



# Observatory of Public Sector Innovation

## What's the problem? Learning to identify and understand the need for innovation

ALPHA VERSION: FOR DISCUSSION AND COMMENT

The Observatory of Public Sector Innovation collects and analyses examples and shared experiences of public sector innovation to provide practical advice to countries on how to make innovation work.

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## An OECD public sector innovation lifecycle study on learning for innovation

**Intent:** The intent of this study is to explore how public sector organisations and public servants can start the innovation process with a stronger understanding of where they actually need to innovate.

**Audience:** It has been written for:

- Senior leaders who are looking to develop innovation capability within their organisations
- Those departments and teams that have, or that are developing, formal innovation strategies
- Individual public servants seeking to innovate within their organisations.

### Alpha Version – October 2016

This study is the first of a series of studies looking at the innovation lifecycle. This series of studies is being undertaken by the OECD and funded under a European Commission Horizon 2020 grant.

This study, looking at the identifying issues stage of the innovation process, has been drafted as an '[alpha](#)' version of the intended product. This 'early release' has been undertaken with the aim of seeking input from the intended audience to ensure the final product will meet the needs of public servants and their organisations.

After feedback has been obtained and refinements made, an improved 'beta' version will be released, with the intent of seeking further advice and feedback. It is intended that a more definitive version will then be published after the finalisation of the other studies in this innovation lifecycle study series.

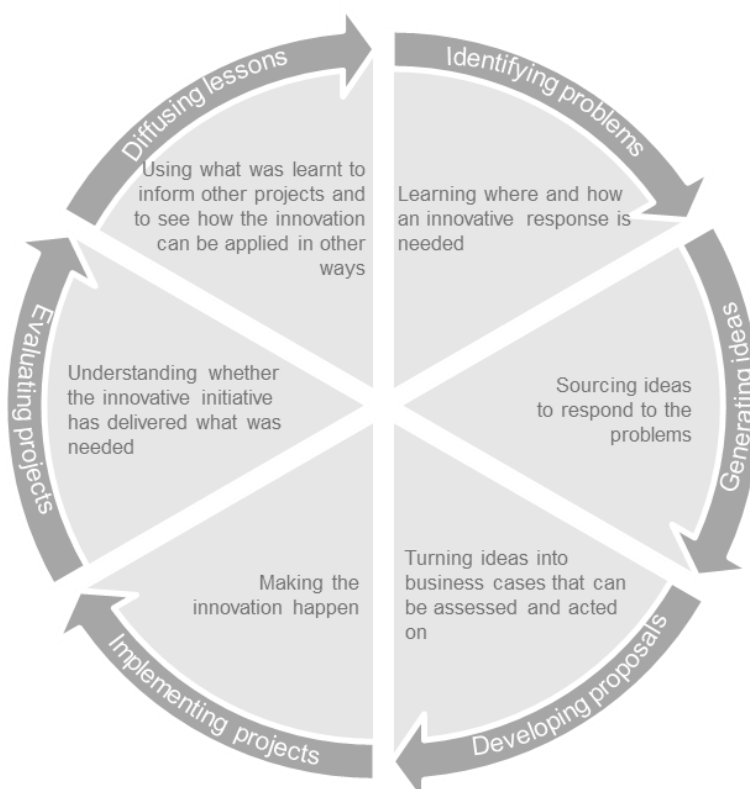
Further information about this work can be found on the [Observatory of Public Sector Innovation website](#).

## Summary

Public sector organisations are dealing with large and varied changes in their operating environment (see OECD 2015). Many traditional practices are no longer delivering the results that are expected or needed. There are pressures to perform, to meet changing expectations of government and to build trust that government can meet the needs of citizens. There is a need to lift productivity and effectiveness, and to work with citizens in new and more inclusive ways.

These pressures mean that public sector organisations will need to look to innovative approaches in order to meet the demands placed upon them. Organisations need to integrate innovation as part of their core activities. This means that they need to systematically put in place processes for the identification of problems, the generation of ideas, the formalisation of business cases, implementation of promising projects, evaluation and the diffusion of results. This process has been identified in the Innovation Lifecycle.

**Figure 1: The Innovation Lifecycle**



### The Importance of Learning

The beginning of the innovation process is the identification of problems where an innovative response is required. If the reason for innovation is not clear, then the inevitable hurdles faced in introducing a new way of thinking or doing things will be much harder, and the other stages of the process much trickier than they need to be. i.e. if it is not clear what the problem being solved is, then assessing which new ideas will be useful will be hard, and effort could easily be wasted on exploring ideas that will not thrive.

Effectively identifying problems relies on learning – learning what is not working, what might be possible, or what might be potential problems.

Learning is also a fundamental part of the overall innovation process. The learning process ensures that innovation is tailored to an organisation's needs and context and is adapted across an organisation and its ecosystem. Innovation without learning is luck, and governments cannot rely on luck or chance to answer citizen expectations.

### **A Changing Context**

Public sector organisations have always had to learn (and the public sector has a long history of innovating) however there are two issues which suggest that particular attention needs to be given to learning for innovation:

- Learning completely new things is different and more difficult than learning things that are already well understood. Innovation is an uncertain and exploratory process, and involves different considerations than learning about existing things, where the process is better understood.
- Public sector organisations are operating in a context of constant new information which makes the scale and scope of learning needed very different from the world in which public services evolved.

### **Effective Learning for Innovation**

An appreciation of the different features of learning for innovation provides a suggested framework for organisations and individuals, revolving around three cascading factors:

- **Enabling Conditions:** What are the enabling conditions that encourage organisations and individuals to reflect and allow people to challenge existing ways of thinking?
- **Channels for Learning:** What are the channels for learning? How is new intelligence about the world and the changing operating context accessed?
- **Tools:** What are the tools that can be used to reveal current assumptions? That can best demonstrated the difference between 'what is' and 'what is wanted', and provide insight into how to respond to that gap?

### **Enabling Conditions**

Organisations can maximise their learning for innovation by giving consideration to a number of enabling factors, grouped around:

- Purpose – having a clear understanding of what the organisation is trying to achieve
- Openness – being open to different perspectives
- Capacity – having the capacity to absorb and integrate learning from outside of the organisation
- Capability – having the ability to act and build on the new things that are learnt
- X-Factor – recognising that each organisation is different, and will need to assess their own context and learning for innovation needs.

With the right environment for learning for innovation, organisations will be better placed to understand and recognise problems when they emerge.

### **Channels for Learning**

Organisations will also need to ensure that they are connected with, and are learning from, the constant source stream of new information and knowledge being generated in the world.

Organisations can do this by considering the different channels by which relevant information reaches the organisation:

- Where is the organisation currently learning from?
- Which channels provide the most surprises or unexpected learning?
- Are there any big gaps in these channels for learning?
- Do any of these channels allow the organisation to challenge existing knowledge, and to potentially encourage it to ‘unlearn’ fundamental assumptions or investment in the status quo?

The right mix of channels can ensure that organisations are receiving the intelligence they need to identify problems early on.

### *Tools*

A number of tools can also assist with the process of identifying and learning about problems, and how to begin to respond. A number of tools are proposed, based on their ability to meet or contribute to some or all of the following features:

- Clarifying intent
- Making assumptions explicit and building shared understanding
- Avoiding jumping to conclusions
- Connecting with others
- Experimentation and reducing the cost of failing
- Reframing the problem.

*Table 1: Summary of Key Considerations for Effective Learning for Innovation*

Enabling Conditions	Channels for Learning	Tools
<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Openness</li> <li>• Capacity</li> <li>• Capability</li> <li>• X-Factor</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge management and learning and development</li> <li>• Staff mobility</li> <li>• Benchmarking and environmental scanning</li> <li>• Data</li> <li>• Socialisation</li> <li>• Complaints and feedback</li> <li>• Networks</li> <li>• Open Innovation</li> <li>• Accountability, evaluations, political processes and crises</li> <li>• Enabling others</li> <li>• Unlearning and mechanisms of challenge</li> </ul>	<ul style="list-style-type: none"> <li>• Dashboards</li> <li>• Horizon scanning</li> <li>• Design thinking</li> <li>• Systems thinking</li> <li>• Behavioural insights</li> <li>• Peer-to-peer learning</li> <li>• Learning organisation</li> <li>• Innovation Labs</li> </ul>

These can be considered at the level of the organisation, its leaders, and its employees. A series of prompting questions to enable self-assessment or reflection about learning for innovation have been developed and are provided at Appendix 1.

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## 1. Introduction

Governments operate in a world of change (and sometimes turmoil) where there are increasing or changing expectations from citizens about what public services are and can be. As new possibilities are demonstrated around the world – by other governments, by industry or not-for-profits, in consumer products and in services – there is a legitimate expectation by citizens that their own governments can *and will* do better. If, or when, such expectations are unmet, the level of trust in public institutions and faith in their ability to deliver will suffer.

Governments are also operating in a world of constraints (financial and political). Rarely is it the case that governments can simply mandate for something to be or spend their way out of a problem. Governments need to become more effective and more productive, to make the most of the resources they do have. To achieve an increase in effectiveness and productivity will require changing how things are done.

Government also face the challenge that they cannot act alone and that many problems (e.g. obesity) require the active involvement of citizens if there is to be progress. So governments need to look to new ways of thinking and doing if they are to deliver results, and many of these new ways will involve a changed, and potentially more inclusive, relationship with citizens.

Building trust in government, achieving greater productivity, and working in new (and potentially inclusive) ways with citizens – for these and other reasons the public service is faced with a need to do things differently. That means doing new things (and stopping old ones), thinking about things in new ways (and ceasing to think in old ways), and organising and working with others in new ways. That means innovation.

### OECD and European Commission Studies on the Innovation Lifecycle

This need has resulted in topic of public sector innovation receiving significant attention in recent years, with many governments supporting, facilitating or encouraging more innovative responses in their public services.

The innovation process for the public sector has slowly become better understood as more has been done and more systematic approaches have been applied. More is known about how organisations and individual public servants can apply innovative initiatives to meet citizen and country needs.

This growing knowledge can be seen in the [proliferation of advice and toolkits](#), each with guidance on how to apply different methods and what is needed to do certain types of innovative projects.

Yet this large body of information can actually make it more difficult for time-pressed public servants and resource-constrained organisations who may be unfamiliar with innovation to navigate the process while simultaneously delivering on their existing responsibilities.

This series of studies, funded under the [European Commission's Horizon 2020 program](#), aims to take stock and review what is known, identify possible gaps in that knowledge, and to provide guidance about:

- The issues faced by innovators and organisations when trying to introduce novel initiatives
- What tools and methods are most appropriate at different stages of the innovation process and under what conditions

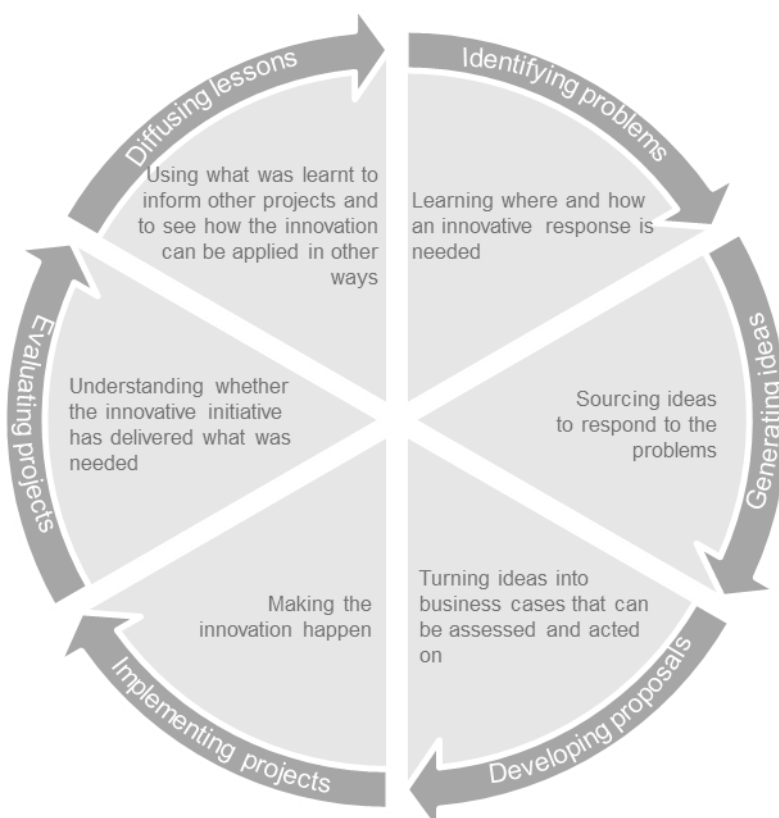
- How a stronger innovation capability may fit with existing processes and initiatives.

The studies will contribute to a better understanding of how public sector organisations can effectively use the innovation process to get better outcomes, including by:

- Identifying problems and learning where and how an innovative response is needed
- Generating ideas to respond to those problems
- Developing proposals that turn those ideas into business cases that can be assessed and acted upon
- Implementing the innovation projects that proceed
- Evaluating (and integrating) the outcomes of those innovation projects and whether the innovative initiative has delivered what was needed
- Diffusing the lessons from those evaluations, and using those lessons to inform other projects and how other problems might be responded to.

The cyclical and interconnected nature of the innovation process is shown in Figure 2.

*Figure 2: The Innovation Lifecycle*



The insights from these studies, and the feedback received on them, will feed into the development of an innovation toolkit for public servants and their agencies.

### **Identifying Problems and Learning for Innovation**

Innovation will only be useful if it is understood where it is needed – innovating for the sake of it will tie up resources and organisational energy on things that do not matter. The act of identifying problems – of understanding that there is something that could be better – and responding with

innovation – applying a novel approach that changes the operating environment – are both heavily reliant on learning. Innovation without learning – understanding the relationship between action and result – is luck, and governments cannot rely on luck or chance when confronted with significant economic, environmental and social problems that affect people’s lives. Innovation needs to be a systematic, if uncertain process, and that means learning must be a core feature of effective organisations.

Yet as will be shown, learning for innovation is not the same as learning to improve things that are well understood. Learning for innovation in an interconnected world where new information is constantly being generated is no easy task.

Public sector organisations really need to understand how to learn for innovation, and to assess whether they are really positioning themselves for ongoing learning. They need to understand what enables effective learning for innovation, the mechanisms by which learning for innovation occurs, and the tools that can help.

This study looks at these elements and considers how organisations, those that work within them, and those that work with them can really learn for innovation and thereby understand the problems that require innovation.

## 2. Learning for innovation

### The Importance of Knowing What the Problem is and Why Innovation is Needed

Innovation is an important process for any organisation. New ways of doing things, new ways of thinking, new ways of organising – innovation is a big part of how organisations become able to do new things, and become able to respond to problems where existing strategies may not be working as well as needed. Any organisation that has to operate in a changing world has to innovate if it is to stay relevant.

Yet innovation is also a process that, by definition, means changing how things are, and thereby going against the status quo. Therefore any innovation introduced will come up against barriers or resistance.<sup>1</sup> The barriers might involve competition from business-as-usual pressures for resources or organisational investment. They might involve scepticism about whether an innovative response is required or what form it should take. Or there may be resistance from those who are invested in the way things currently operate. Or it may just be difficult to introduce something that has not been done before, and so is uncertain with no surety about the outcome and the risk of unintended consequences.

There are also organisational challenges. An organisation can only pursue so many ideas at any one time. New skills or capabilities may be required. Promising innovations need to be integrated with the organisation's existing practices. Previous activities may need to be stopped.

Thus innovation should not be thought of as an easy process, but one that needs to be managed in order to deliver beneficial results.

Such attributes mean that innovation should be a strategic activity – i.e. there needs to be deliberate consideration of where novel responses are really required and why. An organisation needs to be able to answer the question, "Where is innovation most needed?" or risk tying up resources and effort in trying something new that unnecessarily distracts from organisational priorities and delivering on what is expected.

That is not to say that there are not times that innovation is opportunistic. There may be a chance to change how things are done and to introduce a novel approach which will lead to better outcomes without responding to a specific problem. E.g. there may be a chance to experiment with a new technology platform before the need is clear. Such innovation can be valuable in understanding what is now possible, that previously was not.

However, in the public sector, innovation will generally be problem-oriented (Windrum 2008b). For instance, in a public sector environment there are often accountability requirements that mean the possible costs of experimenting on something where there is no apparent need will likely outweigh the potential benefits. Competition for scarce resources (financial as well as political) also tends to prioritise attention on problems rather than opportunities. In addition, a problem can help generate a pressure *for* innovation to happen from stakeholders and partners, to potentially match any pressure *against* innovation happening from others either inside or outside of the organisation. The barriers to innovation are likely to be reduced when the reason for innovation is clear.

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<sup>1</sup> A detailed discussion of potential barriers to innovation in public sector organisations can be found in *Empowering Change: Fostering Innovation in the Australian Public Service*, Australian Government 2010

Therefore innovation will likely be of most use in the public sector when there is a clear understanding of what the problem is and why an innovative response is appropriate. This is why the innovation lifecycle (Figure 3) starts with ‘Identifying Problems’.

**Figure 3: Identifying Problems**



### **Finding Out What the Problems are Requires Learning for Innovation**

Yet identifying problems that require an innovative response is easier said than done.

Often the most significant or troublesome problems may not be clear, or their causes may not be immediately apparent. A problem may start out small and seemingly manageable before suddenly turning into a major political issue – a situation that might have been avoided if time had been spent on the problem early on. Or it may be discovered that the apparent problem was actually connected to another issue entirely. Or it could be that the response to a problem raises more problems than the ones it solves.

How then can an organisation really understand what the problems really are and when an innovative response is required? Some considerations include being able to:

1. Identify new problems when they arise (What has changed? What is needed now that was not before? Why?)
2. Identify when old problems need novel responses (Has the problem changed? Has the understanding of the problem changed? Has the possible range of options for responding or their effectiveness changed?)
3. Identify what the real problem is (How well understood is the problem? Is it connected to other problems? Can the problem be addressed at a different level?)

4. Identify when or how it is best to respond (Is now the right time to introduce an innovation? If not, what might need to happen first?)
5. Identify the possible implications of the problem and of acting (Will things get worse if the problem is not addressed? Is the problem emergent and will it become harder to address as time goes on? What will success in tackling the problem mean – will it create other problems?)
6. Identify when new solutions are actually working (What has changed? Is it better? If yes, how sure is it that it was the intervention being looked at?)

All of these considerations require one thing: gaining an understanding of the connection between different things – learning.

Learning may be in the form of acquiring new knowledge, of acquiring new skills and capabilities that enable acting on that knowledge, or of acquiring new ways of thinking, behaving and acting that result in better learning. Learning may take place through formal teaching and education, or through mentoring or direct experience, from sensing and testing, from investigation or experimentation, or even through play.

Learning for innovation inherently involves dealing with uncertainty and ambiguity. When doing new things, the relationships between different factors are unclear. If a completely new service is offered by a government, the results cannot be known beforehand, and any predictions will rely on limited comparable past experiences. So learning for innovation is messy, as it can be hard to work out what relates to what, and whether an innovative initiative caused something or not.

Learning for innovation also has to be ongoing. Without ongoing learning, there will be a static understanding of the problem. Introducing an innovative initiative – something that is novel and that has impact – will change the system that it is introduced to. Change begets other changes, which means that learning cannot stop when something is introduced.

Innovation and learning then are intimately entwined. Successful innovation without learning is luck, and luck is not a process that can or should be relied upon for addressing problems. Public sector organisations need to be able to systematically apply innovation in order to achieve better outcomes, and therefore public sector organisations need to be able to systematically learn.

Therefore public sector organisations, and the leaders, teams and individuals within them can only identify the problems where a novel response is needed through learning.

So learning is essential to identifying problems and to successful innovation – but has that not always been the case? Have not organisations, public or private, always been learning? What's different about learning for innovation now that might require organisations to approach it differently?

### 3. A Changing Context – A New Urgency to Learning for Innovation

Public sector organisations have always had to deal with change, and there is a long history of innovation in the public sector.

What is different now?

Much has been said over recent decades about how the public sector now operates in a world of increasing change and new and powerful technologies, dealing with new or more fully appreciated complex/wicked problems, with resource and capacity constraints, and greater expectations by citizens informed by experience with a private sector providing more targeted and contemporary services.

Why is this really different though, and why does it really require a changed response? Surely the work of the public sector has never been completely straightforward, that there have always been unmatched stakeholder and citizen demands, constraints and new challenges? Yet has not the work continued on, with real progress made?

This study suggests that there are three interconnected and reinforcing factors that explain why now is different. These factors are:

- A changed understanding of the operating environment, from one where information was relatively scarce to one of astonishing abundance
- A changed understanding, learnt from this new abundant information, of the problems and issues where an innovative response is required
- A changed understanding, learnt from innovative responses to those problems, of what can be done, which in turn provides increased information about the world and what works.

This ongoing and reinforcing cycle of change means that the need for public sector agencies to get better at identifying problems and learning is increasing.

The following explores and explains each of these factors in turn.

#### A Changed Understanding of the Operating Environment

Once upon a time, public sector organisations faced an environment where:

- A lot of their work was highly standardised and relatively routine
- There were new challenges and problems, but there were relatively clear lines of accountability and responsibility
- Issues tended to be relatively slow moving, with some time taken before most political issues registered and became dominant issues needing a response
- There was recognition that agencies housed considerable expertise and could be expected to know what could or should be done
- They could plan with a fair degree of confidence and under relatively stable financial frameworks.

In more recent times, there's been a lot of change happening. While there can be debate over how much change there has been, how fast it is occurring, and whether the rate of change is accelerating, one thing would seem clear: it is pervasive and ubiquitous.

*"In today's global environment, change rather than stability is the order of the day. Rapid changes in technology, cultural values, social life, competition and citizen/customers' demands have increased the rate at which organisations need to alter their strategies and structures in order to survive and operate successfully." (Michalopoulos & Pschogios 2002, p.1)*

*"... the environment that most individuals and organizations confront today is not what it was at the recent turn of the century; it is even radically dissimilar from what it was, say, 25, 50 or 100 years ago – market conditions were consistent; assumptions would remain valid for years; decisions would not have to be revisited for some time." (Serrat 2012, p.4)*

One of the main forces underpinning this change is a move from relative little/scarcity to relative abundance of information in its different manifestations (drawing on the work of Hagel, Brown and Davison 2010; Diamandis and Kotler 2012; Ismail, Malone and Geest 2014). For instance, significant change can be seen in:

- **Data availability** – there is a growth in government data sets, and a massive growth in externally collected/generated data sets. The Internet of Things and a growing proliferation of sensors likely means that there will be an ever greater abundance of data for all sorts of indicators, whether health, environmental, economic, or social. Where once governments may have had to rely on proxies or estimates, in the near future it is possible that government agencies will be able to draw on unprecedented amounts of real-time data.
- **Relevant and accessible external knowledge** – once upon a time accessing knowledge outside of an organisation was slow and potentially difficult. It could be hard to find out who knew what, and the means to share information were much slower and more laborious to coordinate. In today's connected world, accessing, aggregating and analysing relevant information from outside of your organisation is vastly easier and less costly.
- **Customer / citizen insights** – data and information sometimes tell us only so much. Sometimes there's a need for 'anecdotal' or insights drawn from the lived experiences of citizens and those using government services. Social media and other real-time feedback mechanisms combined with more sophisticated tools and ethnographic approaches provide a rich source of such insights. At the same time, design thinking is becoming an increasingly important tool for governments. Gaining not just a greater understanding of what people are doing, but also insight into why, is easier than ever before.
- **Actors with possible influence or impact** – in a connected world, it is easier for individuals and small organisations to have an impact, and on that is possibly global in nature. Where once government agencies might have needed to only think about and engage with a small number of powerful institutional actors, now start-ups and citizen ventures can pop-up very quickly and with significant affect.



- **External events or developments that matter** – in an interconnected world, events in one field can more easily have cascading ripples across the board. Where once public sector agencies might have limited their monitoring or planning to a small number of situations, now developments from unrelated arenas can often have big impacts on the work of an agency.
- **Possible futures** – in a world with a small(er) amount of data and information, where there were fewer actors or events that might have a direct impact on the work of an organisation, planning needed to deal with a much narrower range of possible futures or scenarios. In an interconnected world, with rapid changes in information and technology, there is a much wider range of possible futures, and that makes planning and trying to be prepared a lot more complex.

At the same time, some of the same conditions that have resulted in this shift from scarcity to abundance have also meant that organisations are also in a better position to consider and experiment with a lot more ideas. Design thinking, ICT tools, ready availability of data, computational power and simulation – these and other factors mean that the cost of having and testing an idea (to some extent) is far cheaper than it once might have been. It is now far easier to quickly develop, validate and prototype an idea with relevant people – in a way that once would have either been impossible or have taken far more time and resources.

*Figure 4: Move from Scarcity to Abundance of Information*



#### **A Changed Understanding of Where Innovation is Needed**

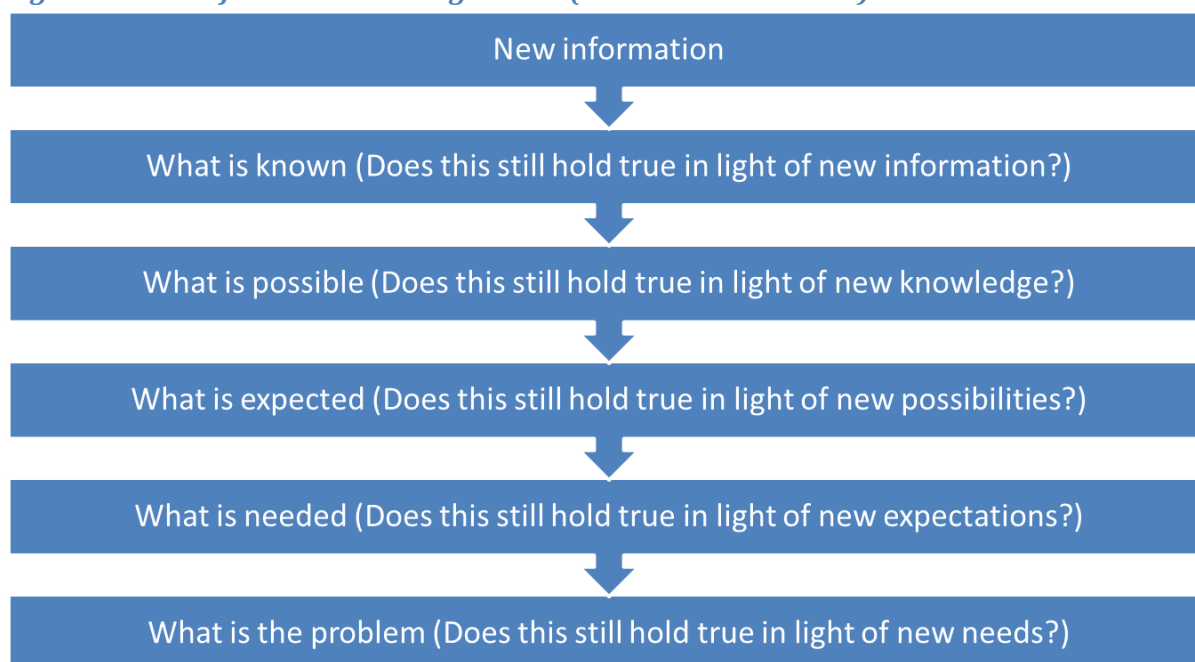
The impact of this growth in new information is manifold. Coming from a background of scarcity and control, the public sector tends to view more information as a definitive good. However in some ways it can make the operating environment more difficult, rather than less. For instance, it now may be uncertain what information should be drawn on and how for what issues, who should be consulted about what, and who needs to be involved in what projects. It can be hard to filter what is relevant and what is 'noise'.

Specifically in regards to innovation, it is suggested that the growth in information has the following impacts:

- What is known needs to be revisited – new information means that it cannot be assumed that what was known is still relevant/valid or applicable
- What is possible needs to be revisited – new knowledge means that it cannot be assumed that what was possible before still is. Old possibilities will have been replaced by new ones
- What is expected needs to be revisited – new possibilities mean that expectations of what *could be* will inform expectations of what *should be*
- What is needed needs to be revisited – new expectations mean there will be new (unmet) needs.
- What is the problem needs to be revisited – new needs mean there will be new (or revealed or better understood) problems.

In other words this process of revisiting – of learning or relearning – leads to a changed understanding of the problems where innovative responses are needed.

**Figure 5: New Information Leading to New (or Better Understood) Problems**



### **A Changed Understanding of What *Can* be Done**

The learning process does not stop once the problems are identified however. A problem is not a static artefact – it, and the understanding of it, will change as the problem is engaged with, and more is learnt. This learning continues as organisations experiment to see what can be done, and this further reveals the nature of the problems they are trying to address.

Sometimes this experimentation will be minor and can fit within existing practices, existing procedures and existing organisational structures.

Sometimes though, just as with disruptive innovation in the private sector, there will be a need for new ‘business’ or operating models – new ways of organising and working to deliver the innovation

needed (whether a government program, a service, a policy or regulation, or even a new way of conceptualising or delivering an aspect of government).

This is not surprising – after all, much of the public sector as an institution came about in the late 1800s/early 1900s and reflected the trends of the time including the industrial revolution, the emergence of bureaucracies, and a belief in scientific management (Bourgon 2008, p.391). Part of this industrial model was about the control of information through rigid hierarchies (NAPA 2009, p.iv) reflecting its previous scarcity.

It makes sense that without major changes, the public sector as an institution may struggle to deliver some of the innovative responses required in a world of constant new information. Experimentation with new practices, with new ways of thinking, and new ways of organising and new conceptions of how government works may be needed.

This in turn will lead to learning about what works, and this new information will lead to learning about what is needed (and thus new problems requiring innovative responses).

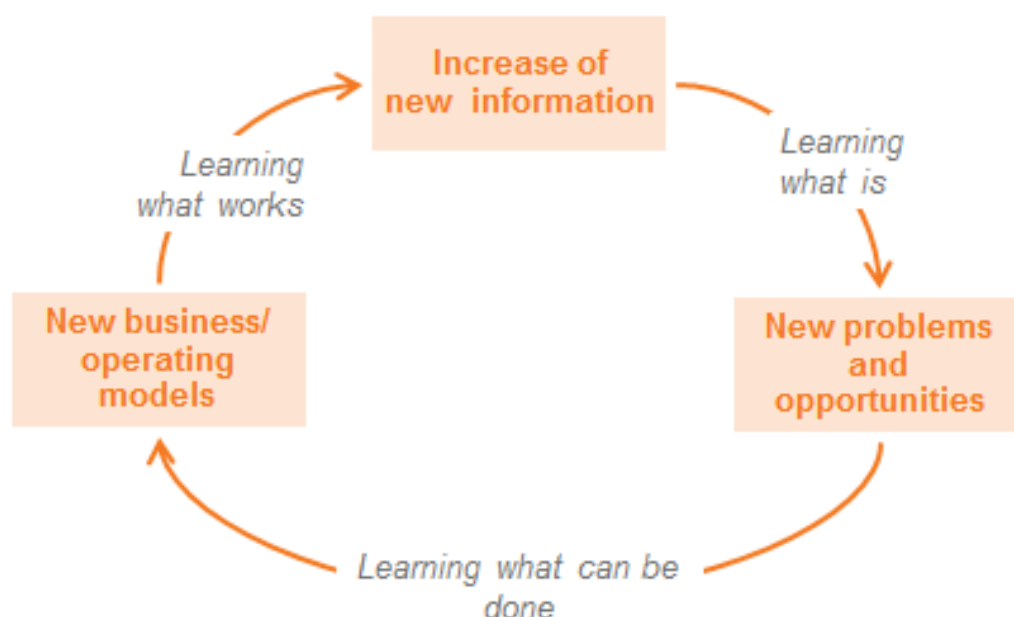
### **A Changed Context Requires a Changed Approach to Learning**

In summary, these various changes suggest that government organisations cannot rely on things continuing as they have, nor that policies, programs and services can stay the same. Organisations must continually revisit where innovation is needed, and then seek to respond, to adjust, to adapt (and sometimes even transform).

*“In an evolving economy or open society, policy and governance must continually experiment and innovate ‘just to keep up’.” (Potts 2009, p.42)*

Governments, as part of a wider dynamic system will react to changes from elsewhere with their own changes, which in turn will generate other changes, each of which may require a reassessment of what needs to be done, what can be done and how it should be done.

**Figure 6: New Information, New Problems, New Ways of Responding and Continuous Learning**



At each stage of this cycle *learning is key*, whether it be:

1. Learning what is – what is known, leading to learning of what is possible, then what is expected, then what is needed, then what is the problem faced
2. Learning what can be done – what are the responses to those needs, those problems
3. Learning what works – so not only what can be done, but what should be done and what is sustainable.

This requires placing ongoing learning and innovation as fundamental activities of public sector organisations.

*“In an era of rapid shifts in technology, consumer demands, and public sector challenges, a capacity for organizational innovation isn’t a luxury – it is an imperative. The ability to innovate is the ability to adapt to an altered environment, to learn, to evolve.” (Eggers & Singh 2009, p.6)*

## 4. Learning About Learning for Innovation

Learning is an important mechanism for public sector organisations. It is how they can effectively identify and then understand what problems there are that require an innovative response.

Of course, just as public sector agencies have been dealing with change for a long time, so too has learning been a core part of how the public sector has operated. Learning is not new for the public sector. Many organisations have learning systems in place and have looked at both [organisational learning](#) and being a [learning organisation](#).

However, the scale and nature of the learning needed is now arguably different.

It has already been learnt, by the majority of organisations around the world, both public and private that innovation is not an easy thing.

*“... making innovation work inside a large organization is a much more complex and multifaceted challenge than most people imagine. It simply cannot be solved with some Band-Aid or silver bullet.” (Skarzynski & Gibson 2008, p.14)*

Learning, as a key component of innovation, should also be regarded as difficult. Both learning and innovation are things that organisations have experience with, but it is clear that there is more to be done to in order to master it. Both innovation and learning cannot be approached by agencies as ‘set and forget’ practices. There needs to be *an ongoing journey of learning about learning and how to innovate*.

*“You can never say, ‘We are a learning organization,’ any more than you can say, ‘I am an enlightened person.’ The more you learn, the more acutely aware you become of your ignorance.” (Senge 2006, p.16)*

### What has Been Learnt About Learning so Far?

Learning is something that everyone does, and increasingly it is something that everyone is doing in some form all the time. Learning can take many forms (formal and informal, structured and ad hoc). It can take place in many ways (through coaching, experience, immersion or even simply through reading or observation). While common and ubiquitous, learning and how it occurs varies dramatically.

This variation suggests that it is worth looking at the dimensions of learning and how they apply to innovation in the public sector. The following sections outline some of the aspects of learning that are proposed as relevant to the innovation process and understanding where and when innovation is needed.

### Different Types of Things to be Learnt: Tacit vs Explicit Knowledge

The first thing to note is that information and knowledge comes in different forms. Perrott (2015, p.81) outlines a knowledge hierarchy of data (e.g. facts and statistics), information (organised data), knowledge (actionable information that aids decision-making) and wisdom (the judgement to act appropriately to the situation).

Another distinction is that knowledge can be explicit or tacit:

- Explicit knowledge is that which is abstract, externalised, articulated in some form, and easily shareable (Perrott 2015; Zineldin 2015, Cummings 2003)
- Tacit knowledge is the knowledge that is “held in the minds of individuals” (Perrott 2015, p.82). It is “derived from direct experience and action” and is “subconsciously understood and applied but difficult to articulate” (Zineldin 2015, p. 133). Tacit knowledge is context-based (Cummings 2003, p.16).

In the context of learning for innovation, the most relevant aspects are tacit knowledge. As an exploratory activity of the unknown, innovation involves tacit knowledge. When an innovation is new it will involve a high degree of tacit knowledge. Only when an innovation has been repeatedly implemented and starts to become well understood (and loses its status as a new innovation) will the knowledge associated with it become easy to explain, to convey to others who have not been involved.

The other important aspect of this is that knowledge (and wisdom) associated with innovation is held by individuals, whereas explicit knowledge is that of organisations (Zineldin 2015).

This has two implications:

- First, that learning for innovation places a lot of emphasis on individual learning and their access to tacit knowledge. If organisations want to improve the access of individual employees, it means that they need to help connect them with other individuals that are also exploring “relevant edges” (Hagel, Brown & Davison 2010, p.66).
- Second, that the transfer of tacit knowledge is not a transactional activity – you cannot simply download it or buy it from someone else. It requires trust and respect.

*Particularly when dealing with tacit knowledge, which is so hard to express, it is essential to cultivate empathy and respect for the other’s experiences while probing beneath the surface to render the tacit knowledge a little more visible. (Hagel, Brown & Davison 2010, p.128)*

While organisations should seek to codify and make tacit knowledge explicit (so that the learning can be exploited as widely as possible), the constant increase in new information and the need for ongoing experimentation innovation means that there will always be new tacit knowledge. Learning for innovation places an emphasis on the learning capabilities of individuals that slower changing environments avoided.

### Different Types of Learning

Not only are there different types of things that can be learnt, there are also different types of learning. One of the most well-known frameworks (Argyris & Schön 1978 in Örtenblad 2013b) distinguishes between three types of learning:

- Single-loop learning – learning within the existing mindset. Within government this may be efficiency-oriented, and about achieving ‘value for money’ (Gilson, Dunleavy and Tinkler 2009, p.17)
- Double-loop learning – exploratory learning, which builds on the first loop and questions underlying causes and seeks lasting solutions (Lawrence 1998, p.4). Within government this may

be framed as ‘Can we do it better?’ (Gilson, Dunleavy and Tinkler 2009, p.17). Double-loop learning tends to be more conceptual and social learning and can be radical in nature (Windrum 2008, p.10). While it can lead to a changed mindset, it might also result in a stronger belief in the current one (Örtenblad 2013b, p.27)

- Deuteron-learning – “which indicates that the learner learns about learning in itself, that is, about how one learns, to ensure a more successful learning” (Örtenblad 2013b, p.27).

It is argued that single-loop learning can lead to ‘skilled incompetence’ (Argyris & Schön 1978 in Lawrence 1998), or “teams full of people who are incredibly proficient at keeping themselves from learning” (Senge 2006, p.26). In other words, there is a risk that this type of learning does not allow for challenges to how the world is understood, guaranteeing that people will continue doing things that may no longer be appropriate.

Innovation is more likely to be linked with double-loop learning, with its potential for doing better by doing differently, rather than single-loop learning’s focus on doing the same things better. Deuteron-learning is relevant for both learning and innovation, where more sophisticated practice can be achieved with maturity of understanding of the practice itself. This may include moving from learning facts/knowledge/processes/procedures, to learning skills, to learning to adapt (e.g. experimentation), to learning to learn (questioning, and testing hypotheses) (Yusoff 2005, p.464-465).

Another way of considering learning (Mayer 2005 in Clark & Mayer 2008) is that it involves:

- Selecting – that learners can focus on what the important information that will help them build new knowledge and skills
- Organising – putting the information into a coherent mental representation
- Integrating – integrating the new information with prior knowledge.

Clark and Mayer (2008) would advise against focussing entirely on ‘learning by doing’ and that ‘learning by viewing’ or more passive learning (e.g. reading or lectures) is also important. Their distinction is relevant to learning for innovation in that they note that learning by doing can involve a heavier cognitive load, meaning there is less capacity for integrating the information into long-term memory. Innovation is associated with learning by doing, which hints at the need for opportunities for reflection and for consideration separate to the doing. In this way, double-loop learning and learning for innovation likely need built-in processes for reflection about what was learnt during the doing of innovative work. It should not be assumed people will automatically be able to make the most of the learning they could gain from experience with innovation; there also needs to be revisiting, a chance to organise and integrate the new information with existing knowledge.

One further type of learning that is very relevant to innovation is that of ‘unlearning’. Hsu (2013) suggests that learning often works to reinforce the existing way of working, and can hold organisations back from seeing other possibilities. Unlearning then might be about removing a dominance of certain types of knowledge, of certain styles of thinking, and allowing for a plurality of difference types of knowledge. So for instance, this might be about appreciating what different disciplines and different traditions of learning and knowledge can add. Hsu (2013, p.363) argues a radical unlearning organisation would be advantaged by having a capacity to critique, and inspire new ways of thinking and acting that are not constrained by existing presuppositions.

This concept also contributes to the idea of learning for innovation being strongly associated with the opportunity to reflect and to challenge existing assumptions. Learning (and unlearning for innovation) involves considering knowledge in context, questioning whether current understandings are the most appropriate, and the valuing of different perspectives and different forms and schools of knowledge that might offer new ways of seeing the problem.

### **Learning for Efficiency and Exploitation VS Learning as Exploration**

So we see that learning is often divided into being about efficiency and exploitation and making the most of existing knowledge (single-loop learning), or about exploration and seeing how things can be done differently (double-loop learning / learning for innovation). This distinction helps illustrate some of the tensions that both learning and innovation share in large organisations.

Hagel, Brown and Davison (2010) talk about how large (private sector) organisations could previously benefit from ‘scalable efficiency’, where they would seek to extract the most value from their stocks of knowledge, and where the [experience curve](#) could be exploited – where doing the same process resulted in lessons that could make that process more and more efficient.

Yet efficiency sits uncomfortably with innovation and exploratory learning, which can benefit from error, mistakes, failure and waste (e.g. Parsons 2006, Potts 2009, Lafley and Charan 2008).

*“Good waste is the consequence of experimentation that leads to learning that then feeds back into innovation in governance and opportunity. Learning naturally involves mistakes and post-hoc waste.”*  
(Potts 2009, p.39)

For this and other reasons, in a world of change, where new information is valuable and old knowledge is less so, Hagel, Brown and Davison (2010, p.57) argue that the advantage for large organisations will come from ‘scalable learning’, which is “the ability to improve performance and learn faster by effectively integrating more and more participants distributed across traditional institutional boundaries.”

*“The best an institution can do is increase the rate at which it learns: If you want to innovate faster, you have to learn faster. And institutions don’t really learn: We do.”* (Hagel, Brown and Davison 2010, p.157)

### **Learning Can be Uncomfortable, Challenging, Risky and Costly**

However this exploratory type of learning that can lead to innovation may be uncomfortable; whether that discomfort is felt by organisations, the leaders, or the individuals working within the organisation.

Exploratory learning and innovation can involve challenging orthodoxies and questioning deeply held beliefs about what is important (Skarzynski and Gibson 2008, p.46). This is not an easy thing for organisations to do, as it may be hard for an organisation to continue with its work while simultaneously questioning what it is doing. Additionally learning may lead to unexpected outcomes for the organisation, some of which may be negative (Hsu 2013, p.361), but all of which may be challenging or difficult to manage. There may also be the need to gain political acceptance/tolerance of the likelihood that, by adopting innovative and learning approaches, there will be some resultant adjustment and failure (APSC 2009, p.40).



Alternatively, different parts of the organisation may be learning different or even conflicting things (Örtenblad 2013) which may be hard to reconcile, or may hinder having a shared sense of what is 'known'.

Another perspective is that in a world of constant new information, what is known is less important than what is not known. That emphasises the importance of the flip side of learning, 'unlearning', which is the need to unlearn, or to challenge, pre-existing and accepted knowledge, and such a notion hits at the traditional view of hierarchy, expertise and position-based authority (see Hsu 2013). If existing knowledge is not the answer, then it is just as likely that any staff member may have valuable insights; or even that those in authority are the ones to *least likely* to know the right answers because of their investment in previous knowledge.

Learning, then, may not sit comfortably with existing organisational structures or processes.

*"By its very nature, the introduction of the learning organization raises questions about the legitimacy of current arrangements, processes and dispositions of power and authority. Thus, the initial reaction to leaders to the raising of difficult feelings or issues may lead to processes of amplification."* (Weir and Örtenblad 2013, p.72)

Learning may also be difficult at the leadership level.

At a personal level, learning implies that there will be mistakes (or things seen as mistakes) and course corrections as new things are learnt and old lessons replaced. Yet successful leadership is rarely associated with mistakes or corrections. Therefore it may be difficult for leaders to admit they have made a mistake or that there needs to be a change to something they believed earlier. Learning might be seen as admitting that they do not have expertise or mastery of their domain. This may inhibit them becoming successful models for, and champions of, learning. Alternatively, learning may be taken as an opportunity by some leaders to reframe what is understood as leadership.

*"But the truth about truth is itself counterintuitive: Corrections do not diminish credibility. Corrections enhance credibility. Standing up and admitting your errors makes you more believable; it gives your audience faith that you will right your future wrongs."* (Jarvis 2009, p.91)

At an organisational level, this connection between learning and mistakes means that leaders may have to set the parameters for the scope of allowable learning for the rest of the organisation.

*"It is the job of management to ensure that everyone knows where failure can and cannot be accepted."* (Lafley & Charan 2008, p.207)

Such a distinction can be particularly difficult in the public sector. The line between acceptable and out of bounds can change dramatically depending on sudden changes in political factors. Alternatively there may be vulnerable systems or people where change is difficult or risky (and yet likely where learning is most needed). Leaders may need to be brave in making those judgement calls.

Learning can also be discomfoting for everyone else working in the organisation. The need for learning, for possible constant learning, may sit uncomfortably with self-perceptions of core competencies, core strengths, or even just things that are 'known'. Ongoing learning suggests that any previous education was only a "thin foundation", and that previous capabilities that may have led to success may no longer be predictors of future success (Hagel, Brown and Davison 2010). That may be hard to accept, as education and expertise can be a big part of the identity of a professional (public servant). In this, and other ways, learning can strike at notions of the self, of who people really are or what they are capable of.

*"Real learning gets to the heart of what it means to be human. Through learning we recreate ourselves. Through learning we become able to do something we never were able to do. Through learning we re-perceive the world and our relationship to it. Through learning we extend our capacity to create, to be part of the generative process of life." (Senge 2006, p.18)*

These are big questions, and not necessarily ones that people are going to be comfortable having exposed in the work environment.

Thus learning can be challenging for organisations and for those who work in them, whether it be at the level of management, of strategy, of expertise, of knowing who is good at what, or what should be accepted as true. Learning can be risky, leading to unexpected outcomes. All of this, and learning does not even guarantee immediate benefits – indeed "the costs of learning are immediate and the benefits long-term" (Dodgson 1993, p.389).

### **Learning is Valuable (If You Know the Reason Why)**

It would seem clear then that organisations do need to learn – the amount of change requires it. Organisations need to learn in exploratory ways that challenge existing beliefs and knowledge, and that involve professional vulnerabilities of taking risks, of failing, of wastage, of being seen as making errors and mistakes, of being wrong. This learning will likely be uncomfortable and yet not even guarantee benefits. What then is the benefit? Why do organisations pursue it if there are such tensions involved, other than necessity being a driver?

The answer to this gets to whether an organisation can be clear about what it is for. Why does the organisation exist and what is it trying to achieve? What is its intent (variably described as vision, mission, purpose, or even simply as a clear goal)?

A clear purpose can have a number of benefits in guiding the learning journey of an organisation and in turn understanding why learning is not just necessary but something to be valued. These benefits include that:

- A purpose makes clear that learning is how things will get better. Reflection leads to learning, and learning leads to innovation, which supports improving public service (Schutte and Bakhuizen 2014, p.163). In this way learning and innovation can act as a form of motivation and inspiration, a sense of what is trying to be achieved beyond the day-to-day process work (Lafley and Charan 2008)

- Learning can make innovation easier and better. Innovation involves uncertainty, the knowledge that things may not go as expected, but learning can help reduce that uncertainty, by helping to work out what is possible and practical (Beckett 2015, p.166) in working towards a purpose
- A purpose can provide guidance and reassurance when plans fall apart. Learning in a world of change implies that plans may not go, well, according to plan. A clear goal can help guide activity where a plan may falter, and a clear goal makes the value of learning apparent as opposed to the risk of the occasional mistake (Eggers & O’Leary 2009, p.70)
- In an uncertain world, missions also are an important tool for leaders – they give a framework for what should be pursued, and for being able to evaluate work (where traditional measures may have focused more on outputs rather than what has been learnt and achieved) (Mumford, Byrne and Shipman 2009, p.283)
- Thus a learning organisation with a purpose may believe that change is inevitable and that learning is a matter of survival (Zineldin 2015, p.133) but it also means people know why they are learning (Sarder 2016, p.21) and that their work, which learning will change, still matters.

So a purpose or vision can provide a driving force for people and organisations – a sense of what is important and how learning will contribute. Learning then is a part of how the purpose will be realised. This helps learning be seen not as an abstract or unrelated process, but as core.

The purpose provides a guide for where and how learning is important, as well as a means by which to reconcile different lessons from across an organisation, and a way of evaluating what has been done.

*“You cannot have a learning organization without shared vision. Without a pull toward some goal which people truly want to achieve, the forces in support of the status quo can be overwhelming. Vision establishes an overarching goal. The loftiness of the target compels new ways of thinking and acting. A shared vision also provides a rudder to keep the learning process on course when stresses develop. Learning can be difficult, even painful. With a shared vision, we are more likely to expose our ways of thinking, give up deeply held views, and recognize personal and organizational shortcomings. All that trouble seems trivial compared with the importance of what we are trying to create.” (Senge 2006, p.149)*

### **Learning is Part of the Job, Not on Top of the Job**

If learning has a clear purpose then it provides a framework for individuals to approach it and a way to understand it as part of their job. It can help them accept that in a world of constant new information, learning must be ongoing, rather than something seen as tied to formal education and the early stages of life (Hagel, Brown and Davison 2010, p.135).

Yet that realisation is not straightforward. It also means that learning is not a distinct activity. Learning is ongoing and will occur and come from all areas of life. Previously learning and work have been regarded as somewhat separate (CPSA 2007, p.11), with learning covered by formal training and development. Learning as part of the job, of being part of how to achieve what is expected, may then not fit comfortably with traditional performance management frameworks.

*“How many of us work in organisations where we are rewarded for reflecting on our work, for reading and listening to what others have to say, for systematising and sharing our experiences so others can critique our work, both within our institutions and in the broader development community?” (Laura Roper and Jethro Pettit, 2002, p.14)*

*“When was the last time someone was rewarded in your organization for raising difficult questions about the company’s current policies rather than solving urgent problems?” (Senge 2006, p.26)*

Truly adopting learning within organisations may require some careful thought about how to recognise or reward learning, or at least consideration of how to support individuals who have failed in good faith in pursuit of needed lessons (O’Donnell 2006, p.xi).

*“Born into a world of constantly evolving technology, rapid change, and the constant creation of new knowledge, the knowledge worker no longer sees learning and work as completely distinct. To the knowledge worker, getting the job done means keeping abreast of developments in their fields, and this requires continuous learning.” (CPSA 2007, p.7)*

The consequences of this are broader however. If everyone is learning, it means that everyone has knowledge. How will that knowledge be made accessible to the rest of the organisation, that lessons from all staff are integrated?

### **Learning is a Social Process**

If learning is part of the job within organisations, and everyone is learning, then learning becomes by definition a team activity and a social process. Innovation in an interconnected world is a collaborative process. An idea must be shared if it is to be enacted in some form. Therefore learning that stops with one person is unlikely to result in real change, or contribute to the shared purpose of an organisation. Learning by necessity becomes a team activity and a team skill (Senge 2006).

This social aspect is reinforced because in a world of increased new information it is hard for any one person to be across all that is relevant. Learning and innovation then are also social processes because they involve discussion, trial, and error and rely on collective understanding (Ferreira, Farah, & Spink 2008, p.92). More radical ideas will result from the bringing together of ideas and domains that are usually separate (Skarzynski and Gibson 2008, p.39).

Organisational learning is then complicated by the fact that learning happens with individual people, but must be shared across teams to have effect, and that the important lessons must somehow be diffuse and entrenched enough that they do not rely on individuals or teams that may change over time.

*“Learning means just not repeating the same mistake all the time. It means, above all, learning to learn, learning to deal in a group, and, with a constantly changing environment, establishing mechanisms for collective feedback and action.” (Block and Borges 2002, p.292)*

## Learning is Increasingly an Open Process

In an interconnected world, this social aspect is much broader than just those people who work within the organisation. Consideration has to be given to the broader learning context. The learning that happens outside of an agency may be just as, if not more, important than the learning that happens within an organisation.

In a world of constant new information, government agencies cannot expect to have all the relevant information and knowledge within their organisation. They will need to access thinking, learning and resources from others (Eggers and Singh 2009, p.63). And for many complex problems (e.g. obesity) public policy requires the active participation of citizens in the process of change (Bourgon 2008, p.398).

For these, and other reasons, public sector organisations are now rarely solely responsible for developing and delivering policy frameworks and services – there are third parties that can be involved such as non-government organisations, industry associations or even specific firms, or citizen movements (APSC 2009, p.19).

In this way learning is not only about how those within an organisation contribute towards a purpose, it is also about how others might be given the capabilities to contribute to social cooperation, cultural knowledge and civic resources for that purpose (Fung 2008, p.68).

Therefore organisations may need to ask not only how learning is distributed within organisations, but also how it becomes known and integrated by others (e.g. partners, stakeholders and citizens).

## Lessons and Evidence are Not the Same Thing

Questions of how learning contributes to a purpose, how learning can be assessed as part of the job, and of what is learnt and shared within and across organisations relate to evidence and the sense of what lessons are most relevant, or most ‘true’.

A clear purpose will provide some guidance as to the value of particular lessons. Ideally there would be a clear sense of what was unknown, what was being tested and what was learnt.

*“In this respect, government reports should then aim to be more like scientific papers, stating what was proposed, what experimental conditions held, and what was learnt.” (Potts 2009, p.41)*

However, in an interconnected and changing world, such a proposition may be problematic.

For instance, with a particular policy, program or innovation it may be difficult to isolate which element was successful (or not), or even if it was responsible for a particular change (Behn 2008, p.140). Many forms of experimentation do not produce unambiguous evidence (Mulgan 2007, p.22). The question about any experience may be ‘what was actually learnt?’

Identifying and understanding what to take from an experience is also complicated when innovations and learning involve or occur across multiple organisations or systems. When there are multiple actors with possibly multiple purposes, there is unlikely to be a clear-cut sense of what counts as success or what has been learnt (Behn 2008, p.140) or for the learning to take the same form across the system.

Then there is the additional complication of the timeframe of the learning. The outcome of an innovation can be dramatically different dependent upon *when* it is judged (Dodgson, Gann and Salter 2005, p.21). Was the innovation a success, and then later a failure? Was it a failure, and then a success? Or not clear either way? When does the learning take place?

Indeed, looking too closely at a particular innovation may be the wrong perspective. The innovation may be unrelated to the effect or some other cause may have had a bigger effect. Some would argue that cause and effect are not closely related in time and space (Senge 2016, p.54) and that a wider perspective should be taken.

*“Herein lies the core dilemma that confronts organizations: we learn best from experience but we never directly experience the consequences of many of our most important decisions. The most critical decisions made in organizations have systemwide consequences that stretch over years or decades.”* (Senge 2006, p.25)

If the learning does need to take place at that wider level, then there are questions as to where that learning will reside, and how public sector organisations can make use of it.

In the private sector, learning is promulgated by markets, which work on failure and learning – competition generally means that the businesses that succeed are the ones that have learnt and the ones that do not, or that have ceased to, die (Parsons 2006, p.4). In such cases learning takes place across an entire industry, whereas in the public sector such succession processes are not usually in place (Gilson, Dunleavy and Tinkler 2009, 14-15). Therefore the public sector may need to look at a ‘learning society’ model, where learning is truly social and open, and happens in a decentralized fashion (Parsons 2006, p.6).

### **Learning is Hard and Complex and Uncertain**

In the absence of a clear and immediate arbiter of what is good ‘learning’ it may be that learning and integrating a learning approach as an organisation may be hard, complex and uncertain. It is undoubtedly of value, but it can also be very unclear as to which bits are most valuable.

For a specific innovation, much of the learning will relate to tacit knowledge that is hard to codify and share – how then will those lessons be understood and applied in different contexts (Borins 2008, p.11)?

How also will an organisation function where everyone is expected to learn, and then presumably act on those lessons, continuously – is there the danger of burnout for staff (Osborne and Brown 2005, p.42)?

Is there even really a clear understanding of what being a ‘learning organisation’ involves?

*“Neither the idea of learning nor the idea of organization is entirely clear. Not surprisingly, we do not achieve much more clarity when we connect these ideas in the “learning organization.”* (CPSA 2007, p.9)

*“Nonetheless, it is becoming quite generally accepted that the true ‘learning organization’ is rather like the fabulous unicorn in that it is*

*more commonly talked about than encountered.” (Weir and Örténblad 2013, p.68)*

*“The learning organization may be one of those great-sounding ideas that just do not work because they are hard to operationalize and thus not practical.” (Weir and Örténblad 2013, p.73)*

Or it may simply be that learning, and making use of learning, is hard.

*“...learning is hard to do, both for individuals, and particularly for organisations and groups of organisations. When we do learn, we often learn the wrong things. Huge gaps remain between our learning and our behaviour or practice.” (Roper and Pettit 2002, p.8)*

## Summary

This discussion has attempted to identify some of the most relevant aspects of learning as it relates to innovation and the public sector. This includes that:

- Innovation is primarily about tacit knowledge
- There are different types of learning
  - Single-loop learning – which is about learning what is
  - Double-loop learning – which is about learning what could be
  - Deuteron-learning – which is about learning how to learn.
- In a changing world, the most value for organisations will likely come from double-loop or exploratory learning
- Such learning involves challenging existing beliefs and structures and can be uncomfortable at all levels
- Learning is helped by understanding what purpose the learning contributes to
- If learning is connected to an organisation’s purpose, then learning becomes a part of how a job is done, not something done in addition
- Once learning is part of a job, it means that everyone in the organisation has learning that could be valuable
- This means that innovation is a social/team activity. Learning has to be connected throughout an organisation, though this does not guarantee the learning will be accessible to the organisation as a whole or integrated with its decision making
- In an interconnected world with constant new information, learning also has to be a somewhat open process. Learning needs to be shared with others if the purposes of public sector organisations are going to be achieved, and the learning of others needs to be drawn on
- Learning is clearly valuable, however the value of any particular lesson is not always clear. Learning is not the same as evidence and knowing what is relevant and when from learning is difficult
- Learning overall is difficult. While much has been discussed about learning organisations, it is similar to what it is to be an innovative organisation – it is an individual journey that depends on context, circumstances and capabilities.

What then are the implications of this for public sector organisations seeking to better understand where and when innovation is needed? What needs to be in place to ensure effective learning? What are the mechanisms by which organisations learn?

*“So observation, reflection, discussion and learning are advisable as the innovation develops from invention to implementation to diffusion. It is generally not possible to innovate without people (whether managers, staff, clients, or politicians) having to learn new ways of doing things, making mistakes, giving up particular ways of doing things, and adopting new ways. This is essential, but often goes unremarked.”*  
(Hartley 2015, p.149)



## 5. Enabling Effective Learning for Innovation

Although learning is happening all the time in organisations, this does not guarantee that it will be in the form most needed by an organisation, or that it will be effectively used to identify and understand where innovation is needed.

With the increase in information and change, organisations need to consider whether their existing processes, structures and systems are appropriately geared towards this new operating context.

*“History and common sense make clear that you cannot radically transform every part of an organization – and accelerate the underlying clock of that enterprise to hyper-speed – without fundamentally change the nature of that organization.” (Ismail, Malone and Geest 2014, p.49)*

With something as variable as learning and innovation, each organisation will have to consider its own context. The exact nature of what is needed is going to vary for organisations – it will depend on purpose, stakeholders, existing capabilities and what might be feasible, and the constraints being operated under.

However each organisation may want to give particular consideration to the following enabling conditions for effective learning for innovation.

### Purpose

A clear sense of purpose or mission (or shared vision, goal or [massively transformative purpose](#)) can play a powerful role for learning and for innovation. It provides a reason for innovating, for what is trying to be achieved and thus why experimentation and learning is needed.

Having a clear purpose is also a characteristic of successful innovators (Considine, Lewis and Alexander 2009, p.28). Purpose can sustain innovators when they experience major setbacks (Altshuler and Zegans 1997, p.78) or even just to keep pushing against processes and systems that may be inhibiting innovation (Eggers & O’Cleary 2009, p.140).

A clear purpose can also provide the organisation with a framework for assessing capabilities and gaps, and understanding how well placed the organisation is to actually meet its mission (Eggers and Singh 2009, p.124). It can also help shift the perspective of the organisation to what it is achieving externally, rather than being caught up in internal politics about change (Ismail, Malone and Geest 2014, p.62).

An organisation’s purpose can provide:

- Motivation and impetus for achieving better outcomes (including through learning and innovation)
- A means of assessing the organisation and what it needs
- A means of assessing performance for inherently uncertain processes such as learning and innovation.

What constitutes a ‘purpose’?

*“Shared vision is quite simply your reason for existence.” (CNMC 2002)*

*“Building on the seminal work by Simon Sinek, the Purpose must answer two critical “why” questions:*

- *Why do this work?*
- *Why does the organization exist?”* (Ismail, Malone and Geest 2014, p.63)

A clear purpose needs to articulate what the organisation is trying to achieve and why it is important. However it cannot simply be a mission statement or organisational vision, it needs to be something real. It cannot simply be an idea – it needs to be a force (Senge 2006, p.147), something that people can really connect to and be passionate about. It needs to be “tangible and actionable” and demonstrated in the actions and work of management (Schrage 2000, p.14). It must be embedded in the organisation and its systems (Mumford, Byrne and Shipman 2009, p.280).

*“Creative people invest themselves and their identity in the mission being pursued. As a result, missions both direct and motivate creative efforts. This rather straightforward set of observations, however, has an important, albeit often overlooked, implication: viable missions, as defined by leaders, must be embedded in the environment – both the organizational and the technological environment.”* (Mumford, Byrne and Shipman 2009, p.280)

A clear purpose then is both powerful and a substantial ask for an organisation. A purpose must be reflected throughout the organisation, and therefore there needs to be an alignment between culture and mission. Care should be taken in matching the purpose with the organisation’s “cultural comfort zone” (Eggers & O’Cleary 2009, p.145).

The work, and purpose, of public sector organisations is generally broad and reaches across society. As discussed, the success of such work may require the active involvement of many others, including citizens. An organisation might then also want to consider whether the purpose is something that will not only inspire work by those within the organisation, but also those outside.

*“What gives an organization meaning? What compels employees, customers and even members of the general public to devote themselves to the success of that enterprise?”* (Ismail, Malone and Geest 2014, p.98)

It should be noted that articulating such a purpose will likely be challenging for any organisation, but may be harder for those in the public sector. Private sector organisations have the advantage of being able to be singular in their focus. Public sector organisations generally operate in a contested space with competing demands and tensions as to what is expected. It may be difficult to articulate a purpose that is audacious and inspirational as well as enjoying wide support.

A guiding question for organisations might be “Does the organisation have a clear sense of what the organisation is for and why its work is important?”

#### **The United States Peace Corps Mission<sup>2</sup>**

“To promote world peace and friendship by fulfilling three goals:

<sup>2</sup> For details see the Peace Corps, accessed at <https://www.peacecorps.gov/about/>

- To help the people of interested countries in meeting their need for trained Volunteers.
- To help promote a better understanding of Americans on the part of the peoples served.
- To help promote a better understanding of other peoples on the part of Americans.”

## Leadership

As discussed, exploratory learning involves a degree of questioning and challenge. Innovation is about challenging the status quo. Both then are heavily dependent upon leaders (both in the sense of positional authority and those who lead in doing new things and who show what is possible).

What are the characteristics of a leader who supports learning and innovation, or who will create an environment where people feel encouraged to learn and try new things?

Identified characteristics include:

- Being prepared to share vulnerabilities, including being able to admit ignorance (Weir & Örténblad 2013, p.78) and being prepared to change course even though it may be interpreted as having made a mistake
- Recognising that failures represent opportunities to learn (Lafley 2008, p.7) and being clear about where mistakes can be made, and where they are unacceptable (Lafley & Charan 2008, p.207)
- Questioning and listening to employees, prompting dialogue and debate (Garvin, Edmondson and Gino 2008, p4)
- Attracting and rewarding those with questing attitudes and mindsets, and working to foster the emergence of such mindsets (Hagel, Brown and Davison 2010, p.211)
- Having a personal commitment to learning (both their own and that of others), having natural curiosity and understanding the value of research and education (Hailey and James 2002, p.201)
- Providing support when people encounter frustrations involved doing something new and creative (Mumford, Byrne and Shipman 2009, p.280)

Such leadership may be in tension with other paradigms or beliefs about leadership which emphasize being confident, bold, and optimistic (Eggers & O’Cleary 2009, p.109) and action over reflection (Weir & Örténblad 2013, p.78).

There may need to be concerted efforts to provide leaders with the tools, confidence and comfort that they need to engage with learning for innovation. For instance, this might be about the senior leadership being given access to personal transformation programs (Ismail, Malone and Geest 2014, p.256). Leaders will need to ensure their own learning is ongoing and that they challenge their own existing knowledge and expertise, and seek out new ideas and knowledge. Learning and innovation are often experiential in nature – are leaders given the opportunity to ‘get their hands dirty’?

An organisation (and its leaders) will need to consider what makes sense for its context. The essential element would seem to revolve around whether learning is valued by leaders, and whether that extends in practice to learning from failure and supporting staff when they fail in good faith. A guiding question for organisations might be “Do the leaders of the organisation clearly value learning (including learning in the form of failure)?”

### Five Behaviours of Innovative Leaders<sup>3</sup>

The Australian Public Service developed a set of behaviours for leaders who are wanting others to do something innovative.

1. **Empower others – share where innovation is most needed** Innovation often works best when it is a strategic activity. One of the easiest ways to empower others to innovate is to let them know where it is most needed or where it is most sought. This can help others focus on ideas that are more likely fit with strategic needs and aims
2. **Invite in the outliers – demonstrate that diversity** is valued Innovation involves new ways of looking at things, and that requires tapping into different networks and groups and experiences, different ways of working and thinking, and allowing and encouraging constructive debate. One way to foster an environment that values diversity is to actively invite in those with different perspectives, from outside and inside your organisation. Who are the outliers that represent new or different ways of understanding your world? Invite them into the conversation and show that you are open to very different insights
3. **Say “Yes, and” not “No, because”** It can be hard to put forward a new idea, but very easy to stop someone else doing it. “A raised eyebrow or a sceptical look can kill an idea before it gets any oxygen”. Building on an idea can help ensure you don’t miss out on a great new way of doing things. It helps people know that you value ideas and creativity, and that ideas are not expected to be perfect straight away
4. **Don’t over-react – appreciate experimental error** Things will go wrong. There will be mistakes as things are learnt through innovation. Some, if not most, ideas will fail to come to anything. People will try things that don’t work. One adverse reaction to an innovative attempt can stop any further innovation. Provide guidance on where there is room to experiment, and where there can only be rigorously tested and checked initiatives. Create the space for ‘safe’ experimentation. Cultivate reflective learning, where experimental mistakes are discussed and learnt from, and not hidden or seen as shameful
5. **Support innovators and share stories of success** Innovation can be hard. It can be hard going against the status quo or working on something that may not, initially, fit with the rest of an organisation. Developing a new idea can involve running into a lot of roadblocks. Innovative ideas will require time and resources to be developed into real and tested proposals. They will need protection from the ongoing pressures of business-as-usual work. Innovators will need to be supported. Sharing stories of success can help build wider support, demonstrate the value that innovation can bring and show that it can be done, and help connect those who have implemented something new with those who are trying to do something new.

### Diversity

Innovation and learning comes from difference, and so diversity is an important factor for effective learning for innovation. This diversity may be a matter of diversity in people, in information, in skills and aptitudes, in backgrounds, in beliefs/perspectives, or in tolerance for risk. There needs to be an appreciation of diversity, of difference.

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<sup>3</sup> For details see the Public Sector Innovation Toolkit blog, accessed at <http://innovation.govspace.gov.au/2016/02/15/innovation-behaviours-for-the-public-service-beta-version/>

*“Appreciation of differences. Learning occurs when people become aware of opposing ideas. Recognizing the value of competing functional outlooks and alternative worldviews increases energy and motivation, sparks fresh thinking, and prevents lethargy and drift.” (Garvin, Edmondson and Gino 2008, p.3)*

When there is diversity of team membership (such as skills and backgrounds), then there will be differences in the information generated by the team (Gryskiwicz 2009, p.103). This will be in part because when diversity is valued people will be more likely to share their original ideas (Runco and Kaufman 2009, p.158).

Diversity is not without its challenges. Care needs to be taken to ensure that diversity amongst and between teams is respected and valued, and trust is developed, rather than having differences viewed in a competitive or guarded fashion.

*“In a multidisciplinary team each individual becomes an advocate for his or her own technical specialty and the project becomes a protracted negotiation among them, likely resulting in a gray compromise. In an interdisciplinary team there is collective ownership of ideas and everybody takes responsibility for them.” (Brown 2009, p.27-28)*

Diversity may also lead to very different learning experiences – different people and teams may learn different things from the same experience or situation. While this will contribute to creativity, and the mixing of different ideas, it may also mean opportunity is needed for reflection so that overall there is a coherent or shared understanding.

Generally organisations will need to take concerted effort to ensure that recruitment, recognition and training processes create and maintain diversity. Perhaps in part because of the tensions that diversity can create, there is a tendency for people and organisations to veer towards less diversity.

*“People invariably choose likeability over ability. In most organizations, employees prefer to work with others who share their own values, attitudes and ways of thinking – even if they don’t possess any demonstrated competence.” (Fraser & Dutta 2008, p.152)*

In an interconnected world organisations may also want to give consideration to accessing diversity of thinking and experience from those outside of the organisation. A guiding question for organisations might be “Is difference appreciated within the organisation?”

## Openness

The value of diversity and different ideas and experiences will only be realised as long as people within an organisation are ‘open’ to this difference and newness. This involves being open to:

- New ideas (including not dismissing or blocking the ideas of others)
- Not knowing (including not having the answer, not being the ‘expert’)
- Mistakes and failure (and to others making mistakes or failing)
- Learning new things (and unlearning old things)
- Uncertainty and ambiguity (in the context, in work, in what has been learnt, in innovation)

- Change (including having to do new things, act in new ways, and stop doing other things).

In summary, it is about being open to being challenged and to challenging oneself. However this in itself may be asking a lot of people. Dealing with ongoing change, with ongoing learning, and with ongoing uncertainty may be exhausting. At a minimum the organisation will need to offer a degree of psychological safety where people feel comfortable expressing their thoughts, their questions and being in the minority or sharing mistakes (Garvin, Edmondson and Gino 2008, p.3).

Others argue that unless people find their passion, and connect that to a purpose, the level of change and challenge will be too much.

*“Without passion, we will find ourselves increasingly stressed as performance pressures inexorably mount until they become unbearable. As stress mounts, relationships fray, and we become ever more protective of the diminishing resources we have. There is no sustainability to be found here; at best, we can hope for a grace period.”*  
(Hagel, Brown and Davison 2010, p.252)

A guiding question for organisations might be “Do people within the organisation feel encouraged to be engaged with difference outside of the organisation?”

#### Five Behaviours of Innovators<sup>4</sup>

The Australian Public Service developed a set of behaviours for people seeking to do something innovative.

1. **Ask questions – of others and of yourself** Innovation is about changing our behaviour, the way we do things, and how we understand problems and solutions. When you question some aspect of the status quo, you open yourself to seeing different options and ways of doing things. Question assumptions, question how and why things are done the way they are, question whether there might be a better way, ask whether there might be a different way of looking at things or whether there might be others who can add insight. Use answers to those questions to build a richer understanding of the current situation, what the problems are and what might be done
2. **Try things – experiment a little (or a lot)** Innovation is uncertain – if you knew exactly what was going to happen, then it wouldn’t be innovative. To reduce that uncertainty, you have to experiment in some way, to test the idea and what happens. The easiest way to experiment is to make the idea real or tangible in some form, such as a mock-up, a prototype or a rehearsal. This can be done quickly and at low cost, at least initially. As with an experiment, there should be openness to results that may not be what was expected or wanted, including failure, criticism or no reaction
3. **(Help) Tell a story – who does this matter to and why?** Why will this make things better? What will it allow us to do? How will this idea contribute to priorities, to getting better outcomes? It is easy for a new idea to seem like an additional task, a distraction from core business. If it is part

<sup>4</sup> For details see the Public Sector Innovation Toolkit blog, accessed at <http://innovation.govspace.gov.au/2016/02/15/innovation-behaviours-for-the-public-service-beta-version/>

of a story, if you can identify how and why this matters, then the innovation can become part of existing work, rather than more work

4. **Focus on the problem to be solved – don't get attached to 'your' idea** There are lots of ideas – but which ones will best address the issue at hand? It is very easy to get attached to one particular idea, yet the important thing is what the idea might lead to. Sometimes there will be better ideas, or circumstances mean you will need to change direction. A focus on an idea may mean stalling if the idea does not work as hoped – a focus on the problem can help keep momentum no matter what ideas are being tried
5. **Stick at it – believe in the power of persistence** Getting people to change their behaviour, to change how they think about something, can be hard. Ideas may not work out as hoped. Other people may say “no” or otherwise dismiss your idea. Developing an innovative proposal may require going outside your comfort zone or involve new skills or methods. A new idea may mean you need to go out and build new networks or find support from different quarters. If you want to innovate, you need to persist at it.

### Empowerment (or Mastery)

If everyone within an organisation is learning, and everyone has learning as part of their job, then everyone has knowledge that is valuable. And if everyone within an organisation is surrounded by change, then everyone is going to have to change some of what they do.

This is different to the traditions of bureaucratic and hierarchical institutions which placed controls on information and limits on where variations in practice or thinking were allowed, thereby curbing creativity (Greve 2009, p.142).

*“The reality is that the integration of and innovation in the delivery of government programs is unlikely in traditional bureaucratic arrangements marked by hierarchical authority, administrative rigidity and a strong culture of control.” (Shergold 2009, p.147)*

If staff are not trusted and are subjected to micro-management, then they are unlikely to spend time or effort on independent and original thinking (Runco and Kaufman 2009, p.157). If all innovation has to go through rigid control processes, then innovation within organisations will be limited.

This implies then that if an organisation is seeking to enable continuous and ubiquitous learning and innovation, there will have to be a certain degree of autonomy given to staff to allow experimentation.

More might be expected from people if they are allowed to go beyond just autonomy, and are allowed to develop a level of mastery in the learning and their work. This implies a high degree of trust of employees, letting them develop their skills guided by their experience, rather than managing them with regard to their performance (OECD 2010, p.128).

*“People with a high level of personal mastery are able to consistently realize the results that matter most deeply to them – in effect, they approach their life as an artist would approach a work of art. They do that by becoming committed to their own lifelong learning.” (Senge 2006, p.14)*



Therefore an organisation needs to give some consideration to whether employees are allowed some freedom to work with others on understanding issues and developing ideas, to experiment, to act on what they learn, and to put forward the case for change.

For public sector organisations, this may be complicated in two respects:

- Government requires accountability “which requires predictability, standardization, replicability, and stability” (Lynn Jr 2007, p.99). Learning and innovation can complicate accountability. Who made the decision for an innovation? What if it fails in an unexpected way? What if something is learnt that challenges current beliefs and processes? In an environment of constant new information and change, government organisations may need to give thought to how accountability requirements can be best met.
- A decentralised or networked model of government may provide better results, but it will also be harder to do and to manage than a top-down structure which controlled risks (Eggers 2009, p.32). Employees that are empowered with autonomy or the freedom to develop mastery will require different leadership and ‘management’ than staff expected to do the same repeatable things.

A guiding question for organisations might be “Are staff allowed to experiment with their work?”

### Service Orientation

If innovation in public sector organisations is about responding to problems that need new responses, then it is also about the people who share those problems. Effectively addressing those problems will require learning *about* people and their problems in context. It will require some learning *from* people about the experience of those problems and current strategies and solutions, and learning from others with relevant insights. It will likely require learning *with* people about what works and what does not.

In an interconnected world where government is one (major) player of many, innovation cannot just be done to people if it is to be effective – it will likely require some degree of cooperation, collaboration or even co-ownership.

Therefore, effective learning for innovation that meets the needs of an organisation and the people it serves requires a degree of ‘service orientation’.

Service orientation includes conventional aspects such as ensuring good customer service/experience, being responsive to complaints, and understanding stakeholder perceptions and relations. But service orientation also implies a deeper understanding and appreciation of customer/citizen needs.

- What might complaints really signify?
- What is being said about the organisation and its services in other forums (e.g. social media)?
- What quality are the relationships the organisation has with:
  - Service recipients
  - Stakeholders
  - Those being regulated
  - Collaborators



- Commercial partners/service providers
- Is the organisation usually prepared or unprepared for shifts in the needs of stakeholders/citizens/those it is delivering for?

A service orientation can give an organisation a much stronger appreciation of its environment and give “form” to its purpose. It can also make change within the organisation easier, because it reinforces or helps make clear what the need for the change is.

*“Customer focus is interesting from two standpoints: on one hand customers are an important source of feedbacks, comments and suggestions on the organisations’ activities; on the other hand, changes initiated by customers’ feedback have a ‘natural’ legitimacy and lower conflict potential than changes initiated from inside the organisation.”*  
(OECD 2010, p.128)

Again, each public sector organisation will need to consider its context, and its own ecosystem and relationships. The nature of the service orientation will also vary depending on the function of the organisation – e.g. whether it is a regulator or a service delivery organisation.

Regardless of the variation however, there are likely to be some common elements in an interconnected world with constant new information, where learning is taking place everywhere and others outside of the organisation may have vital insights that matter. Such a service orientation will likely need to be based in respect, in openness, and with an appreciation of difference (even where they may need to be some distance or even sometimes outright scepticism or measured distrust).

A guiding question for organisations might be “Are relationships with those outside of the organisation characterised by respect, openness and the appreciation of difference?”

### Absorptive Capacity

New experiences, new insights and new ideas will not matter one bit unless the organisation, its leaders and its employees have the capacity to appreciate and understand them. “Typically, organizations that lack absorptive capacity with respect to expertise, process and structure will fail to effectively exploit emergent opportunities.” (Mumford, Byrne and Shipman 2009, p.281).

If organisations are seeking to become effective at learning for innovation, then they will need to reflect on their “absorptive capacity” for learning. E.g. do staff have the requisite knowledge and skills to engage with this new learning? A policy officer may not recognise the significance of a particular complaint, whereas someone on the frontline might instantly know there is a problem, yet not know what to do about it (or vice versa). Absorptive capacity will be shaped by previous experiences, inclinations and skills.

At its most basic this may often be a question of time. Do leaders and employees actually have the time to consider what they have experienced, to turn it from a series of events and happening into real learning, putting new information into context and applicable knowledge?

*“Time for reflection. All too many managers are judged by the sheer number of hours they work and the tasks they accomplish. When people are too busy or overstressed by deadlines and scheduling pressures,*

*however, their ability to think analytically and creatively is compromised. They become less able to diagnose problems and learn from their experiences. Supportive learning environments allow time for a pause in the action and encourage thoughtful review of the organization's processes.” (Garvin, Edmondson and Gino 2008, p.3)*

Time has another dimension – age and experience. Despite the sometimes perception that creativity is mainly a young person's game, some research suggests otherwise. Innovation can involve complex, interdisciplinary knowledge, wide social networks and deep learning – a combination that comes with age (Greve 2009, p.143). Absorptive capacity will sometimes require experience, and again diversity will be a factor.

Absorptive capacity will also be about what is already known. Some learning will only make sense if it builds on previously obtained understanding. Organisations should not expect to be able to just switch learning on and off when needed – effective learning will be an ongoing journey.

Despite operating in a world of constant new information, neither can organisations expect to be able to just tap into the knowledge of others when there is an internal lack identified. Such connections will depend on relationships and a potential exchange of value.

*“No one will be able to effectively participate in relevant knowledge flows without possessing useful knowledge stocks of their own. People who reach out to connect with others to simply take knowledge will find that these interactions quickly dry up as others begin to realize they have little to gain from these connections.” (Hagel, Brown and Davison 2010, p.61)*

The requisite level of absorptive capacity will depend on the organisation and its context, as will the strategies for improving the base level of capacity. A guiding question for organisations might be “Are there deliberate processes for staff at all levels to reflect on experiences (regular and irregular, successes and failures)?”

### **Infrastructure and Processes**

If learning for innovation is something that cannot be turned on and off, it implies that there needs to be some infrastructure and processes supporting it.

A look at other core corporate processes such as human resource management, financial management, and procurement is telling. These are also processes that are often distributed, where staff from across the organisation may be expected to play some role, but where there is generally some degree of coordination or guidance from the centre.

Learning and innovation will happen in a decentralised fashion, but that does not mean that there will not need to be some guidance or support for them. And while many organisations have formal learning and development programs, it should be noted that learning for innovation will tend to be more emergent than regular training, and may need to be supported differently.

*“Within departments and agencies there need to be teams with a specialised role to organise and advance innovation. These need to*

*include people who scan the world and other sectors for promising ideas.” (Mulgan 2007, p.25)*

Nor does the decentralised and somewhat autonomous nature of learning and innovation mean that there should not be some structure and process associated with them. Learning and innovation may both be unpredictable but that does not mean they are completely free-flowing or serendipitous events. Organisations may find a structured approach can work better, without removing the creative dimensions.

*“Innovation doesn’t just happen. You have to work at it. It requires a deliberate practice, consistency, rhythm, discipline, and continuous learning from success and failure. Doing innovation right means developing a repeatable, scalable, and consistent way of converting ideas into results. It requires a degree of standardization so that others can imitate the model, and improve on it.” (Lafley and Charan 2008, p.155)*

*“Organizational learning theory posits that learning is enhanced when it takes place in an environment of established rules, goals and norms, and where participants understand and appreciate the other’s differences.” (Cummings 2003, p.35)*

The appropriate mix of infrastructure and processes to support learning and innovation will vary greatly, as it does for other corporate functions. However, if learning for innovation is valued, if it is seen as important not only for how the organisation will get better at what it does, but also for how it will meet new needs and solve problems (known or unknown), then this importance will have to be reflected in the organisation’s structure, its systems, and its processes.

A guiding question for organisations might be “Does the organisation provide a similar level of structured support (systems, technology, guidance and processes) as it does for other core work functions?”

### **Tolerance for Risk (and Failure)**

Learning and innovation are both uncertain and thus unpredictable processes – the end outcomes cannot be known beforehand, despite any expectations or hopes. Such uncertainty is confronting for public sector organisation where there are expectations of predictability, for accountability, for standardisation of services and outcomes across systems. It introduces a level of risk that may be uncomfortable.

The risk is not limited to the risk of failure, of something not working. The risk is more multi-dimensional than that.

*“A key managerial challenge for innovation in public services is therefore the management of risk. Beyond the obvious risk of the failure of an innovation, other risks that need to be considered are:*

- *The risk that the innovation may render the skills of the staff or service manager of the organization obsolete;*

- *The risk that the innovation will cost more than was intended;*
- *The risk that the innovation will have unintended consequences;*
- *The risk that the innovation is seen as a normative/ideological good and may be pursued by external (political) stakeholders, irrespective of its actual impact on the efficiency and/or effectiveness of a public service;*
- *The risk that the innovation may be successful but not attract sufficient take-up to ensure its financial viability; and*
- *The risk that the innovation might be successful but that the PSO could not cope with the subsequent increased level of demand for the service.”*  
(Osborne and Brown 2005, p.190-191)

Learning is an essential element of how organisations can remove, reduce, control or mitigate for risk – whether it be by avoiding the repetition of mistakes, of being able to predict likely risks and control for them before they happen, or for the truly proficient (or masterful) practitioners, having a sense of when things are not quite right and know that this is a sign that something needs to change.

Despite best efforts sometimes risks will be realised, and mistakes and failures will occur. When they do, it is vital that they are learnt from, so as to avoid further mistakes, or at least to limit new ones. Learning from failure though requires admitting that there was a failure – something that, in a public sector organisation, can be high profile or subject to political criticism (Osborne and Brown 2005, p.195).

Learning, then, involves not only being prepared to make mistakes, to fail, but being honest and being able to admit a mistake has occurred, that there has been a failure. While this might seem a slight distinction, for a professional public servant this can be a significant and emotionally potent one.

Inculcating a cultural acceptance that simultaneously balances between the value of failure and holds that failure should be avoided will be hard for any public sector organisation.

Part of doing so may be about reframing, or viewing failure in a different light.

*“Mastery of creative tension transform the way one views ‘failures.’ Failure is, simply, a shortfall, evidence of the gap between vision and current reality. Failure is an opportunity for learning – about inaccurate pictures of current reality, about strategies that didn’t work as expected, about the clarity of the vision. Failures are not about our unworthiness or powerlessness.”* (Senge 2006, p.114)

It may be assisted if the benefits of learning from failure can be quantified in some fashion, even if that is just in the form of narrative or qualitative reviews.

*“... an innovation that has been a spectacular failure in accounting terms may have enormous benefits for a firm in the related knowledge created around the innovation, which can be put to other uses, or in preventing it moving down a fruitless path.”* (Dodgson, Gann and Slater 2005, p.19)

Increasingly there are more sophisticated tools that can assist to reduce the scope of failure, to speed up the rate of discovery and learning about whether something may not work as expected, or that give an appreciation of the wider system and possibilities/possible futures.

*“By integrating experimentation as a core value and adopting approaches like Lean Startup, enterprise failures – while still accepted as an inevitable part of risk – can be quick, relatively painless and insightful.” (Ismail, Malone and Geest 2014, p.123)*

Effective learning for innovation can certainly help in managing risk (and uncertainty) and failures when they do happen. That does not mean that all failures will be small though. An interconnected world with constant new information will always contain surprises. Some of those surprises will be extremely negative for organisations, and for public sector organisations there may be considerable political implications. Such fears may tempt organisations to stick with the safe path, despite the potential benefits that can be gained from learning and engaging with risk and failure.

Yet that same assurance of surprises also means that current approaches will increasingly be at risk of failing, even though they are well understood. A changing environment will reduce the effectiveness of current measures. If change is guaranteed, then there is increasing risk in staying with what is with trying to avoid failure.

*“When failure is not an option, you end up with safe, incremental innovation, with no radical breakthroughs or disruptive innovations.” (Ismail, Malone and Geest 2014, p.123)*

Each organisation will need to consider its appetite for risk and failure, and that of its stakeholders, clients, and political owners. It will also need to consider the risk of staying with the status quo, and the risks that would happen without innovation to meet new emerging needs and problems. (Part of that consideration may need to reflect an acknowledgement of absorptive capacity, and that organisations will not be able to pivot at short notice in response to a changed circumstance. Experimentation and learning will have to have already occurred.)

A guiding question for organisations considering their tolerance for risk (and failure) might be “Can staff name a recent failure within the organisation, identify what was learnt about it and discuss it in positive terms?”

### Understanding Systems

In an interconnected world with complex systems, there is often a gap between cause and effect (Senge 2006, p.54), multiple factors that could have contributed (Behn 2008), or the actual cause may not be apparent or identifiable. Learning – understanding the connection between things – is not going to be easy, especially when it relates to innovation where there is an inherent degree of novelty, of uncertainty and mixed signals. When surrounded and distracted by information, it can be hard to identify what matters.

*“We live in turbulent times. Faced with such turbulence, it is easy to get caught up in the ebbs and flows, reacting to each wave that unexpectedly surfaces and becoming ever more stressed and exhausted by our effort to stay afloat. Overwhelmed by the swells rising and falling*

*about us, we begin to lose sight of the broader forces generating the turbulence in the first place.” (Hagel, Brown and Davison 2010, p,248)*

In such an environment, learning for innovation requires an appreciation of the wider system. To understand what really is the problem, what really is the issue that requires an innovative response, requires some appreciation of how things are linked, of underlying forces or connections, of how systems interconnect and interrelate. It also involves being able to envision the consequences not just around the specific innovation, but also for the wider social system (Mumford, Byrne and Shipman 2009, p.288). Without such an appreciation, it will be hard to know what effects to look for, to know what information the learning should incorporate.

There are tools such as systems thinking that can assist, however there will always be an element of art rather than science.

*“Today, systems thinking is needed more than ever because we are becoming overwhelmed by complexity. Perhaps for the first time in history, humankind has the capacity to create far more information than anyone can absorb, to foster greater interdependency than anyone can manage, and to accelerate change far faster than anyone’s ability to keep pace.” (Senge 2006, p.59)*

Organisations will need to reflect on whether an appreciation of the wider system and system effects is encouraged by the processes and work of the organisation. Without an element of systems thinking within the work of an organisation, it will be difficult to learn what is the real issue or problem where an innovative response is needed, what sort of response will be appropriate, or be prepared for the possible effects of the response (whether it is successful or not).

A guiding question for organisations might be “Does the organisation have a good track record of avoiding unexpected surprises?”

### **X-Factor**

Every organisation is different, and so too will be the learning needs and the need for innovation. The enabling conditions for effective learning for innovation will be different for every organisation. In that spirit every organisation will need to give consideration to its particular environment, its mission, its needs and the needs of those it serves. The factors identified here should not be assumed to be everything that is important. There may well be an ‘X-factor’, something that is special to the particular operating context.

A guiding question for organisations regarding this ‘X-factor’ might be “Has the consideration of learning needs for innovation covered the specific circumstances of the organisation?”

### **Summary**

Establishing the conditions for effective learning for innovation within an organisation is undoubtedly challenging.

*“Getting a balance between fostering an adaptive organization wherein organizational members accept and work with continuous change and instigating a process that produces continual change that exhausts*

*organizational members is not a simple task.” (Osborne and Brown 2005, p.222)*

Nonetheless, moving closer to a state where the organisation can better learn what the problems are and where innovation is needed, will undoubtedly make the organisation better able to serve its purpose and get better at what it needs to do.

It is proposed that these enabling conditions can be grouped as per the following:

- Purpose
- Openness (including diversity and service orientation)
- Capacity (including absorptive capacity and tolerance for risk and failure)
- Capability (including leadership, empowerment, infrastructure and processes, and understanding systems)
- X-factor

Combined with these enabling factors, organisations will also need to consider the specific mechanisms and channels by which they learn new things.

## 6. The Channels for Learning for Innovation

How does new information and learning come into the organisation? What are the channels for by which an organisation learns for innovation?

The following are suggested as some of the main channels by which organisations will learn information relevant to the innovation process and that will inform the identification of problems that require innovative responses.

### Knowledge Management and Learning and Development Activity

Most public sector organisations will already have a knowledge management strategy and a learning and development framework that they use. Organisations may send people to conferences or events, or external or internal training, either for job specific purposes or as broader personal development. Organisations may also have detailed policies regarding records management or the generation and sharing of data and information.

Such practices may tend to favour existing knowledge and practices though, rather than emergent practices, skills and insights that are not yet clearly codified or well understood.

Organisations may wish to assess whether their existing efforts are sufficient for:

- Distinguishing and highlighting new insights or things that may not fit with existing knowledge and existing frameworks of understanding the operating environment
- Supporting the development of capability in emergent practices that are less well understood (e.g. the use of visual facilitation and the gamification of public services) and are therefore less likely to be captured by formal learning and development practices that may concentrate on well-known needs and skills.
- Explicitly capturing instances of failure and learning from them.

Organisations may wish to look at other mechanisms for giving employees access to new insights, skills and possibilities, such as innovation-themed events.

#### Innovation Weeks

A number of countries have introduced 'Innovation Weeks' as opportunities for public services to showcase innovations, to share experiences with innovation, and to expose public servants to new methods and tools that can help them create and implement new ideas.

Some examples of this are:

- Brazil Innovation Week<sup>5</sup>
- United Arab Emirates Innovation Week<sup>6</sup>

<sup>5</sup> For details see "Brazil Innovation Week: Building on the Country's Innate Creativity" accessed at <https://www.oecd.org/governance/observatory-public-sector-innovation/blog/page/brazilinnovationweekbuildingonthecountrysinnatecreativity.htm>

<sup>6</sup> For details see "A Nationwide Celebration: UAE Innovation Week" accessed at <https://www.oecd.org/governance/observatory-public-sector-innovation/blog/page/anationwidecelebrationuaeinnovationweek.htm>



- Australia Innovation Month<sup>7</sup>

### Staff Mobility (and Turnover)

Individual and organisational learning can be enhanced by staff mobility. Temporary movement of staff from one agency to another can help staff gain new experiences, provide access to new skills, and help in building a broader understanding of their work and the work environment. Such learning can be enhanced through formal secondment initiatives with other public sector agencies or with organisations outside of the public sector.

### Operation Free Range<sup>8</sup>

The Australian Public Service Commission has announced ‘Operation Free Range’, a pilot mobility program designed to enable the quick deployment of pre-vetted employees to priority areas in 2017. The program has identified benefits for all the participating parties:

- **Host agency:** Secondments offer the opportunity to share expertise and fresh ways of doing things, with staff returning to their home agency at the end of a time-limited project.
- **Participating agency:** Temporary assignments enable the formation of strong links and partnerships between agencies and enhance awareness of whole-of-government priorities.
- **Participating staff:** Secondments develop skills and capability, provide new perspectives, build resilience and offer personal and professional growth that can enhance career opportunities.

The program is based on research that shows in the contemporary complex and turbulent work environment requires more complex thinking skills, including learning agility, self-awareness, comfort with ambiguity, and strategic thinking.

The pilot program is the result of a ‘workhack’ event, developed as an idea in response to the challenge of ‘how might the Australian Public Service increase the exchange of staff and ideas inside and outside of the APS?’

### Partnership for Change<sup>9</sup>

Partnership for Change is a program of collaboration between Slovenia’s public administration and the private sector, working together through the exchange of employees to solve concrete challenges in five areas:

1. Greater impact of interdepartmental cooperation.
2. Raising motivation of public administration employees.
3. Creating a Slovenian national brand.
4. Making complex public administration services friendly and effective for users.
5. Introducing skills of the 21st century in school curriculums.

In 2016 the program involved 67 employees, 30 companies and 5 government ministries.

<sup>7</sup> For details see “After Innovation Month 2016, some initial thoughts” accessed at <http://innovation.govspace.gov.au/2016/08/04/after-innovation-month-2016-some-initial-thoughts/>

<sup>8</sup> For details see the Australian Public Service Commission, ‘Operation Free Range’, accessed at <http://www.apsc.gov.au/priorities/aps-reform/freerange>

<sup>9</sup> For details see “Partnership for Change” accessed at <http://www.amcham.si/en/partnership-for-change.html>

Staff turnover can also assist in learning for organisations. New employees can bring in new perspectives and skills. They may also find it easier to adopt the new ways of working or thinking that an organisation is seeking to adopt.

However, as discussed, innovation and learning can require previous experience. Losing long-term staff has risks of losing valuable corporate memory and previous lessons, unless an organisation has ensured careful attention to lessons being captured in corporate systems and shared with other employees.

### **Benchmarking and Environmental Scanning**

Another commonly used and basic measure that organisations use to learn is to compare themselves with like-organisations who do similar work or activities. This might be by looking at the benchmarking of performance (e.g. international comparisons provided by the OECD) or through looking at what is being done by other organisations and seeing how it might be relevant or what it might reveal about what is possible or what problems there might be.

In the innovation context, such benchmarking and environmental scanning may not provide as much assistance as it can in other areas. Benchmarking tends to favour well established or well understood practices, where there is agreement about what may be the most important things to measure. Innovation is a much more uncertain process, and it may be hard to identify better or best practice.

Still, such approaches can help to raise awareness of what is being done by others, informing the organisation's understanding of what is possible. As others respond to their problems with innovative responses, the lessons from their experience can help inform the understanding of the organisation's own problems – but only if those innovative responses are known about by the organisation. Benchmarking and environmental scanning can help with that process.

### **Data**

Another channel for identifying problems and learning for innovation are government data sets. These can provide an indication of where problems are or are starting to be, and how performance has changed over time.

Datasets reflect what is measured, and measurement tends to focus on those things that are understood or that have been previously identified as important. Therefore quantitative data sets may not always provide an indication of where *new* problems are emerging; rather they may track performance against old problems.

The notion of datasets should not be limited to quantitative information however. Rich qualitative data (sometimes referred to as 'anecdotal'), obtained through immersive design processes or through the interrogation of other existing information, can help balance a focus on *what* is changing with an understanding of *why* that change is occurring. Such data can also provide an indication of when there may be a need to reframe the understanding of a problem.

### **Socialisation**

Some learning will happen through socialisation of concepts, practices and technologies. The simple process of people becoming familiar with new ideas and being introduced to new concepts and technologies can help spread learning.

Such socialisation may happen through personal networks and being introduced to technologies, products and services as a consumer. It may happen through more formal mechanisms such as presentations or conferences, or through regular meetings and discussions. Such socialisation may not prioritise explicit learning; it may just be about sharing and helping people expand their awareness of what is happening and what is possible. Such knowledge may then be drawn on later or it may help prepare people to explore the topic more closely.

#### **Innovation Champions - Sharing with Senior Leaders<sup>10</sup>**

The Australian Public Service established an 'Innovation Champions' forum in 2015, consisting of senior representatives from Portfolio Departments and large agencies. The Innovation Champions provides a forum for sharing lessons in the form of practical case studies and experiences of applying innovation or initiatives to support innovation. This has included discussion of the Department of Employment and the co-design of their innovation framework; the use of Agile, user-centred design and Managing Successful Programs by the Department of Industry, Innovation and Science; and the *innovationXchange* work on applying innovative approaches to development.

The Innovation Champions meetings also provide a forum for introducing senior leaders to new technologies and innovative business models that may have widespread impact on the work of the public service. For instance, the July 2016 meeting of the Champions received a presentation on the digital technology Blockchain, its opportunities and how it might potentially disrupt existing business models.

### **Complaints and Feedback**

Complaints can provide a valuable source of information about where things are currently not working or where there may be possible issues. Not all complaints will be valuable sources of intelligence, but some complaints will can give an indication of problems and act as evidence that new approaches are needed.

However complaints can also be a response to innovation. Innovations, being new and unknown, will rarely be as good as whatever existing services are in place. It will take time for an innovation to improve, and to become the new normal. So an increase in complaints may actually be a sign of innovation (because something new is being tried), or it may be a sign that innovation is needed (because expectations have changed or because service quality has fallen).

Alternatively, complaints may also be a sign that there are unrelated or uncontrollable factors that are driving dissatisfaction with an organisation or its services or policies. For instance, there may be complaints in response to political issues or wider changes, that an organisation may not be able to control, or where the scope for innovation is limited or where innovation may be an inappropriate response.

An added complication is that a lot of feedback about government services may not be provided to government agencies – it may go to political representatives, it may go to third parties, or it may be as part of discussion on social media forums. Complaints and feedback are also not necessarily always easy to elicit or to capture. Automated responses or analysis of complaints may also have

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<sup>10</sup> For details see the Public Sector Innovation Toolkit blog, accessed at <http://innovation.govspace.gov.au/category/innovation-champions-group/>

trouble in identifying the outliers or the complaints that represent a sign that there are critical issues or emerging problems. Certain tools and methods may assist in sifting through feedback for the indications that something needs to change.

An organisation that values learning for innovation will be one that has a service orientation and is open to the potential insights that complaints might provide.

#### **Indonesia – Citizen Feedback Dashboard**

Indonesia's Ministry for National Development Planning partnered with the U.N.-affiliated Pulse Lab Jakarta to launch the National Citizen Feedback Dashboard in 2015. The Dashboard visualises citizens' feedback and enables public officials to prioritise trending issues based on enhanced data analysis. The tool combines data from LAPOR!, the national citizen feedback mechanism, with the passive feedback contained within the public discourse on social media sites, such as Twitter. The tool applies volume, category, keyword, location and co-topic analysis to the combined data, resulting in a dashboard visualisation of trends in the feedback from citizens and an early warning alert system drawing attention to surges in complaints on a particular theme or within a certain geographic area. The tool is based within the Centre for Data and Information of the Ministry for National Development Planning of the Government of Indonesia.

In contrast with dealing only with concerns or complaints on a case-by-case basis, which was the previous practice in Indonesia, the Dashboard allows public officials to get a better sense of broader citizen concern trends. The system allows for better 'upstream' policymaking with 'downstream' programme delivery, and thus, better enables the public administration to be more responsive to the evolving needs of society. According to Pulse Lab Jakarta officials, the tool, including the software code, will be published on GitHub for the benefit of other governments and open source communities.

*Source: Pulse Lab Jakarta and the Observatory of Public Sector Innovation*

#### **Procurement**

Another important source of learning can be through procurement. Procurement can provide public sector organisations with access to capabilities and skills that may not be available within the organisation. If used well, procurement can help build an understanding of alternative ways of doing things and alternative ways of thinking that may be of use within the organisation. To do this, attention will need to be given to the organisation's capacity, as the ability to transfer such lessons will often depend on their being sufficient skills or knowledge to be able to absorb the lessons.

Procurement can not only drive learning within the organisation but also outside of it, building capability in the broader system for responding to problems and providing others that may contribute to achieving public goods. Used in this way, an organisation may be able to use procurement strategically to drive the adoption of learning by others.

Some relevant guidance on procurement can be found in *Public Procurement for Innovation: Good Practices and Strategies* (OECD 2016).

## Networks

Networks are often a major source of learning for organisations and those that work within them. Networks may range from formalised partnerships around specific agendas to looser arrangements mainly based on information sharing and broad, less tangible aims. Networks can provide insights from a wider group of actors, access to distributed capabilities and knowledge, or mechanisms by which to quickly sound out ideas and problems and potentially collaborate on responding.

Networks are a different arrangement to procurement or to consultation or where a public sector organisation has an agenda-setting power. This difference, often based on the fact that participation or at least the extent of participation will be to some degree voluntary, means that networks require effort, and there should not be an assumption that public sector organisations can exploit networks without providing contributions and value back to the participants.

For instance sustaining a network, and the associated collaboration, can involve “organizing and maintaining cooperation among actors with differing values, interests, and accountabilities.” (Posner 2009, p.71). Those participating in networks must use negotiation, ongoing communication and collegial goal setting, which is very different to that of a policy making or regulatory mindset (Posner 2009, p.90). Networks also need stewardship, so public servants will need to know when networks are needed, and how to build, sustain and adjust them as the network evolves (Moore 2009, p.206). In a digital era, networks may seem ubiquitous and easy to participate in, however a network will require investment otherwise participants will seek other avenues for collaborating and sharing.

Networks that can support learning for innovation may be internal to government or extend across sectors. An organisation seeking to understand where innovation is needed and to learn for innovation will need to assess what networks it (or its employees) participate in and whether there are gaps or whether investment is dedicated to the right mix of networks.

### **Common Knowledge Network<sup>11</sup>**

The Common Knowledge Network is a collaborative platform by the Portuguese government to promote the sharing of best-practices and information about modernisation, innovation, and simplification of public administration. It is a network of knowledge sharing based on open membership by public bodies, central and local administrations, private entities and any citizen who wishes to participate. Participation involves presenting and describing a best practice and its results. The network thus seeks to assert itself as a central reference point to support the dissemination of good practices and lessons learned. It currently has over 500 best practices documented from all levels of government.

The network also serves as a place to conduct debate on public policies and their implementation at local, regional and national levels, and participatory decision-making with interest groups or communities of practice. It strengthens the relationships between the various stakeholders and coordinates information sharing.

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<sup>11</sup> For further details see OPSI case study accessed at <https://www.oecd.org/governance/observatory-public-sector-innovation/innovations/page/commonknowledgenetworkrcc.htm> and the Common Knowledge Network accessed at <http://www.rcc.gov.pt/Paginas/Home.aspx>

Since the network is open, it has the added benefit of helping participating government organisations obtaining a common perspective on the activities of public administration to help create standardisation of service and similar quality standards in different services.

### Open Innovation

Open Innovation involves looking outside of the organisation for ideas and knowledge that can be used to innovate, as well as potentially sharing information not leveraged within the organisation with others who may be able to innovate with it (OECD 2008). It is not a new process, however online platforms and social media have enabled a much greater potential reach and the opportunity to access different perspectives and capabilities than may have been relied upon traditionally.

While open innovation is often applied at the idea generation stage or for the provision of a solution, it can also be used to:

- identify existing measures that the organisation may be unaware of (i.e. environmental scanning)
- identify trends or insights that may provide a new understanding of problems and opportunities for intervention (i.e. scoping problems)
- simply invite others to identify problems or issues (e.g. similar to many consultation processes but on a larger and more open scale).

### Challenge.gov<sup>12</sup>

Challenge.gov is a challenge competition and incentive prize platform run by the US federal government. Government agencies can use the platform to post challenges and prizes for solutions.

An example of the use of Challenge.gov for scoping of problems is the US Patent and Trademark Office 'Cancer Moonshot Challenge'. The Challenge involved: "Using analytic tools, processes and other interoperable data sets, we are challenging you to develop interactive visualizations and stories that can help reveal new insights to guide public policy and research to achieve the goal of doubling the rate of progress toward a cure."

An example of the use of Challenge.gov for highlighting existing strategies and practices being used by the community was the 'Domestic Violence Video Challenge' which aimed to "bring attention to the most innovative and inclusive approaches, practices, policies, programs, safe spaces, activities, and strategies that the public is using to improve safety, promote healing, and provide support for this special population."

### Accountability, Evaluations, Political Processes and Crises

The public sector has a valuable source of learning available to it that other sectors may not. These can provide access to different perspectives and understandings of the problem, though the nature of these processes can sometimes mean it is uncomfortable or difficult to integrate the lessons.

Public sector agencies need to be accountable for their actions and the spending of government monies. This means that many public sector organisations are subject to various oversight processes

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<sup>12</sup> For details see Challenge.gov accessed at <https://www.challenge.gov/challenge/uspto-cancer-moonshot-challenge/> and <https://www.challenge.gov/challenge/domestic-violence-video-challenge/>.

by which their work can be challenged (or sometimes dissected). For instance audit organisations can play a significant role in identifying problems within systems and where innovation could be required. While such oversight processes can be confronting for organisations, given they may involve the organisation's work being called into question, it can also provide insight into other ways of understanding problems, other ways of understanding how to intervene or respond to the problem, and where there is need for new and innovative responses.

A less intense form of this need for accountability can be in the form of evaluations (formal or informal) of public sector organisations, their operations, their service delivery, and of government programs and policies. An evaluation process can provide rich insight into the nature of problems, what works and what does not, and where there is a need for incremental adjustment or more significant innovation.

Other political processes can also provide valuable information that can aid the identification of problems and learning for innovation. These might be reviews, discussion papers, consultation processes, briefing requirements for politicians, transparency initiatives or other processes that involve reflecting on what has been learnt and what could be different.

Political crises can also sometimes aid the innovation process. A crisis can change the dynamics surrounding an issue or problem, and provide an opportunity to try a new approach that may otherwise have struggled to get traction, support or resources without the situation being regarded as serious and potentially urgent. Equally, a crisis can change a promising experimental initiative into a sudden political liability, and something that may no longer be deemed appropriate, even though it may have been assessed as a good idea previously.

Each organisation will need to make its own consideration of its operating environment, and how it might best make use of compliance processes as opportunities for (sometimes forced) reflection and the challenging of existing understandings of problems and needs for innovation.

### Enabling Others

One way for organisations to learn is to enable others to share more easily, leading to an aggregation of data and information from multiple players and giving better insight into the current state. This aggregation can make it easier to identify trends, signals, and opportunities for collaboration and action.

One way that public sector organisations can enable others is to provide a platform (usually online) for sharing. This sharing may cover data points, data sets or more specific information such as what others are doing or planning.

This can help government agencies build a richer and more comprehensive picture and thereby learn what is going on in a much faster and larger way than previously possible.

#### **European Commission Open Data Platform to Drive Open Innovation**

The Joint Research Centre (JRC) at the European Commission supports regional and national governments in the European Union with the development of industrial innovation strategies.



As part of this process, the JRC worked to develop a database of the innovation priorities of governments, aggregating a number of the published priorities, publishing those, and then asking other governments to contribute theirs through a participatory online platform. The database provides member regional and national governments with information on the envisioned priorities of other regions. The purpose of the database is to give an overview of regions' priorities in order to enable others to position themselves, to find their unique niches and to seek out potential partners for collaboration.

The database now covers most of the regions and countries in the European Union and provides an easily accessible database to find out what other territories are planning to invest in. This has been already widely used to create joint networks and project platforms across Europe.

*Source: Observatory of Public Sector Innovation and European Commission<sup>13</sup>*

### Unlearning and Mechanisms of Challenge

This section has emphasised the importance of different channels by which organisations learn *new* things. Learning for innovation obviously requires learning, the acquisition and integration of new facts, new theories and new understandings. But unlearning – the act of challenging or removing old knowledge – is also an important channel.

Without a de-emphasis or a ‘forgetting’ of things previously known or learnt, it may be difficult for an organisation to innovate and to ‘move on’. For instance, without unlearning of traditional ways of doing things, the introduction of new digital approaches may be hindered, as people remain attached to, say, in-person service, rather than learning how to use online services. Therefore unlearning may need to occur outside of the organisation, as well as inside it.

Forgetting happens in any organisation despite good intentions with knowledge management, codifying lessons, evaluations, and succession planning. However unlearning will need to be a more deliberate process. What might that look like?

Purposefully suppressing or phasing out particular ideas or knowledge in an interconnected world may be problematic or difficult. Reinforcing of new knowledge and of new ways of doing things may often be the most practical way of encouraging unlearning, backed up changes to processes and links to performance frameworks. This approach is unlikely to encourage an appreciation of different forms of knowledge however, as it may potentially just exchange one dominant ‘truth’ with another.

One way of countering such a tendency is to have identified ‘mechanisms of challenge’ (Cutler 2008, p.128-129), processes by which those outside of the organisation can question fundamental processes or beliefs, and demonstrate where there may need to be an unlearning of basic assumptions.

The exact form of the mechanisms of challenge will vary depending on an organisation’s circumstances. One form a mechanism of challenge might take is the provision of temporary exemptions from processes to allow learning about whether an alternative approach may really be needed.

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<sup>13</sup> For details of the platform, see EYE@RIS3 accessed at <http://s3platform.jrc.ec.europa.eu/eye-ris3>



### Experimentation France<sup>14</sup>

The initiative "Experimentation France" is an initiative of the French Government calling for bids from innovators who are being hindered or impeded by certain regulatory provisions. The innovators can ask for exemptions from administrative procedures through a transparent mechanism. The most innovative projects will be eligible for temporary exemptions.

### Other Channels

Every organisation will have its own channels and mechanisms by which learning happens. This section has discussed a number of those identified as most likely to be significant, however each organisation will need to consider its own context, its own structure and processes, and its own learning channels. Indeed, organisations seeking to learn for innovation will need to learn about how it learns, and consider which channels are most valuable in providing the needed insights, as well as being open to the unexpected, where the opportunity for learning may be highest.

### How to Make the Most of Learning Channels

If an organisation can ensure that the environment for learning is appropriate, and that it is aware of and nurturing the channels by which learning from the outside world is happening, then it will likely be much better placed to identify the problems where innovation is needed.

Some suggested guidance questions that might assist with an assessment of learning channels include:

- Where is the organisation learning from?
- Which channels provide the most surprises or unexpected learning?
- Are there any big gaps in these channels for learning?
- Do any of these channels allow the organisation to challenge existing knowledge, and to potentially encourage it to 'unlearn' fundamental assumptions or investment in the status quo?

These learning channels are unlikely to be sufficient on their own however. Truly understanding the problems and the need for innovation will likely require additional support in the form of specific tools and methodologies that can be used to accelerate and magnify learning. Organisations will already have access to many tools that can contribute to this, but learning for innovation can be assisted by certain types of tools.

The next section proposes some tools that may be of particular use.

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<sup>14</sup> For details see Experimentation France, accessed at <http://www.economie.gouv.fr/france-experimentation-lancement-1er-appel-a-projets>

## 7. Tools that can Support Learning for Innovation

How can learning for innovation be enhanced or sped up? If innovation is all about tacit knowledge, and heavily reliant on individuals and sharing of information, what can tools do to assist?

There is growing recognition of a number of methods that can assist the innovation process. While each tool is different, this section proposes that there are a number of features that are particularly advantageous to the identifying problems stage of the innovation process.

A central element of these features, is about taking the tacit, the assumed, the unstated and making it tangible in some form, and able to be challenged and questioned.

*“This notion that models and simulations serve us best when they challenge our assumptions has profound implications for innovation management. The ability to respect the counterintuitive and embrace the unexpected is essential both to managing risk and to creating opportunity. In practice, creative counterintuition drives innovation.”*  
(Schrage 2000, p.120)

By making assumptions clear, organisations can better understand where there may be unmet expectations, where there might be emerging issues, and where there might be problems that require innovative responses.

The tools identified as of particular relevance for this attribute is that they share in some of the following attributes:

- **Clarifying Intent:** They help with clarifying what is actually trying to be achieved and, therefore, assist with identifying the gap between what is and what is needed.
- **Making Assumptions Explicit and Build Shared Understanding:** They help make underlying assumptions and mental models/existing conceptions of the problem explicit, and therefore easier to reflect on and to challenge. This aids with building a shared understanding of the problem, and therefore an increased likelihood that it is agreed upon as a problem requiring an innovative response.
- **Avoiding Jumping to Conclusions:** They encourage a wider exploration of problems. A natural tendency for organisations is to see a problem and act. Learning for innovation emphasises that problems should not be taken at face value, that the relationship between cause and effect may be complex or even unclear. Processes that can allow increased exploration of the nature of the problem before requiring action, investment and the elimination of other options offer a better chance for the problem to be understood.
- **Connecting with Others:** They involve others connected to the problem and help access or bring to bear their tacit knowledge to the problem being explored. People’s lived experience of problems is important but can be hard to articulate in the form of clear needs, relevant insights or explanations.
- **Experimentation and Reducing the Cost of Failing:** They emphasise experimentation and testing of aspects of the problem. Processes that reduce the time, effort and cost of experimentation make failure a less significant issue and lead to faster learning about the problem and how to respond.

- **Reframing the Problem:** They help reveal alternative ways of looking at the problem. The presentation of problems may sometimes suggest that there is an obvious way of responding, however the complex and interconnected nature of problems mean that care should be taken. Sometimes the best way of responding to a problem will be to rethink the nature of the problem. This act will then suggest new ways of how the problem might best be responded to and what sort of interventions will be most promising.

In this vein, the following tools are suggested as being of particular relevance to the first stage of the innovation lifecycle. Table 2 identifies the tools and which features each of them have.

*Table 2: Tools for Assisting Identifying Problems and Learning for Innovation*

Features Tools	Clarifying Intent	Making Assumptions Explicit and Build Shared Understanding	Avoiding Jumping to Conclusions	Connecting with Others	Experimentation and Reducing the Cost of Failing	Reframing the Problem
Dashboards	✓	✓				
Horizon Scanning	✓	✓	✓			✓
Design Thinking	✓	✓	✓	✓	✓	✓
Systems Thinking	✓	✓	✓			✓
Behavioural Insights	✓	✓			✓	
Peer-to-Peer Learning	✓	✓		✓		
Learning Organisation	✓	✓	✓		✓	✓
Innovation Labs	✓	✓	✓	✓	✓	✓

## Dashboards

Dashboards can provide a quick and simple way of distilling a large amount of information into an accessible form for getting an ‘at-a-glance’ sense of where there may be potential issues. By choosing particular things to focus on, dashboards also help to reveal assumptions about what is considered important and how problems might be perceived. They can give a shared understanding of what progress, if any, has been made, and where there are still problems.

### Edmonton Citizen Dashboard<sup>15</sup>

The Citizen Dashboard showcases performance data for select services provided by the City of Edmonton, Canada. This performance data include:

- Transportation (e.g. travel time and reliability)
- Livability (e.g. crime severity index)
- Environment (e.g. generation of solar electricity)
- Urban form (e.g. access to amenities and services)
- Economy (e.g. growth in the number of small and medium businesses)
- Finance (e.g. municipal debt)

The dashboard provides at-a-glance indication of performance for each indicator, and whether it meets or exceeds the target, is near the target, needs performance, or data is being collected/measured. Linked to each of the indicators is contextual information and further detail.

## Horizon Scanning and Futures Tools

Horizon scanning and other tools for exploring possible futures can assist in a number of ways. They can help challenge fixed conceptions that the future will continue to be like today and help provide flexibility in planning. They can build greater comfort with uncertainty and of there being multiple possible futures. Such tools can demonstrate how weak signals can provide insight into emergent trends and possible problems, and give insight into what might be done to understand a problem early on. By making futures, and the assumptions behind them, explicit, these tools can also help others think about their assumptions, and what might need to change if a problem is to be resolved.

## Design Thinking

Design thinking – also known as design, user-centred design, or human-centred design – is about being very clear on who you are developing something for and why. In other words, it is an approach that:

- Places strong emphasis on the end-user of a service or policy (e.g. the citizen) and what they need or what their experience of a problem is. This helps ensure a richer appreciation of a problem, and stop the problem definition being about the needs of a particular government agency, or those of a particular process or system.
- Repeatedly tests and revisits assumptions – what is really the problem? What is the experience of the problem? What are the components of the problem, and how might they be responded to?

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<sup>15</sup> For details, see Edmonton Citizen Dashboard, accessed at <https://dashboard.edmonton.ca/>

- Looks for new ways of understanding the problem, and therefore new ways of how the problem can be responded to.
- Emphasises making things visible and tangible early on and often so as to better elicit feedback from people about what they really need or how they would really interact with elements of a proposed solution.
- Recognises that solutions will not be arrived at fully formed and that testing, prototyping and iteration will be needed and is valuable as it helps reduce surprises and risk.

Because of its emphasis on understanding the problem to be solved and the testing of assumptions, design thinking tends to extend process of exploring what the problem actually is. The practice of prototyping – creating visualisations of novel proposals to allow assessment of their value (Ford 2009, p.317) – and iteration – repeatedly revising a prototype – can help ask new and better questions about what the problem really is.

*“Playing with a prototype can stimulate innovative questions as surely as it can suggest innovative answers. The best and most powerful models are provocative, and the unexpected questions that a model raises are sometimes far more important than the explicit questions it was designed to answer.” (Schrage 2000, p.77)*

Design thinking can also be a powerful tool for ensuring there is a shared understanding of the problem. By focusing on the issue from those who experience the problem, by making it clear what the ‘pain points’ are and how it is affecting people’s lives, design thinking can make it easier for those with a stake in the issue to agree that things could be better.

Design thinking also has a strong focus on people and thus can be a useful tool for involving or collaborating with others. Prototyping is particularly useful for eliciting feedback, for generating reactions that reveal needs and assumptions, from people. However design thinking also offers processes such as co-design or co-production for involving people throughout the problem and reducing the potential for surprises or unknown aspects of the problem.

*“An integrated co-design approach will become more necessary to solve complex problems in the future. Organizations need to open up the learning experience to real-world challenges so that learning and innovation can become mutually beneficial.” (Schweitzer and Jakovich 2015, p.224)*

Design thinking can be a powerful tool for identifying problems and unlocking new ways of understanding what is at stake and where the most promising interventions might be.

#### **School Lunch Redesign<sup>16</sup>**

The Lab at the US Office of Personnel Management undertook a project with the Food and Nutrition Services at the US Department of Agriculture. The project involved a design process for the National School Lunch Program, which provides healthy and low-cost or free meals to more than 30 million

<sup>16</sup> For details, see “OPM's Lab Leading Government Innovation”, accessed at <https://www.opm.gov/blogs/Director/2015/5/21/OPMs-Lab-Leading-Government-Innovation/>

children each school day. The redesign of the application process resulted in a simpler form for families, one that was more effective for schools, reduced costs and provided more accurate information for the Food and Nutrition Services. It is predicted that the simple redesign will reduce improper payments by 10 percent by the 2019/2020 school year and save taxpayers more than US\$600m.

### Systems Thinking

Systems thinking is an approach centred on understanding that events and issues do not happen in isolation. Problems are part of a broader context, and relate to what has happened before, what is happening in other parts of a system, or to other parts of other systems. It is an approach that recognises that the relationship between different factors is complex and sometimes uncertain.

Systems thinking can assist as an approach for identifying problems by ensuring that a much wider view of problems is taken. Rather than just looking at and accepting the immediate issue or the immediate problem, systems thinking would encourage looking at where that problem is situated, and seek to explore where the actual cause of the problem might be.

For complex problems – e.g. obesity, climate change, entrenched economic disadvantage – systems thinking can be a valuable tool for finding a ‘point of entry’ or an intervention to leverage change across the rest of the system. It can help reframe the problem.

*“Today, systems thinking is needed more than ever because we are becoming overwhelmed by complexity. Perhaps for the first time in history, humankind has the capacity to create far more information than anyone can absorb, to foster greater interdependency than anyone can manage, and to accelerate change far faster than anyone’s ability to keep pace.” (Senge 2006, p.59)*

### Behavioural Insights

The practice of behavioural insights recognises that people do not always act in ways that fit with their own interests and tries to explain the gap between good intentions and actions that sometimes arises. Behavioural insights practitioners seek to try to help ‘nudge’ people into behaving in ways that fit with their own identified interests and that will contribute to broader societal interests.

Amongst other things, behavioural insights practitioners advise making desired choices easy, attractive, social and timely (BIT 2014) and note that the discipline can help rethink traditional approaches to policy design (BETA 2016). Where the practice of behavioural insights is of particular relevance to learning for innovation however, is in its emphasis on randomised controlled trials and experimentation.

Behavioural insights encourages clearly defining the outcome, understanding the context, and testing, learning and adapting.

### **Behavioural Economics Team Australia (BETA) Project Process (BETA 2016b)**

BETA’s four project stages include:

- Discovery: identify the policy problem and conduct initial discovery work to understand the context, target population and behaviours.
- Diagnosis: conduct desktop research, review data and materials and conduct fieldwork to define the behavioural problem and propose targeted interventions.
- Design: design interventions in detail and design a trial to test their efficacy.
- Delivery: implement, analyse and report on the trial.

Each phase will see the focus of the team move from identifying the target outcome, to exploring the causal behaviour, to developing behaviourally informed interventions, to running a trial of those interventions. While each stage has a different focus, the process is not linear until the trial is launched. It will be necessary to think about trial design early and be open to reconsidering the behavioural diagnosis during the design phase.

Randomised controlled trials can be powerful in assessing what works, by providing clear evidence of the impact of an intervention as compared to a control group that was not exposed to the intervention.

It is possible that behavioural insights on their own may feed more into single-loop learning by establishing what works, rather than necessarily providing an understanding of why something works, or whether the problem as currently understood needs to be rethought. Alternatively, behavioural insights can provide insight into implicit biases and limits of current styles of thinking and mental models.

### Peer-to-Peer Learning

Peer-to-peer learning can be a very useful method for sharing tacit knowledge and helping people learn from the experience of others. Peer-to-peer learning can help with the:

- Identification of problems, by connecting people with others with relevant experience on similar challenges, and whose perspective may help reveal unrealised parts of the problem
- Testing of assumptions, by putting together people who come from different environments and who different experiences and are unlikely to understand the issues in the exact same way
- Accessing of tacit knowledge about how things work, how things are connected, and what is involved in understanding the problem in a way that it can be acted on.

Peer-to-peer learning is a structured process for connecting people and care should be taken to ensure that participants can make the most of their learning, including being able to bring their knowledge back to their work.

The Effective Institutions Platform has published a *Peer-to-Peer Learning Guide* (Andrews & Manning 2016) outlining many of the key considerations.

*“Peer learning .... involves individuals exchanging knowledge and experience with each other, and diffusing this learning back to their organisations to ensure an impact – at scale – on reform initiatives. While peer learning entails complex organisational logistics, it avoids the risk of focusing on process rather than product. It recognises that ultimately learning takes place between individuals and it facilitates*



*interpersonal exchanges that are well-matched and that are based on trust and commitment.” (Andrews and Manning 2016, p.5)*

## Learning Organisation

The learning organisation model as articulated by Senge (2006) revolves around five elements: systems thinking, personal mastery, mental models, building shared vision, and team learning. While some of these elements have been reflected in this studies discussion of learning, enabling factors, and channels for learning, the learning organisation idea can also be seen as a framework that can guide individuals and organisations in their approach to learning for innovation.

The exact nature of what constitutes a learning organisation will be dependent on context and an organisation’s particular mission. It is less of a straightforward tool and more of a guiding approach or ideal, but can provide value in identifying and understanding problems.

While it has much to offer there is some question over its applicability to the public sector:

*“The learning organization model undoubtedly has much to offer PSOs. Their environments are complex and prone to unexpected changes, due to their political nature. This approach encourages organizations to see change and innovation as a core task of all staff, on a continuous basis, rather than a discreet managerial function. It is thus a very empowering approach to innovation and change.... However, it does have significant potential drawbacks. These are particularly significant for PSOs. First, the ‘learning organization’ concept can be at odds with the actual nature of many PSOs. Historically these have been hierarchical organizations, where information is jealously guarded (and sometimes rightly so, to protect the confidentiality of their service users) and where the culture has been one of professional dominance rather than openness. The learning organization model thus requires significant culture change for many PSOs.” (Osborne and Brown 2005, p.42)*

Some public sector organisations and individuals may however find the approach resonates for them and is a useful way of understanding and approaching learning for innovation, and thus helping them in identifying problems where innovative responses are required.

## Innovation Labs

Innovation labs are a relatively recent development within the public sector and act as structural responses to the limitations of existing organisational approaches to innovation and exploration of new approaches.

An innovation lab may take the form of a small team in a dedicated physical space or it may be a process led practice that is convened for specific challenges or when new thinking and new approaches are needed. Innovation labs often apply a mixture of methodologies or disciplines, though many make use of a design-led approach to investigating problems.

By their nature innovation labs tend to be different to the rest of the organisation(s) they are connected with. This can provide challenges from a governance perspective, however the difference is also one of the features that provides the most value for labs.

*“Incumbents at the core – which is the place where most of the resources, especially people and money, are concentrated, and where old ways of thinking and acting still hold sway – have many fewer incentives to figure out the world, or to discover new ways of doing things, or to find new information.” (Hagel, Brown and Davison 2010, p.27)*

Innovation labs can help with the identification of problems, by convening different groups, by using different methods and using different forms of knowledge to reveal where the issues might be. Labs are useful valuable mechanisms for unearthing unstated assumptions through exploratory techniques. They can provide a common understanding of problems as the exploratory techniques can provide clear but non-traditional evidence – pain points, customer journeys, citizen insights, scenarios, or stories – of where there is an issue and where current approaches may be lacking.

As places of experimentation and exploration labs can mix together different people and perspectives and draw out tacit knowledge and understandings of the world. A lab as an identified space that does things differently to the rest of the organisation, have fewer issues in experimenting and trying new approaches and can stimulate rapid learning. This same characteristic, of doing things differently, means that labs usually do not have access to the same resources and capabilities of the rest of the organisation and thus have an inherent need to find different ways of approaching and understanding problems.

Labs may draw on many of the other tools identified in this section, and are thus often looked to by organisations as a tangible form of engaging with the innovation process.

## 8. Remaining Issues

This is an alpha version of a study – i.e. it has been developed to seek input and test various ideas and features. In that light, feedback is sought about the report and where it may need to be improved, where there may be assumptions or arguments that should be challenged, and whether the report provides a sufficient basis for providing guidance to public sector organisations.

Some possible questions for consideration include:

- What might be missing?
- Is there anything that does not fit with the lived experience of innovation in the public sector?
- Does the report adequately provide an overview of the relevant factors for identifying problems and learning for innovation?
- Are there additional (or better) examples or case studies that could be used to illustrate the process of identifying problems and learning for innovation?

Feedback can be provided to the Observatory of Public Sector Innovation team at [opsi@oecd.org](mailto:opsi@oecd.org). This will contribute to a beta version of the report which will then be tested with representatives from OECD member countries and interested public servants.

## Appendix 1. In Depth Guiding Questions for Organisations – A Work in Progress

How can organisations and individuals take practical action to support learning for innovation? The following are some potential questions that might help prompt self-assessment of how well current activity matches learning for innovation needs.

### 1. Checklist for Organisations and Teams Regarding Enabling Conditions

Those responsible for an organisation's learning and innovation strategies and practices may wish to consider the following checklist of questions. These questions are intended to act as a prompt for assessment of the organisation's learning for innovation capability against identified necessary preconditions.

Factors for Effective Learning for Innovation	Guiding Question	Y/N
<b>Purpose</b> – without an established purpose, it will be difficult for an organisation to know what it is learning and innovating for.	Does the organisation have a clear sense of what the organisation is for and why its work is important?	
<b>Openness</b> – organisations operate in an interconnected world, where more is happening outside of the organisation than within it. Learning and innovation will be reduced where there is not external engagement.	Do people within the organisation feel encouraged to be engaged with difference outside of the organisation?	
<b>Openness (Diversity)</b> – without diversity, it will be difficult to learn all that can be gained from different experiences, to come up with new insights and ideas, and to understand the problems where innovation is needed.	Is difference appreciated within the organisation?	
<b>Openness (Service Orientation)</b> – public sector organisations will not fully understand where innovation is needed unless there is a service orientation to those outside of the organisation.	Are relationships with those outside of the organisation characterised by respect, openness and the appreciation of difference?	
<b>Capacity (Absorptive Capacity)</b> – learning and innovation build on what has gone before and lessons will only make sense in context and with experience.	Are there deliberate processes for staff at all levels to reflect on experiences (regular and irregular, successes and failures)?	
<b>Capacity (Tolerance for Risk and Failure)</b> – learning and innovation are risky activities and require a degree of comfort with failure.	Can staff name a recent failure within the organisation, identify what was learnt about it and discuss it in positive terms?	
<b>Capability (Leadership)</b> – learning and innovation are challenging, and will require leadership support.	Do the leaders of the organisation clearly value learning (including learning in the form of failure)?	
<b>Capability (Empowerment)</b> – learning and innovation will be limited if everything	Are staff allowed to experiment with their	

Factors for Effective Learning for Innovation	Guiding Question	Y/N
needs to be approved or agreed first. Staff need to have some degree of empowerment.	work?	
<b>Capability</b> (Infrastructure and Processes) – innovation and learning are core functions, and need to be treated as such if they are valued.	Does the organisation provide a similar level of structured support (systems, technology, guidance and processes) as it does for other core work functions?	
<b>Capability</b> (Understanding Systems) – learning and innovation take place in complex systems. An understanding of the wider systems is needed in order to learn what underlying problems are and the full impact of responses.	Does the organisation have a good track record of avoiding unexpected surprises?	
<b>X-Factor</b> – every organisation is different. There will be something specific to each organisation that will impact the learning and innovation needs.	Has the consideration of learning needs for innovation covered the specific circumstances of the organisation?	

### In-Depth Questions

Some additional guiding questions for Organisations are proposed, to assist where specific enabling conditions may be assessed as needing additional support.

#### Purpose

**Explanation:** Without an established purpose, it will be difficult for an organisation to know what it is learning and innovating for.

#### Questions:

- Does the organisation have a clear sense of what the organisation is for and why its work is important?
- Is there a shared understanding of this purpose within the organisation?
- Is the purpose tangible?
  - Do people within the organisation understand it and what it means for them and their work?
  - Is it clearly reflected within the work of teams?
- Is the purpose embedded within the organisation?
  - Is it aligned with culture – the behaviours, practices and unstated beliefs of the organisation?
  - Is it reflected in the processes of the organisation?
  - Is it reflected in the technology and systems of the organisation?
- Is the purpose meaningful to stakeholders, partner organisations and people outside of the organisation?

### *Openness*

**Explanation:** Organisations operate in an interconnected world, where more is happening outside of the organisation than within it. Learning and learning will be limited without external engagement.

#### **Questions:**

- Do people within the organisation feel encouraged to be engaged with difference outside of the organisation?

### *Openness – Diversity*

**Explanation:** Without diversity, it will be difficult to learn all that can be gained from different experiences, to come up with new insights and ideas, and to understand the problems where innovation is needed.

#### **Questions:**

- Is difference appreciated within the organisation?
- Is that appreciation of difference clearly demonstrated in decision-making?

### *Openness – Service Orientation*

**Explanation:** Public sector organisations will not fully understand where innovation is needed unless there is a service orientation to those outside of the organisation.

#### **Questions:**

- Are relationships with those outside of the organisation characterised by respect, openness and the appreciation of difference?
- Are the problems of those outside of the organisation viewed as being as important as those within the organisation?
- Are those served by the organisation regularly invited to share their insights about how their context is changing?

### *Capacity – Absorptive Capacity*

**Explanation:** Learning and innovation build on what has gone before and lessons will only make sense in context and with experience.

#### **Questions:**

- Are there deliberate processes for staff at all levels to reflect on experiences (regular and irregular, successes and failures)?
- Do performance management processes support the recognition of lessons learnt as well as achievements?

### *Capacity – Tolerance for Risk (and Failure)*

**Explanation:** Learning and innovation are risky activities and require a degree of comfort with failure.

#### **Questions:**

- Can staff name a recent failure within the organisation, identify what was learnt about it and discuss it in positive terms?
- Do risk frameworks encourage the identification of the risks of not innovating as well as the risks of innovating?

### *Capability – Leadership*

**Explanation:** Learning and innovation are challenging, and will require leadership support.

#### **Questions:**

- Do the leaders of the organisation clearly value learning (including learning in the form of failure)?
- Are the leaders of the organisation seen as actively valuing their own learning?
- Are leaders given the opportunity to ‘get their hands dirty’ with innovative projects or learning opportunities?

### *Capability – Empowerment*

**Explanation:** Learning and innovation will be limited if everything needs to be approved or agreed first. Staff need to have some degree of empowerment.

#### **Questions:**

- Are staff allowed to experiment with their work?
- Do staff know where/when it is safe to try new things and where/when it is not?

### *Capability – Infrastructure and Processes*

**Explanation:** Innovation and learning are core functions, and need to be treated as such if they are valued.

#### **Questions:**

- Does the organisation provide a similar level of structured support (systems, technology, guidance and processes) as it does for other core work functions?
- Do staff have clearly identified people they can turn to for help or advice when it comes to learning for innovation?

### *Capability – Understanding Systems*

**Explanation:** Learning and innovation take place in complex systems. An understanding of the wider systems is needed in order to learn what underlying problems are and the full impact of responses.

#### **Questions:**

- Does the organisation have a good track record of avoiding unexpected surprises?

### *X-Factor*

**Explanation:** Every organisation is different. There will be something specific to each organisation that will impact the learning and innovation needs.

#### **Questions:**

- Has the consideration of learning needs for innovation covered the specific circumstances of the organisation?

## **2. Questions for Organisations and Teams Regarding Channels for Learning**

Some possible questions for the organisation to consider regarding its access to new learning from outside include:

- Where is the organisation currently learning from?
- Which channels provide the most surprises or unexpected learning?
- Are there any big gaps in these channels for learning?
- Do any of these channels allow the organisation to challenge existing knowledge, and to potentially encourage it to 'unlearn' fundamental assumptions or investment in the status quo?

## **3. Questions for Organisations and Teams Regarding Tools to Assist Learning for Innovation and Identifying Problems**

Some possible questions for the organisation to consider regarding the tools it uses to assist learning for innovation and identifying problems include:

- Do the tools currently being used help clarify intent?
- Do they make assumptions explicit and build a shared understanding of the problem?
- Do they help avoid jumping to conclusions?
- Do they help connect with others?
- Do they help experimentation and reduce the costs of failing?
- Do they help reframe the problem?

## **4. Questions for Leaders to Consider on Learning for Innovation**

Some possible questions for organisational leaders to consider about their role in supporting learning for innovation (and their own learning) include:

- Does your understanding of what it is to be a leader include:
  - Readily and freely admitting mistakes or that things need to change?
  - Regularly asking others to challenge your assumptions?
  - Sharing what you have learnt with others?
  - Promoting debate and discussion before coming to a decision?
- Do you regularly expose yourself to new and different learning opportunities?
  - Can you name the last time that you got your 'hands dirty' with direct experience and involvement in an innovative project?
- Do you provide a clear sense of where failure and innovation is allowed or the circumstances in which it is allowable?
- Do you recognise situations and staff that have provided the organisation with significant learning, not just delivering on business-as-usual work?
- Do you regularly seek insights from people who are not like you (in skills, in experience, or in background)?
- Do you encourage reflection of experiences and regular sharing of the knowledge that comes out from that?
  - Can you name the specific practices by which you encourage it?





## Bibliography

- Altshuler, A. and Zegans, M.D. (1997), "Innovation and Public Management: Notes from the State House and City Hall", in Altshuler, A. and Behn, R.D (eds.) *Innovation in American Government: Challenges, Opportunities, and Dilemmas*, Brookings Institution Press, Washington, D.C.
- Andrews, M. and Manning, N. (2016), *A Guide to Peer-to-Peer Learning: How to make peer-to-peer support and learning effective in the public sector?*, Effective Institutions Platform.
- Australian Government (2010), *Empowering Change: Fostering Innovation in the Australian Public Service*, Report 9 to the Management Advisory Committee.
- Australian Public Service Commission (APSC) (2009), *Smarter Policy: choosing policy instruments and working with others to influence behaviour*, Contemporary Government Challenges Series.
- Australian Public Service Commission (APSC) (2009b), *Policy Implementation through Devolved Government* APSC, Contemporary Government Challenges Series.
- Banks, G. (2009), *Challenges of Evidence-Based Policy-Making*, Australian Public Service Commission and Productivity Commission, Contemporary Government Challenges Series.
- Beckett, R.C. (2015), "Learning to Facilitate Innovation" in Soliman, F. (ed.) *From Knowledge Management to Learning Organisation to Innovation: The Way Ahead!* Cambridge Scholars Publishing, pp. 152-169.
- Behn, R.D. (2008), "The Adoption of Innovation: The Challenge of Learning to Adapt Tacit Knowledge" in Borins, S. (ed.) *Innovations In Government: Research, Recognition, and Replication* Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University – Brookings Institution Press, Washington, D.C. pp.138-158.
- BETA (Behavioural Economics Team Australia) (2016), "About behavioural economics" accessed at <https://www.dpmc.gov.au/resource-centre/domestic-policy/about-behavioural-economics>.
- BETA (Behavioural Economics Team Australia) (2016b) "Guide to developing behavioural interventions for randomised controlled trials", accessed at [https://www.dpmc.gov.au/sites/default/files/publications/BETA-Guide-developing-behavioural-interventions-randomised-controlled-trials\\_1.pdf](https://www.dpmc.gov.au/sites/default/files/publications/BETA-Guide-developing-behavioural-interventions-randomised-controlled-trials_1.pdf).
- BIT (Behavioural Insights Team) (2014), *EAST: Four Simple Ways to Apply Behavioural Insights*, accessed at <http://www.behaviouralinsights.co.uk/publications/east-four-simple-ways-to-apply-behavioural-insights/>.
- Blackman, D.A. (2013) "Contextualizing the learning organization: how will help us learn in the future?" in Örtensblad, A. (ed.) *Handbook of Research on the Learning Organization: Adaptation and Context*, Edward Elgar, pp.358-371.
- Block, D. and Borges, N. (2002), "Organisational learning in NGOs: an example of an intervention based on the work of Chris Argyris" in *Development in Practice*, Vol. 12/3-4, August, p.277-293.
- Borins, S. (2008), "Introduction" in Borins, S. (ed.) *Innovations In Government: Research, Recognition, and Replication* Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University – Brookings Institution Press, Washington, D.C.
- Bourgon, J. (2008), "The Future of Public Service: A Search for A New Balance: Keynote Address to the 2008 IPAA National Conference" in *The Australian Journal of Public Administration*, Vol. 67/4, pp.390-404.

- Brown, T. (2009), *Change By Design: How Design Thinking Transforms Organization and Inspires Innovation*, Harper Business, New York.
- Bruce, M. (2009), "Unleashing the creative potential of design in business" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.37-45.
- CNMC (Canada National Managers' Community) (2002), "Tools for Leadership and Learning: Building a Learning Organization" (3<sup>rd</sup> Edition), accessed at <http://www.managers-gestionnaires.gc.ca/eng/tools-leadership-and-learning-building-learning-organization>.
- Considine, M., Lewis, J.M. and Alexander, D. (2009), *Networks, Innovation and Public Policy: Politicians, Bureaucrats and the Pathways to Change Inside Government*, Palgrave Macmillan.
- CPSA (Canada Public Service Agency) (2007), "A Primer on the Learning Organization", Prepared for the Public Service Learning Policy Directorate, accessed at <https://www.tbs-sct.gc.ca/dev/dwnld/lapn-eng.pdf>.
- Cross, R. and Thomas, R.J. (2009), *Driving Results Through Social Networks: How Top Organizations Leverage Networks for Performance and Growth*, Jossey-Bass, San Francisco.
- Cummings, J. (2003), "Knowledge Sharing: A Review of the Literature" World Bank Operations Evaluation Department.
- Cutler, T. (2008), *Venturous Australia: building strength in innovation*.
- Diamandis, P. and Kotler, S. (2012), *Abundance: The Future is Better than you Think*, Free Press, New York.
- Dodgson, M. (1993), "Organizational Learning: A Review of Some Literatures" in *Organization Studies*, Vol. 14/3, pp.375-394.
- Dodgson, M., Gann, D. and Salter, A. (2005), *think, play, do: technology, innovation, and organization*, Oxford University Press, Oxford.
- Eggers, W.D. (2009) "From Conflict to Collaboration: Lessons in Networked Governance from the Federal Cooperative Conservation Initiative" in Goldsmith, S. and Kettl, D.F. (eds.) *Unlocking the Power of Networks: Keys to High Performance Government*, Brookings Institution Press, Washington, D.C., pp.15-33.
- Eggers, W.D. and O'Cleary, J. (2009), *If We Can Put a man on the Moon: Getting Big Things Done in Government*, Harvard Business Press, Boston, Massachusetts.
- Eggers, W.D. and Singh, S.K. (2009), *The Public Innovator's Playbook: Nurturing bold ideas in government*, Deloitte Research.
- Ferreira, M., Farah, S., and Spink, P. (2008), "Subnational Government Innovation in a Comparative Perspective: Brazil" (p.71-92) in Borins, S. (ed.) *Innovations In Government: Research, Recognition, and Replication*, Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University – Brookings Institution Press, Washington, D.C.
- Ford, C. (2009), "Prototyping processes that affect organizational creativity" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.317-326.
- Fraser, M. and Dutta, S. (2008), *Throwing Sheep in the Boardroom: How Online Social Networking Will Transform Your Life, Work and World*, John Wiley & Sons Ltd, Chichester, West Sussex.

- Fung, A., "Citizen Participation in Government Innovations" in Borins, S. (ed) *Innovations In Government: Research, Recognition, and Replication*, Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University – Brookings Institution Press, Washington, D.C., pp.52-70.
- Garvin, D.A., Edmondson, A.C. and Gino, F. (2008), "Is Yours a Learning Organization?" *Harvard Business Review*.
- Gilson, C., Dunleavy, P., and Tinkler, J. (2009), "Organizational Learning in Government Sector Organizations: Literature Review: A report to the National Audit Office from LSLE Public Policy Group" accessed at [https://www.nao.org.uk/wp-content/uploads/2009/02/n0809129\\_Literature\\_review.pdf](https://www.nao.org.uk/wp-content/uploads/2009/02/n0809129_Literature_review.pdf).
- Goldsmith, S. and Eggers, W.D. (2004), *Governing by Network: The New Shape of the Public Sector*, Brookings Institution Press, Washington, D.C.
- Greve, A. (2009) "Social networks and creativity: combining expertise in complex innovations" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.132-145.
- Gryskiewicz, S.S. (2009), "Leading for renewal: the value of positive turbulence" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.99-106.
- Hagel, J., Brown, J.S., and Davison, L. (2010), *The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion*, Basic Books, New York.
- Hailey, J. and James, R. (2002), "Learning leaders: the key to learning organisations" in *Development in Practice*, Vol. 12/3-4, August, pp.190-204.
- Hartley, J. (2015), "Eight-and-a-half Propositions to Stimulate Frugal Innovation in Public Services" in Wanna, J., Lee, H. and Yates, S. (eds.) *Managing Under Austerity, Delivering Under Pressure: Performance and Productivity in Public Service*, ANZSOG.
- Hsu, S. (2013), "Alternative learning organization" in Örtensblad, A. (ed.) *Handbook of Research on the Learning Organization: Adaptation and Context*, Edward Elgar, pp.358-371.
- Ismail, S., with Malone, M.S., and Van Geest, Y. (2014), *Exponential Organizations: Why new organizations are ten times better, faster, and cheaper than yours (and what to do about it)* Diversion Books, New York.
- Jarvis, J (2009), *What Would Google Do?* Collins Business, New York.
- Kaufmann, G., and Runco, M.A. (2009) "Knowledge management and the management of creativity" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.149-159.
- Kelleher, D. and the Gender at Work Collaborative (2002), "Organisational learning: a borrowed toolbox?" in *Development in Practice*, Vol. 12/3-4, August, pp.76-88.
- Kelman, S. (2015), "Kennedy School School" of Research on Innovation in Government" in Borins, S. (ed.) *Innovations In Government: Research, Recognition, and Replication* Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University – Brookings Institution Press, Washington, D.C., pp.28-51.
- Lafley, A.G. (2008), "P&G's Innovation Culture" in *Strategy + Business*, Booz & Company Inc. accessed at <http://www.strategy-business.com/media/file/enews-08-28-08.pdf>.
- Lafley, A.G. and Charan, R (2008), *The Game-Changer: How Every Leader Can Drive Everyday Innovation*, Profile Books Ltd, London.

- Lawrence, E. (1998), "Some Thoughts on Turning a Government Organization into a Learning Organization", Draft, accessed at [http://wiki.dbast.com/images/5/52/PSC-Some\\_thoughts\\_on\\_turning\\_a\\_govt\\_org\\_into\\_a\\_learning\\_org.pdf](http://wiki.dbast.com/images/5/52/PSC-Some_thoughts_on_turning_a_govt_org_into_a_learning_org.pdf).
- Lynn, L.E. (2007), "Innovation and the Public Interest: Insights from the Private Sector" in *Innovation in American Government: Challenges, Opportunities, and Dilemmas* Altshuler, A.A. and Behn, R.D. (eds.), Brookings Institution Press, Washington, D.C., pp.83-103.
- Michalopoulos, N. and Psychogios, A. (2002), "Knowledge Management and Public Organizations: How well does the coat fit? The case of Greece", Third European Conference on Organisational Knowledge, Learning and Capabilities, accessed at <http://apollon1.alba.edu.gr/OKLC2002/Proceedings/track9.html>.
- Moore, M.H. (2009), "Networked Government: Survey of Rationales, Forms, and Techniques" in *Unlocking the Power of Networks: Keys to High Performance Government*, Goldsmith, S. and Kettl, D.F. (eds.) Brookings Institution Press, Washington, D.C., pp.190-227.
- Mulgan, G. (2007), "Ready or not? Taking innovation in the public sector seriously", NESTA.
- Mumford, M.D, Byrne, C.L. and Shipman, A.S. (2009), "The thinking of creative leaders: outward focus, inward focus and integration" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.279-291.
- NAPA (National Academy of Public Administration) 2009, "Enabling Collaboration: Three Priorities for the New Administration: A paper by the Collaboration Project Advisory Panel of the National Academy of Public Administration" accessed at <http://www.napawash.org/2009/1376-enabling-collaboration-three-priorities-for-the-new-administration.html>.
- OECD (2016), *Public Procurement for Innovation: Good Practices and Strategies*, OECD Publishing, Paris.
- OECD (2015), *The Innovation Imperative in the Public Sector: Setting an Agenda for Action*, OECD Publishing, Paris.
- OECD (2010), *Innovative Workplaces: Making Better use of Skills within Organisations*, OECD Publishing, Paris.
- OECD (2008), *Open Innovation in Global Networks*, OECD Publishing, Paris.
- O'Donnell, O. (2006), "Innovation in the Irish public sector", Discussion Paper 37, Institute of Public Administration, CPMR (Committee for Public Management Research) accessed at [http://www.ipa.ie/pdf/cpmr/CPMR\\_DP\\_37\\_Innovation\\_Irish\\_Public\\_Sector.pdf](http://www.ipa.ie/pdf/cpmr/CPMR_DP_37_Innovation_Irish_Public_Sector.pdf).
- Örtensblad, A. (2013) "What do we mean by 'learning organization'?" in Örtensblad, A. (ed.) *Handbook of Research on the Learning Organization: Adaptation and Context*, Edward Elgar, pp.22-34.
- Osborne, S.P., and Brown, K. (2005), *Managing Change and Innovation in Public Service Organizations*, Routledge, London.
- Parsons, W. (2006), "Innovation in the public sector: spare tyres and fourth plinths", *The Innovation Journal: The Public Sector Innovation Journal*, Vol 11/2.
- Perrott B. (2015), "Organizational Knowledge Management Dynamics: Insights and Perspectives" in Soliman, F. (ed.) *From Knowledge Management to Learning Organisation to Innovation: The Way Ahead!* Cambridge Scholars Publishing, pp.79-104.
- Posner, P. (2009), "Networks in the Shadow of Government: The Chesapeake Bay Program" in *Unlocking the Power of Networks: Keys to High Performance Government*, Goldsmith, S. and Kettl, D.F. (eds.), Brookings Institution Press, Washington, D.C., pp.62-94.

- Potts, J (2009), "The innovation deficit in public services: The curious problem of too much efficiency and not enough waste and failure", *Innovation: Management, Policy & Practice: the international journal for innovation research, commercialization, policy analysis*, Vol. 11/1, pp.34-43.
- Rehn, A. and De Cock, C. (2009) "Deconstructing creativity" in Runco, M.A. and Moger, S. (eds.) *The Routledge Companion to Creativity*, Tudor Rickards, Routledge, New York, pp.222-231.
- Roper, L. and Pettit, J. (2002), "Development and the Learning Organisation: an introduction" in *Development in Practice*, Vol. 12/3-4, August, pp.1-21.
- Saint-Onge, H. and Wallace, D. (2003), *Leveraging Communities of Practice for Strategic Advantage* Elsevier Science, Burlington.
- Sarder, R. (2016), *Building an Innovative Learning Organization: A Framework to Build a Smarter Workforce, Adapt to Change, and Drive Growth*, Wiley.
- Schrage, M. (2000), *Serious Play: how the world's best companies simulate to innovate*, Harvard Business School Press, Boston.
- Schutte, N. and Bakhuizen, N. (2014), "Creating Public Service Excellence Applying Learning Organization Methods: The Role of Strategic Leadership" in *Mediterranean Journal of Social Sciences*, Vol. 5/4, pp.159-165.
- Schweitzer, J. and Jakovich, J. (2015), "The Emerging Potential of Crowd-Sharing: Learning and Innovation Beyond the Organizational Context" in Soliman, F. (ed.) *From Knowledge Management to Learning Organisation to Innovation: The Way Ahead!* Cambridge Scholars Publishing, pp. 208-230.
- Senge, P.M. (2006) *The Fifth Discipline: The Art and Practice of the Learning Organization* (Revised Edition), Random House Business Books, Random House eBooks.
- Serrat, O. (2012) "Innovation in the Public Sector June" in *Knowledge Solutions*, Vol. 117, Asian Development Bank.
- Shergold, P. (2009), "Been there, done that, still hoping for more", in *Griffith Review: Participation Society* Winter 2009, Griffith University, Brisbane, pp.139-155.
- Skarzynski, P. and Gibson, R. (2008), *Innovation to the Core: A Blueprint for Transforming the way your Company Innovates*, Harvard Business Press, Boston.
- Viguier, P., Smit, S. and Baghai, M. (2008), *The Granularity of Growth: How to identify the sources of growth and drive enduring company performance*, John Wiley & Sons, Inc. Hoboken.
- Visser, M. and Van der Togt, K. (2016) "Learning in Public Sector Organizations: A Theory of Action Approach" in *Public Organization Review*, Volume 16/2, pp.235-249.
- Weir, D and Örtensblad, A. (2013), "Obstacles to the learning organization" in Örtensblad, A. (ed.) *Handbook of Research on the Learning Organization: Adaptation and Context*, Edward Elgar, pp.68-85.
- Windrum, P. (2008) "Innovation and entrepreneurship in public services" in *Innovation in Public Sector Services: Entrepreneurship, Creativity and Management*, Windrum, P. and Koch, P. (eds.) 2008, Edward Elgar Publishing Limited Cheltenham, pp.3-20.
- Windrum, P. (2008b), "Conclusions: public innovation and entrepreneurship" in *Innovation in Public Sector Services: Entrepreneurship, Creativity and Management*, Windrum, P. and Koch, P. (eds.) 2008, Edward Elgar Publishing Limited Cheltenham, pp.228-243.
- Yusoff, M.S.B.M. (2005), "The public service as a learning organization: the Malaysian experience" in *International Review of Administrative Sciences*, Vol. 71/3, pp. 463-474.

- Zineldin, M. (2015), “The Integrated Role of Information, Technology, Learning Organization, Innovation and Knowledge Management” in Soliman, F. (ed.) *From Knowledge Management to Learning Organisation to Innovation: The Way Ahead!* Cambridge Scholars Publishing, pp.129-151.