

Musings on the Digital Revolution (or eleven thoughts on what digital transformation might mean for the public service)

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“We are experiencing a digital revolution. Revolutions are comprehensive. They affect all parts of the system.”

This was a key insight that I have been reflecting on since I heard it on 12 November 2014. That was when I attended [Innovating the Public Sector: from Ideas to Impact](#), an OECD conference on public sector innovation, and heard Henri Verdier, Chief Data Officer, say those words (translated from French, so I’m paraphrasing).

I already knew this was true – the digital world is all around us and the changes are evident to see. It is already reshaping business models and economic and social processes. Yet I’m not sure I’d realised the full consequences of that truth.

Perhaps it was simply hearing someone from France talk about revolutions, but it prompted me to consider what this digital revolution really meant. How a revolution, over time, affects how we think, how we understand things, and what we do and why.

Had I really thought about what digital would mean for all parts of society? Or if I had, had I really considered what the implications were?

Whatever the reason, this is something I have been thinking about since that conference.

The following are some of my reflections about what digital transformation might mean for the public service and its operating environment. It is intended as a provocation or an exploration, rather than trying to predict or be prescriptive about what might or should happen.

It is also a personal piece. While it does draw on my experience within the public service and working on public sector innovation, on countless conversations with many people, and some fairly eclectic reading, it is a personal reflection.

1. Digital delivery is fast, but digital thinking might not be

The digital world is faster than the industrial world. In the digital world, it is possible to develop, test, implement and scale an idea, product or platform quickly. This very aspect may actually work to slow down the policy process.

In government the delivery of services has traditionally been slower moving than policy. The policy intent could be worked out quickly, but the supporting measures to implement could take a long time. Coming up with a new policy idea, while never easy, was something that could be done quickly. Delivering on those policy ideas was slower. Supporting infrastructure, systems, processes would need to be developed, capability built, and resources marshalled.

This is still the case in much of what the public service does, but a digital world will likely change that, making it easier to make adjustments to service delivery relatively quickly.

Digital platforms and networks can be redone, repurposed or redirected far faster than previous soft infrastructures. The capabilities to scale up and roll out initiatives, provide information and new products/services are now widely available, whether in the private, not-for-profit, citizen or government sectors. The necessary skills and resources in the wider system can, in principle, be connected and delivered quickly.

Yet those same capabilities can act to slow and complicate the policy development process. The digital policy process is likely to be even more contested, interlinked and dependent on agents outside of the public sector.

In a digital world it is easier for other actors to put forward their own ideas, suggestions or criticisms. It is often easier for vested interests to weigh in on the policy process and to point out and publicise the downside of any changes. Digital platforms mean that others can promulgate their own critiques or assessments of government policy, in a way that might once have been limited to large organisations, associations or think tanks. A meme or a social media campaign can be as deadly to an idea or initiative as mainstream media critiques. Crowdfunding can allow [ceasing government advisory bodies to continue their work](#), or for [individuals to write a book](#) specifically on critiquing and assessing government policy.

The shift to digital is not the only force acting on the agility of the policy development process. Forces such as deregulation, globalisation, and increasing dependencies between policy areas all contribute in different ways. But the shift to digital is arguably instrumental in speeding up delivery of services.

What might the shift in this dynamic between service delivery and policy mean?

One implication it suggests is that it will be more important for the public service to be aware of, and engage with, policy issues early. While big data and real-time analytics may help with this, speculative approaches such as horizon scanning, and insight methods such as design thinking, are also likely to be valuable. Some of these approaches and tools may well be formalised by governments, such as the predictive intelligence-gathering platform, [The Good Judgement Project](#). Anything that helps identify emerging trends, and enable consideration before an issue crystallises in public discourse, may help provide the necessary additional agility to the policy process.

2. The digital version of products are services (relationships)

In the digital world products are becoming services (which in turn are about relationships). Policy has recently had many of the characteristics of a product approach - developing, launching, delivering - that may no longer be suitable. What might policy as a service look like?

Digital products are becoming services. Software is increasingly cloud-based, where updates are regular or continuous. [Software as a service](#) offers many advantages over static products for both consumers and providers. It also changes the nature of the interaction from being transactional (e.g. a one off purchase) to ongoing (e.g. an ongoing relationship).

This same trend can be seen in regards to many other products, even those not purely information-based such as music or books. For instance, Tesla Motors [upgrade its cars with over-the-air updates](#), making the relationship with the customer much closer. The Internet of Things will presumably make such practices commonplace. The decision to purchase or enter a

relationship with a provider will be about longer-term capabilities and how their offering fits with the wider ecosystem, not just what is available right then and there.

If we apply this shift in perspective to the public service, the implications for service delivery are perhaps not that different. Services may have a stronger relationship component than previously, and service design will likely continue to incorporate practices such as design thinking and agile in order to be sufficiently responsive.

But what of policy?

Policy has traditionally been product-like. It is something that is developed and then announced as a distinct 'thing' - "this is our policy". While the delivery takes time, and there may be (product) reviews and decisions to amend or discontinue, policy at its core has been a product in nature.

If we consider policy as a service, what might that look like?

Presumably it means regular or even constant iteration and adjustment. It means continual feedback and testing. Rather than product launch/policy announcements, it means regular updates and changes of features. It means less one-size fits all, and more consideration of individual circumstances and situational contexts. It is informed by real time data about delivery and usage, performance and reception. It is not discrete from delivery. Those delivering it, receiving it, or co-producing the service will have a stronger stake in deliberations.

Policy as a service will likely require a different approach to, and conception of, the policy making process. Within the Australian context, it might imply that an administrative separation of policy and programme may be hard to maintain. It also poses challenges to how the public service thinks of itself and its work.

3. Digital and legislation may not be a comfortable fit

The legislative process, for many good reasons, is relatively slow, defined and discrete. How might legislation evolve in a digital world where speed, responsiveness and agility are prized?

A world of agile and lean, a world of iteration, testing and data, raises questions for the process and understanding of legislation and regulation.

Quickly adapting and updating policies and services can be difficult when legislation in place. Legislation is about precision and definition which can prohibit or limit quick change. Speed is not an inherent good in the legislative process or for the public sector more broadly. Care has to be given to make sure that unintended consequences are minimised or limited, that fairness and administrative due process are considered.

But in a digital world, more emphasis may be placed on the ability to respond quickly and adjust settings at short notice. New technologies, new business models, new ways of thinking, and thinking of policy as a service may require changes to the idea of legislation. How might a legislative cycle allow for fast iteration, for repeated disruptive technologies and business models, for rapidly evolving social understandings of problems and issues?

While there is unlikely to be a single or correct response to such shift, some possible options suggest themselves:

- Deregulation may be one approach. Allowing external systems (such as self-regulation, reputation markets, or targets/quotas) to take the responsibility for responding to the change may be a work-around for a government process that is either ill-suited, or unable to adjust quickly
- Building in the capacity for exceptions or temporary exemptions might be another option. Giving the executive or regulatory agencies the ability to allow experiments to occur might provide any flexibility needed without removing or modifying core elements of the system
- Identifying challenges early and considering what leeway is already within existing laws is another. An example of this in practice can be seen with the UK Government and its [Fixing the Foundations](#) (2015) report which identifies that it will “require departments to work with regulators to publish Innovation Plans ... These will set out how legislation and enforcement frameworks could adapt to emerging technologies and disruptive business models.” Being forward looking and picking up on legislative tensions before they are realised may allow the current approach to continue
- Speeding up the current system and looking at how to speed up the process of forming, reviewing and agreeing legislation
- In the future it might also be possible to look at using big data and intelligent systems to legislate by parameters, with built-in stabilisers or feedback systems that allow or restrict activity depending on desired outcomes.

Whatever form it takes (and some other interesting options are [put forward here](#)), it is interesting to consider how the legislative process might need to evolve to reflect a digital world.

4. Digital is both convergent and fragmented

Siloed bureaucracy is ill-suited to cross-cutting issues that are experienced differently by fragmenting identities.

The digital world is one of convergence – issues are no longer easily categorised or separated, and hard divides become blurred. Services/products, users/providers, businesses/citizens – such distinctions are no longer clear cut. The realities of citizens’ lives are that they see and experience the world as interlinked – health, welfare, employment, education and industry are not separate.

At the same time, digital platforms make it easier for different interests and identities to coalesce as distinct groupings and to see themselves as communities of interest, whether it be around political views, religious beliefs or notions of self. Such groupings can make policy and service more complex, by contributing a greater range of differing expectations or views, and making it harder to find a unifying narrative or to establish common ground.

Policy and service delivery are being expected to reflect the reality of convergence and the expectation of whole-of-citizen/citizen-centred responses. Single entry points, portals, one-stop-shops and even moving to a [single website](#) are all being explored by governments. Less clear is how policy making can respond. The practicalities of policy making are that it is a process of trying to understand discrete problems.

One indication of how this will be overcome is the growth of innovation 'labs' around the world, with Denmark's [MindLab](#) being one of the first. These labs are platforms for bringing together different perspectives, methodologies and voices to investigate and understand issues. They offer an opportunity to frame problems (and possible responses) in new ways, without having to repurpose existing agencies or tinker with the machinery of government. A question remains as to how well these labs are equipped to integrate resulting insights back into a siloed bureaucracy. If a problem is looked at from a citizen/whole-of-government perspective, it is likely the resultant answers will be whole-of-government in nature. Entrenched institutional perspectives and processes may need to be overcome and/or removed to allow the space for such a new solution to be properly implemented.

Another option is Deloitte's notion of '[GovCloud](#)'.

"A cloud-based government workforce, or GovCloud, could comprise employees who undertake creative, problem-focused work. Rather than existing in any single agency, these workers could reside in the cloud, making them truly government-wide employees. Cloud teams could be directed by thinner agencies than those that exist today. Agencies and cloud teams could be supported by government-wide shared services that prevent the establishment of new, permanent structures by assisting with ongoing, routine work."

Such infrastructure might help provide the flexibility to recombine capabilities in ways better suited to addressing system-wide issues. Some experimentation with this approach is [already taking place](#).

A third alternative includes using initiatives that provide a forum and a process for drawing together relevant parties and actors and giving them the support and constraint needed to reach new ways of understanding and responding to problems. An example of this is the [90 Day Projects](#) run in South Australia.

Whatever is done, the tendency to move away from a system of discrete functional organisations with individual systems and processes and vested interests in particular slices of problems is likely to accelerate.

5. Digital changes power dynamics

Digital systems are interdependent. Digital accelerates the growth and reach of technologies. Digital changes how governments interact with citizens, and how citizens interact with governments.

The public service is a professional environment. There are a high number of people who have undertaken tertiary education (in the Australian Public Service it is [close to 60% and at a higher rate for new engagements](#)). There is a lot of complex and complicated process, with associated jargon and abstract concepts. A professional identity is often built around competence, expertise, knowledge and familiarity with abstractions and with particular disciplines.

Taking a citizen-centred view often requires understanding the reality and nuance of the lives of actual citizens. It is not enough to prescribe behaviour for many intractable problems - the state needs to work with citizens to achieve sustainable and effective results for issues ranging from

health, environment, or industry. These issues require the active engagement of those who are affected (e.g. the public service can rarely implement behavioural change).

Such an approach means that individual experience is seen not only as valid and legitimate but as a primary source of knowledge and truth. This does not always sit well with notions of professionalism and expertise, where those with the training and the formal knowledge have traditionally had the power.

Digital exacerbates this trend.

Firstly, digital makes codified knowledge far more accessible to a much wider audience. Individuals can access information about any topic or issue, and through platforms such as MOOCs (massive open online courses) can learn from some of the world's best about nearly any topic.

Secondly, digital is fast, so that the growth in knowledge for nearly any topic or area of expertise is increasing at a rate that few, if any, will be able to keep up with. Professionals cannot be assured that they know all the latest in their field - indeed they can only be guaranteed that others will know something that they don't.

Thirdly, digital (in conjunction with globalisation and other forces) is helping individuals access new capabilities and technologies that were once only available to large organisations or the state. This "consumerisation" of capability means that individuals can access and engage a diverse range of expertise, skills, audiences, funding and technology. An individual or small group may no longer need the support of companies or governments to do things such as helping [protect endangered wildlife](#), to [conduct research](#), or to attempt to address a global issue like [ocean plastic pollution](#).

Structures (such as innovation labs) and methods (such as co-design) that are more suited to the digital environment are by nature flatter and value people's experience and insights. A professional public service can find this challenging and uncomfortable.

In addition, a digital world is a networked world. Networks, as opposed to hierarchies, place more emphasis on individuals and groups rather than roles, position or organisations.

A digital world is also one of constant change, meaning that stories and experience are often a more valued teaching technique than codified knowledge which might not be directly translatable to a shifting environment.

In such a world - of social networks and published case studies - many individual public servants are more likely to have a public profile, either through social media, or as being identified with specific projects and initiatives. This can be challenging to traditionally hierarchical organisations where positions and roles are the defining characteristics. A lower level staff member may now have expertise, experience and recognition that higher positional level staff may not.

How might such a change be reflected in organisational policies and processes such as workflows, briefing, staff development, recognition and remuneration?

A digital world therefore likely has very different power dynamics, both with stakeholders and clients and within organisations.

6. Digital winners take most

Digital is global. Digital is cheap. Digital winners win big.

Digital platforms gain value from participation, and the more people who use them, the more valuable they become to others. Facebook, Twitter, Google have all benefited from these [network effects](#), as have many other companies. In the digital space, the winners get most, if not all, the benefit, making it hard for others to enter the market.

In this way first movers can play a significant role in shaping options and locking-in particular pathways (or at least stopping some other pathways being explored).

What might this mean for the public service?

Governments are playing in a global space and digital services need not be limited to citizens. Digital services may have minimal or no marginal cost, and governments may gain value from having a larger user base rather (for instance in terms of analytics, user insights, identifying trends or modelling outcomes).

An example of a government offering a service to those outside its country is already in practice with Estonia which offers "[e-Residency](#)" to non-residents/non-citizens.

"All of these (and more) efficient and easy-to-use services have been available to Estonians for over a decade. By offering e-Residents the same services, Estonia is proudly pioneering the idea of a country without borders."

So there is a situation where:

- Governments can easily offer many services to those in other countries for little to no cost by simply scaling up digital services that they offer to citizens
- Governments may gain value from doing so by getting access to larger data sets and greater information flows (and possibly from the cachet of being seen as a global leader)
- First mover advantages and network effects may mean that governments who "follow" are disadvantaged.

At the same time governments that move first may lock in pathways. For instance, services that are directed by user needs and behavioural insights may lock-in certain behavioural patterns or embed particular values or beliefs that are later very hard to change. The social mores and understanding of the citizen's role will be shaped by the platforms and digital services that are introduced. Without consideration of longer-term aims and shifts, governments may inadvertently enter into pathway dependencies that will be hard to change later.

What are the implications of this?

One interpretation is that governments will need to have a continual look to the future(s), to consider what is possible and which scenarios are likely to be more preferable, and ensure that decisions about platforms and services are made in that context. Tools such as horizon scanning, scenario planning and causal layered analysis may assist with this.

7. Digital innovation begets more digital innovation, but who approved it?

Innovation is an evolving practice. It is an exponential technology - it builds upon what has gone before. Each wave allows for new options.

Digital innovation is different to industrial innovation. It is a faster, more iterative practice. Design thinking, virtual environments and 3D printing allow for much more rapid realisation of ideas and testing and refinement. Crowd-funding and just-in-time global supply chains allow for an individual [to have an idea and bring it to fruition relatively quickly](#).

Digital innovation will likely continue to be faster and more constant. A system with more interlinked players, each having the potential for more meaningful influence and impact on the system, means that the need for others to respond will increase. One change will equal the need for multiple other changes, which in turn beget the need for more changes. The system may reach a new equilibrium at some stage, but before then each innovation will be like a marble hitting other marbles, that in turn hit other marbles, and so on.

Despite being unpredictable, the one constant of innovation is that it is about changing the status quo, which regardless of intent, is a political process. It is about value, about power, about allocation of resources, and shaping the future.

Constant innovation will, at times, be in uneasy tension with the political process. Who has accountability for the decisions involved in the innovation process, when it may be rapid and fluid? When does an innovation have democratic legitimacy?

If an innovation is small/incremental in nature, it might be presumed to be 'safe' or intrinsically approved as a democratic intervention. It might just be improving the capacity of the system to do what has been agreed - to do more with the same or fewer resources. However that in turn may be a political act - to maintain or improve a system, when not acting might have led to a more fundamental questioning of the current approach and whether it was appropriate.

Innovation that is at the service delivery front might also seem to be politically legitimate. Responding to user needs and making a service faster, more effective or more efficient may be seen as a proxy for democratically legitimate. However that presumes that there are not multiple choices that could be made between equally legitimate pathways. Who makes those decisions and when, or is the process seen as being ongoing with no actual considered assessments of alternatives?

Of course the public service also has a democratic responsibility to innovate - to not innovate is to deny the legitimate expectations of citizens and governments that improvements will be made.

This might seem an academic debate, however as the rate of innovation speeds up, and as innovations result in the need for further innovation, the public service may introduce many innovations that seem minor and are assumed as an inherent good. This may be a risky assumption. Innovation is a political process involving making choices between differing possibilities and disrupting the status quo. Innovation has political implications, not least that it creates value differently for different groups.

Innovation processes such as co-design, co-creation and co-production may be sufficient to ensure legitimacy for many innovation outcomes, but there is no guarantee. Increased complexity, a

dynamic environment, and speed are likely to complicate the important questions of accountability, responsibility and legitimacy in the public service.

8. Stability is no longer inherently valuable

“Show me a completely smooth operation and I’ll show you someone who’s covering mistakes. Real boats rock.”¹ Digital strikes at the core of many operational assumptions of the public service.

Constant innovation means constant change, and constant (re)negotiation. Constant innovation means engaging with divergence, navigating diverse assumptions, experiences and people. Constant innovation means questioning how the public service works.

Digital might mean looking at how others, non-traditional public servants, can enter the system quickly to add value, and possibly leave just as quickly. An example of this in practice is the [Presidential Innovation Fellows program](#).

Digital might mean overcoming hierarchical traditions, and being able to tap into expertise and experience from those within the organisation and allowing them to lead projects. Digital might require different ways of remunerating and recognising talent, given a constantly shifting environment.

Digital might mean that organisations have to get used to constant restructuring or realignments, and faster turnover of high level staff, reflecting a faster moving environment. Reliance on closed networks and safe (career) choices may be risky, as an unpredictable context means that conservative guesses may be outpaced by reality.

For an institution built around stability, the public service may find digital challenging at an operational level until a new understanding has developed. Core practices and traditions in recruitment, in management, in briefing and approvals and delegations, in stakeholder management, in how policy and services are thought about - all of these and more will be questioned and possibly rethought.

9. The long tail

“The future is already here — it's just not very evenly distributed.”²

Not everywhere will engage with the digital shift at the same time. It will affect different people, sectors and organisations differently at different times.

Yet the public service will need to cater for all.

It may be challenging for organisations to cater to both ends of the spectrum at once. Considerably different processes, different understandings of how things work, and different attitudes will exist. While this might currently manifest as thinking about catering for online and non-online services, in the future the distinctions may be more nuanced and complex.

¹ Frank Herbert, 1985, *Chapterhouse: Dune*

² William Gibson, 1993, https://en.wikiquote.org/wiki/William_Gibson

10. Digital allows for, and legitimises, different information preferences

"The medium is the message." Digital allows information to be presented and represented in a huge variety of ways.

Information production is experiencing exponential rates of growth. YouTube and Instagram are indicators of the appetite for information in visual form. The written word no longer has the dominance that it once did.

In an information rich environment, brevity and distillation of meaning is prized. 'Time poor' decision makers want access to the right information, but limited to the bare essentials they need to make the right calls.

Digital allows for information to be presented in many many ways. This diversity allows individuals to explore their preferences for how they like to receive and interact with information, where once they may have been limited to stylistic (written) forms that had arisen in their organisation.

In the public service, the preferences of one or two major decision-makers at the top of the organisation can shape how everyone else presents information regardless of their individual preferences. However, in an interconnected world where issues may be shared across organisations and audiences, that may no longer be the case. Different decision makers will expect to receive information in a style that suits them - and a digital world will reinforce that expectation.

A digital world may require public servants to be much better at developing stories and engaging with creative forms of presenting and sharing information that builds the case for an argument across media (blogs, microblogs, photos, videos, art) and across information forms (e.g. written/visual, anecdotal/statistical, personal/ impersonal, detailed/big picture).

11. Friction as a source of democratic engagement?

Why do people care about public services? Does anyone truly care about an extremely well-run public service unless it stops working?

A digital world may very possibly be one where governments are able to smooth out, simplify and automate much of government service delivery. A digital world may even lead to governments that are fast, responsive and agile, engaging with issues early on and working with citizens and stakeholders to develop effective and co-designed and co-produced processes.

Though it may seem remote or unlikely now, it is worth considering what the outcome of such a scenario might be.

In his 1969 science fiction novel *Whipping Star* the author Frank Herbert posited the creation of a '[Bureau of Sabotage](#)' in the far future, as a response to government becoming tremendously efficient and responsive and where red tape has disappeared. The Bureau acts as a means of slowing down the sped-up processes of government in order to provide citizens the opportunity to reflect upon changes and the direction of government.

While this is obviously far-fetched, there is an underlying point of relevance to this discussion. If the public service does manage to become a truly digital one, where things can be rolled out

quickly and smoothly, particularly in service delivery, the regular engagement of citizens with government may become seamless and barely noticeable.

This would seem a clear good. However, perhaps consideration should be given to what that means for how citizens engage with government, and with the democratic process. How will citizens see government if the now obvious areas of service delivery become part of the background? Will the focus be more on the policy process and any issues that are difficult, complex and possibly intractable - e.g. difficult and not immediately relatable?

Consideration might be given to better understanding in the public service how and why citizens engage with the democratic process, and whether in a digital world where greater efficiencies and levels of responsiveness are possible, different channels for engagement are required.

In summary

- Digital is fast. The public service may need to improve its capabilities at identifying and considering emerging issues earlier in order to be able to effectively respond
- Policy in a digital world is likely to be more like a service than a product, which will require a different conceptual approach to policymaking
- Digital and the legislative process are unlikely to be a comfortable match. Consideration of how the legislative process can be agile will be needed
- New structures and organising frameworks will be required to match a more complex policy environment
- These structures and digital trends will change the power dynamics both within and without public service agencies
- Digital services may not be limited to residents/citizens and first mover advantage may be strong and also lock in particular pathways
- Digital innovation will be fast and constant and will raise likely questions around legitimacy of innovations for public service agencies
- A digital perspective will likely challenge many of the operating procedures of the public service
- The digital shift will affect different areas at different times. Public sector organisations may find it difficult to cater to both ends of the spectrum at the same time
- Digital allows for information to be presented in very different ways according to different preferences. This may be challenging for the public service
- A digital public service might actually achieve significant efficiencies and seamless service delivery. What might this achievement mean for how citizens engage with their governments?

This is not intended as a prescription nor is it seeking to be a definitive text about digital government. Rather it is intended to provoke discussion and explore what the possible implications of 'digital' might be.

