.

Stage 4 Connected services
Government websites have changed the way governments communicate with their citizens. They are proactive in requesting information and opinions from the citizens using Web 2.0 and other interactive tools. E-services and e-solutions cut across the departments and ministries in a seamless manner, information, data and knowledge is transferred from government agencies through integrated applications. Governments have moved from a government-centric to a citizen-centric approach, where e-services are targeted to citizens through life cycle events and segmented groups to provide tailor-made services. Governments create an environment that empowers citizens to be more involved with government activities to have a voice in decision-making.

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2 Government 2.0 or Gov 2.0 refers to government policies that aim to harness collaborative digital technologies to create an environment in which government, citizens, and innovative companies can improve transparency and efficiency. Some of the initial concepts of Gov 2.0 were first outlined by Tim O'Reilly in 2009.

While Gov 2.0 created the opportunity for all manner of new services, most of initiatives to data have been about complementing government services rather than replacing or rationalising them. This perhaps reflects that most of them have been based on reusing government information in new ways or collecting new information from the public or providing data analysis, rather than providing the more complex transaction based services traditionally managed by governments.

O'Reilly, Tim, 2009a, 'Gov 2.0: It's All About The Platform' in TechCrunch, 4 September 2009,
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5 European Community, 2010,
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http://ec.europa.eu/digital-agenda/en/european-egovernment-action-plan-2011-2015
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All public bodies will monitor and evaluate take-up of eGovernment services with a view to achieving at least the 50% (for citizens) and 80% (for businesses) targets set out in the EU eGovernment Action Plan by 2015.

6 In June 2013, the Australian Government set the following targets:

By 2020, four out of five Australians will choose to engage with the Government through the internet or other types of online service.
To advance our progress towards this goal, the Government will adopt the policy of Digital First in the design and delivery of government services. Under the Digital First policy, agencies will:
- *commit to using digital channels as their main form of service delivery*
- *commit to the milestones in the Digital First roadmap*
- *implement end-to-end online processing for government services, with a single authentication process by the end of 2017.*

Advancing Australia as a Digital Economy, 2013
Department of Broadband, Communications and the Digital Economy, June 2013.
http://www.archive.dbcde.gov.au/2013/september/national_digital_economy_strategy/advancing_australia_as_a_digital_economy
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These policies and targets have been reinforced by the Coalition's policy statement for E-Government released in August 2013.

The Coalition's proposed actions are to:

1. *Designate the Internet as the default way to interact with users, other than for defined exceptions. We will look to establish a Digital Service Standard and Digital Design Guide, modeled on the UK equivalents, to ensure consistent design of current and future services.*
2. *Give people the option to elect to receive material from the government in digital form or in hard-copy, depending on their circumstances. We will aim to provide all correspondence, documents and forms in digital form, as well as hard-copy, by 2017.*
3. *Seek to ensure every Government interaction that occurs more than 50,000 times per year can be achieved online by 2017. Video-conferencing via technologies such as WRTC will be an acceptable substitute for physical proximity in most cases.*
4. *Ensure Agencies report what proportion of their digital services are not mobile-accessible from 2015. Digital services and information should be platform-agnostic and useable from devices such as tablets and smartphones.*
5. *Designate three agencies with high-volume client interaction to trial three services using next generation tele-presence, such as in-browser Web RTC, from 2014.*
6. *Provide individuals and entities (on an opt-in basis) with a unique digital 'inbox' – a secure and permanent contact point for communication with government that can be used as a stand-alone 'mailbox' or on a 'store and forward' basis in combination with an email address, Australia Post Digital Mailbox or some other destination application. This service will build on the MyGov inbox but add flexibility to use in a redirect mode or integrate with existing and emerging commercial products (e.g. APDM or digital vaults). This will be delivered within existing ICT resources. We will accelerate take-up and value to users by opening this facility to State, Territory and Local government communications.*

Coalition Liberal and National Parties, August 2013
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See *Advancing Australia as a Digital Economy*, 2013
Department of Broadband, Communications and the Digital Economy, June 2013.
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NICTA


Australian Government


NSW GOVERNMENT
Trade & Investment
State Government Victoria
Queensland Government


Australian National University
DEAKIN
Federation
Griffith UNIVERSITY
LA TROBE
MACQUARIE UNIVERSITY
MONASH University
QUT
RMIT UNIVERSITY
SWINBURNE
THE UNIVERSITY of ADELAIDE
THE UNIVERSITY of MELBOURNE
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