Supplement to the ANAO’s Better Practice Guide

Innovation in the Public Sector:
Enabling Better Performance, Driving New Directions

Public Sector Innovation: A Review of the Literature

Report on a project carried out to support the preparation of an ANAO Better Practice Guide on public sector innovation

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Preamble and Acknowledgements

This literature review has been compiled as part of an Australian National Audit Office (ANAO) project aimed at preparing a Better Practice Guide (BPG) on Public Sector Innovation. It is a ‘stock-take’ of the current state of development of a newly emerging field of academic inquiry and of practice within the public sector.

The literature review covers official government publications, literature produced by non-government organisations and also academic publications on this issue.

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Executive Summary

This is a review of the academic literature on public sector innovation augmented by a range of technical reports, working papers, and government publications that identify insights and examples useful to preparing the Australian National Audit Office’s (ANAO’s) Better Practice Guide (BPG) entitled *Innovation in the Public Sector: Enabling Better Performance, Driving New Directions*.

The ANAO’s BPG, and the work that underpins it, are part of a wider, whole-of-government initiative to encourage a greater emphasis on, and degree of support for, innovation in the Australian Public Service. Two key components of this initiative that complement the ANAO’s work are the project on public sector innovation carried out by the Management Advisory Committee (MAC) and the major initiative entitled *Reform of Australian Government Administration*. In general terms, the ANAO’s work has focused on enhancing public sector innovation within the constraints of the existing legislative framework and managerial practices whilst the MAC work and the *Reform of Australian Government Administration* initiative focus on recommended changes to this legislative framework.

The main emphasis is upon summarising published material that addresses public sector innovation concerns directly. There is a far more extensive literature on general aspects of innovation. Whilst aspects of this general literature are relevant to public sector innovation, aside from a brief discussion on lessons for risk-taking, such insights have been drawn upon as background material when drafting the ANAO’s Better Practice Guide and are not covered in this document. The more general lessons derived from private sector experience are addressed in the complementary work on public sector innovation carried out by the Management Advisory Committee.
The main findings and conclusions from this literature review are as follows:

- Academic inquiry into public sector innovation is a new and growing field. Just over half (51.5%) of the 167 academic journal articles examining public sector innovation tracked by the extensive Thomson-Reuters database of academic journal publications in the period 1971–2008 were published in the three years: 2006–2008. The growth in the volume of the non-academic literature produced by governments and non-government organisations, although harder to track numerically with the same rigour, also appears to exhibit the characteristics of an emerging field. This recent rise in interest is not dissimilar from that exhibited by the more general literature on innovation (24% of the 1971–2008 output has been published in the 2006–08 timeframe).

- The recent emergence of this field means that well established ‘quality assurance’ mechanisms have yet to be applied, namely: systematic and peer-reviewed assessments of collated evidence (i.e. ‘meta studies’); comparative peer-reviewed analysis of different case studies and their implications etc. Consequently, given the formative stage of this literature it is necessary to draw conclusions on the basis of what tend to be anecdotal and unsystematic observations that fall in the lower levels of the ‘hierarchy of evidence’ used (ideally) to support government decision-making.

- In general terms, the existing literature focuses on promoting a more ‘self-conscious’ recognition of the importance of innovation in a public sector setting. In so doing, it seeks to redress a perceived imbalance in the emphasis placed on innovation in the private sector vis-à-vis innovation in the public sector. This imbalance has arisen partly as a result of the growing prominence of the ‘innovation studies’ literature relating to the private sector. Another reason for this imbalance emerging has been the ethos that the public sector is neither equipped to be, or should seek to become, innovative.

- The contemporary public sector management agenda that has been emerging since the early years of the new Century seeks to challenge this ethos that the public sector is neither equipped to be, or should seek to become innovative. This emerging management agenda reflects a shared perception between academic commentators, influential thinkers in civil society and also by senior government officials that:
  (a) the public sector has in fact a long and distinguished history of innovating that pre-dates that of the private sector — and is still active today;
  (b) this feature of the public sector needs to be recognised and promoted to the general community;
  (c) public sector innovation requires a more explicit use of experiments and mechanisms to evaluate competing options;
  (d) public sector innovation also needs to be supported both as an over-arching objective and as a pervasive operational consideration within the machinery of government; and
  (e) as in the private sector, the necessary appetite for risk stems from articulating the relationship between risks and potential rewards, and commonly involves strategies in which a spectrum of activities are pursued within this risk–reward relationship (from low risk–lower reward through to higher risk–higher reward options).

- The government of the United Kingdom stands out in the high profile that it has given to public sector innovation. This emphasis includes the provision of substantial ‘risk-taking’ funding to facilitate partnership-based innovations in public service delivery (particularly those innovations that aim to increase the efficiency and effectiveness of public service delivery).

- Although the verifiable evidence is ambiguous, the fact that a marked increase in academic interest in public sector innovation (as reflected in increases in publication numbers) broadly coincides with an increased practice-led focus on public sector innovation within government suggests that practice has driven theory. This is also the case for private sector innovation — where corporations drive cutting-edge work and academics then subsequently capture and disseminate the less confidential aspects of this understanding more widely.
• The emergent state of the literature indicates that there is currently insufficient practical guidance available for use within governments to match these aspirations. This reflects the early stage in the development of the literature.

• It is clear that other major Organisation for Economic Co-Operation and Development (OECD) governments are seeking to move rapidly ahead with putting into place comprehensive ‘innovation friendly’ policy stances. This means that Australia’s efforts align well with this general trend in public policy — generating the possibility for productive exchanges of information, insights and ideas at an inter-governmental level. In such a context, it is particularly important to be able to clearly articulate the nature and extent of any differences between the Australian Public Service and other nations’ public services in order to be able to filter and interpret the relevance of overseas approaches in an Australian context (particularly as regards the specifics of Australia’s Federal arrangements).
Introduction

The nature and extent of public sector innovation, and how best to achieve and manage these processes, is a rapidly developing issue. It is a matter of increasing concern to politicians, public servants and those in civil society (the Third Sector) who seek to shape public opinion.

As Prime Minister Kevin Rudd has stated (2008), the skill sets for future public policy professionals need to be characterised by:

... policy innovation, by policy creativity, by policy contestability, by long-term policy planning and by a parallel commitment to excellence and innovation in how we best deliver services to the Australian community.

In his John Paterson Oration on 3 September 2009, the Prime Minister articulated his aspirations for the Australian Public Service (APS). Having complimented the APS on its achievements he said:

the larger challenges still lie ahead, and that is to move forward with a vision to make the APS the best public service anywhere in the world. I believe that is an entirely reasonable and achievable aspiration for the APS — if we take the right actions now.

To achieve that goal, I believe the APS must perform five tasks:

1. Provide high-quality, forward-looking and creative policy advice;
2. Deliver high-quality programs and services that put the citizen first;
3. Maintain a culture of honesty, impartiality and fairness, with a focus on retaining public trust;
4. Provide flexible, agile responses to changing realities and government priorities; and
5. Be effective and efficient in all its operations.

We have a strong APS, but much needs to be done to achieve these objectives.
A recent Australian Public Service Commission report (APSC 2008: Chapter 11) highlights the current Labor government’s bid to promote engagement with Australian citizens and communities to ‘progress its reform agenda’, including on matters concerning climate change, social inclusion and indigenous disadvantage. New opportunities for direct community interaction with the government to exchange relevant and innovative ideas were evident in the April 2008 ‘Australia 2020 Summit’ and regular Community Cabinets.

It is a message that was reiterated by the APSC in 2009 through the need for ideas to enhance service delivery by greater cooperation between governments and other sectors (ASPC 2009).

As suggested by the APSC, these interactions with the community build upon existing initiatives intended to:

- make the ‘delivery of public services more customer-focused’;
- improve approaches to ‘monitoring and gaining feedback on services’;
- enhance ‘employees’ skills, especially communication and networking skills’; and
- harness information and communications technology (ICT) as ‘an enabler of better service delivery’.

Improved interactions with the general community are crucial given that 24% of APS employees work in service delivery roles in locations such as Call Centres, Shop Fronts and various channels of communication with the public. Of the 24% of APS employees mentioned, 58% deal directly with the public (APSC 2008: Chapter 11).

Here in Australia, there have been a number of innovative public service policies that have improved service delivery and efficiency.

In response to the current global economic crisis, which has led to greater fiscal spending to offset declining private sector investment, public sector innovation was evident. The government announcement in February 2009 of a $42 billion Nation Building and Jobs plan not only addressed long-term policy objectives in education, economic development, housing and the environment, but demonstrated the speed that new technology is used to enhance public sector performance. With eight agencies working together to create the first version of the economic stimulus package within 26 days, citizens were able to find local information on any one of 15,000 stimulus projects, simply by typing in their postcode. More specifically, the plan to install energy efficient insulation in up to 2.9 million Australian homes was also sped up by the Energy Efficient Homes Package requiring installers to pay the cost of installation and offering them swift reimbursement through Medicare (within a benchmark of 48 hours). This was in contrast to standard government practice where the homeowner pays the installer and then applies to a government department for the rebate which can take up to two months or longer to arrive, thus discouraging people to sign-up to the scheme because of initial out-of-pocket expenses (Moran 2009).

Prior to the economic crisis, Australian public sector innovation had been illustrated in a number of ways.

In the use by Australian governments of information communications technology (ICT) to meet the demands of citizens and businesses through various government services and products, Australia was ranked eight of 192 United Nations(UN) Member States by the UN’s E-Government Survey 2008 (APSC 2008).

In 2008, the Internet became the most commonly reported means for Australians’ last contact with government, replacing telephone and in-person contact as the most commonly used service delivery channels. Over the past 12 months more than three in five people (63%) contacted government using the Internet, an increase from 39% in 2004–05. The APSC report also revealed that the proportion of people who undertook most of their dealings with government using the Internet increased to 31% in 2007–08, up from 14% in 2004–05.

Taking advantage of Australia’s high level of Internet use, by 1999 Australia was recognised as a leader in e-government with European and North American policy makers visiting Canberra and Melbourne to see how it was done. Though it is suggested that Australia has fallen away from its pioneering role since 1999,
with e-government pages being used by 47% of the total Australian population by 2003 (Canada 57%, the Netherlands 52%, the US 44% and UK 18%), e-government is still achieving important aims. For instance, by 2002, 25% of the 2.2 million Australians doing their own tax returns were doing so by submitting e-tax forms. An Australian Business Number (ABN) was introduced to assign a unique identification number to every Australian business in conjunction with the introduction of the Goods and Services Tax (GST) in 2000; and Australia scored well in regard to tax agency staff efficiency and low administrative costs — with 639 registered taxpayers per Tax Administration Employee for 2004 (669 in Canada, 420 in Japan and 358 in the UK), and use of e-governance with the Australian Taxation Office (ATO) recording 12.4 page requests per registered taxpayer by 2006 (New Zealand 9.4, Canada 8.1, The Netherlands 3.4, USA 3.3, UK 2.1 and Japan 0.6).

In 2006, a new ‘Service Agenda’ was also introduced in Australia with the aim of producing fewer letters (either paper or electronic) by 10% per year from 2006 to 2010 (Dunleavy, Margetts, Bastow and Tinkler 2008).

Other recent measures by Australian governments to both improve direct government services and help society more efficiently utilise resources include:

• The introduction of the BasicsCard, a PIN-protected card for buying essential goods and services through the existing EFTPOS network, which helps ensure that half of welfare payments force targeted recipients to purchase essential items (APSC 2008).

• The use of electronic voting for Australian Defence personnel serving overseas at the 2007 federal election — which marked the first time this capability has been used in both a technical and a business context (APSC 2008), and offers a possibility for the technology to expand to enhance cost and efficiency at future elections.

• The Australian Taxation Office easing public and business difficulties by producing and improving a Making It Easier to Comply booklet over the past five years which details ATO’s ‘current and future work designed to make the taxpayer experience easier, cheaper and more personalised’ (APSC 2008).

• To improve citizen-centred service delivery, Centrelink provided a drought bus to assist communities in drought and flood-affected areas with advice on specific drought and flood relief and to assist on tax, health issues and even depression. In the year to June 2008, a large proportion of the 13,000 customers who utilised the bus were new to Centrelink (Moran 2009).

• The introduction of the Queensland government’s QGap, another citizen-centred delivery service, that delivers 100 services through 70 outlets in rural and remote Queensland. By offering services at one counter in a community (perhaps a post office, a local clerk of the court, a newsagent or another small shop), a cheaper system emerges while the public interacts with a local person rather than a distant bureaucrat. The system also promotes local business and helps an individual town. A franchise agreement with the State pays the agent per referred query. (Moran 2009).

Public service innovation is also an emerging area of academic inquiry, referred to as ‘new governance’. New governance is concerned with articulating a more explicitly ‘experimentalist’ approach to innovation in public policy. This work, which draws upon innovation management experience in the automotive industry, stresses the ways in which, in an uncertain decision-making environment, managers in the public sector are better off adopting explicitly exploratory and experimental approaches in which goals and intended outcomes are fairly fluid, efforts are redirected as learning advances, and overly hierarchical command and control systems are avoided (see Sabel 1994; Sabel and Zeitlin 2003).

There is academic criticism of new governance literature and similar approaches. For instance, Cohen (2008) argues that ‘New governance scholars have paid less attention to micro-questions of how citizens might capably engage in decentralised and participatory models of governance than they have to macro-questions of public institutional design’.
Further, Alford and Hughes (2008) believe that New Public Management and more recent approaches (such as networked governance or collaboration) still share with ‘their predecessors the problem that they tend toward a one-best-way orientation’. They stress the need for ‘public value pragmatism’ which notes that ‘the best management approach to adopt depends on the circumstances, such as the value being produced, the context, or the nature of the task’ (Alford and Hughes 2008).

There is also evidence to suggest that cost-cutting has been a feature of recent governments, an aspect which complicates the aim of risk-taking public innovation that may require considerable resources devoted to experimentation and an associated likelihood of failure.

For instance, it has been argued that New Labour’s emphasis upon the Third Way ideology in the UK has stressed ‘equality of opportunity rather than equality of outcome’ (Taylor-Gooby 2008) and has been associated with an enhanced role for Non Government Organisations (NGOs) in Whitehall’s reform agenda. As a result, public sector innovation in the UK has been accompanied by the turnover of voluntary organisations increasing from about £16 billion to over £27 billion between 1997–98 and 2004–05 with the associated Third Sector workforce increasing by about 20% (Laffin 2009).

As Bourgon (2008) argues, public innovation in partnership with NGOs is needed because ‘Governments cannot do it all’ and ‘there is no going back to the all-knowing, all-encompassing role of the government in the context of welfare states’. ‘We need to find ways to engage ministers in the decision-making process surrounding risks, innovations and experimentations’ as ‘there have been few serious discussions about these topics between elected officials at the highest levels in Cabinet, in government and in the legislative assemblies’.

As Heilmann (2008) states, policy experimentation, which refers to the workings of novel policies and their impact on major social, market, or administrative actors, often means ‘innovating through implementation first, and drafting universal laws and regulations later’. This is in direct contrast from standard assumptions about policy-making given that the ‘conventional model of the policy process that is widely taken for granted by jurists, economists, and political scientists holds that policy analysis, formulation, and embodiment in legislation precede implementation’ (Heilmann 2008).

In other words, as put by the UK National Audit Office, NAO (2009), ‘an innovation is a project for which an organisation has no tried and tested method or track record of success’. And with the current global economic downturn and tightening public finances, the NAO(2009) has stipulated the need for ongoing public innovation given that ‘there are pressing social, demographic and environmental challenges that will demand the development of innovative products, business processes and ways of delivering services’.

An urgent need to promote innovation to address complex issues has long been recognised by the APSC. A 2007 publication Tackling Wicked Problems, A Public Policy Perspective, which refers to major policy issues that are very complex and highly resistant to resolution, urged new ways of solving problems in order to grasp ‘the big picture, including the interrelationships among the full range of causal factors underlying them’. For instance, in regard to the issue of land degradation, the report urged solutions that involved private landholders who managed 60% of Australia’s land in order to promote sustainable production systems to help prevent further degradation, achieve rehabilitation and assist sustainable resource use (APSC 2007: 1–2).

The APSC (2008) also notes that, despite recent government attempts to promote greater innovation and flexibility through structural reforms that reduce hierarchy and increase autonomy for staff, there is a need to consider a better performance and accountability framework and increase incentives in performance management systems to encourage innovation among staff.

In a 2007–08 APS survey, the APSC found that, despite 93% of employees indicating that they were able to adapt and respond to new challenges quickly, the proportion of employees confident about how ‘their agencies managed change’ dropped to 36% in 2007–08 compared to 43% in 2006–07.
Furthermore, the proportion of respondents ‘satisfied with their chance to be creative and innovative at work’ fell to 54% in 2007–08 compared to 70% in 2006–07, and the proportion of public servants who believed that innovation is important to their job satisfaction declined from 30% in 2002–03 to 18% in 2007–08.

In regard to perceptions at different levels of the Australian public service, 14% of employees at the APS 1–6 levels were the least motivated by innovation compared to 38% for senior executive public servants (APSC 2008), whilst 45% of levels 1–6 concluded that they encouraged innovation compared to 49% for executive level employees and 70% of senior executive public servants (APSC 2008).

The APSC (2008) has also called on government agencies to work ‘in partnership with other agencies, State and Territory Governments and the private and not-for-profit sectors’, and improve links and gather knowledge from overseas government agencies.

It has even been suggested in the Venturousaustralia: Building Strength in Innovation report, released by Senator Carr on 9 September 2008, that a body be appointed to help the Council of Australian Governments’ reform payments to encourage innovation, experimentation and evaluation among the states and territories’ (Cutler 2008).

More recently, Terry Moran, Secretary of the Department of the Prime Minister and Cabinet, urged greater innovation if Australia’s public service is to become the best in the world. Moran noted the need to attract and retain the highest quality creative thinkers and managers to enhance public sector management; greater coordination in regard to the roles and responsibilities of the Commonwealth and the States and Territories in relation to service delivery; the need of the APS to work with people from the private and community sectors, think tanks, academics, stakeholders and members of the public; the need for APS staff to work together rather than as a ‘collection of separate institutions’ by promoting the mobility of APS officers to enhance the transfer of knowledge, skill and people across different levels of government; and better measurement of results to test the effectiveness of policy interventions by also asking citizens what they think about the quality of the services the APS provides and taking action to make them better.

Moran also stressed the need for the APS to strengthen focus on service delivery which enables public servants who create policy to learn from those who deliver it. This may mean that public servants (including senior officials) should experience front-line policy implementation by perhaps spending a week staffing a Centrelink claims desk or a Medicare office (Moran 2009).

In short, how to achieve public sector innovation is regarded as a topical but challenging issue by a range of practitioners and academic commentators. Or as put by Stephen Goldsmith, Director of the Innovations in American Government Program at the Harvard Kennedy School, the innovation process ‘cannot remain a top-down, bureaucratic process, far removed from the concerns of citizens. Governments need to draw upon all their sources of innovation … to produce regular and successful innovations’ (Eggers and Singh 2009: 3).

The new impetus to fostering innovation in the APS has now resulted in the Reform of Australian Government Administration initiative. The aim is to develop a blueprint for the reform, able to position the APS as the best public service in the world (Advisory Group on Reform of Australian Government Administration 2009).
Methodology

This literature review has followed the usual “forensic” process used in the public sector based on online searches and reference-tracing and document review. This has been augmented by the use of a subscription-based bibliographic dataset (Thomson-Reuters Web-of-Science) to carry out more complex keyword-based searches.

One caveat to note, as regards the current state of the literature on public sector innovation, is that the prominence of literature produced by central government departments and agencies together with NGOs means that there are some shortcomings in citations and proper attribution of authorship. This means that specific contributions to understanding are not always clear.

Another caveat relates to the scope of this literature review. The ANAO’s work on public sector innovation addresses the challenge of identifying ways of enhancing public sector innovation within the constraints defined by existing managerial practices and legislative arrangements. In contrast, the complementary work on public sector innovation carried out by the Management Advisory Committee (MAC) and the major initiative entitled Reform of Australian Government Administration (RAGA) focus on recommended changes to this legislative framework and associated changes in managerial practices. Naturally, there is far greater scope for drawing upon the extensive literature on private sector innovation in the MAC and RAGA work.

The ANAO’s efforts have focused on supporting the longer-term reform agenda by seeking to characterise the public sector innovation process as it exists at present — and to promulgate a decision-support framework designed to maximise the effectiveness of current approaches. It is preferable to maximise the effectiveness of the system we currently operate within (over the short-term) before developing a strategy for improving the architecture of this system (over the longer-term).

This has limited the review of the literature to material useful for understanding and improving upon current arrangements in the public sector without requiring changes in managerial practices and legislation.
This pragmatic perspective has also led to an emphasis on defining a suitable holistic decision-support framework for supporting public sector innovation within currently prevailing opportunities and constraints. The ANAO was particularly keen that the Better Practice Guide articulate a balanced approach to the innovation life cycle that considered all key phases, including progress reviews, drawing lessons and (if necessary) re-focussing efforts — not just the ‘headline’ activities associated with developing and implementing new approaches per se. Consequently, the literature review has sought to identify lessons and insights throughout the innovation cycle as a whole. This holistic approach is a particularly important issue for public sector innovation because, unlike in the private sector, determining success and failure in innovation cannot be left to market processes. Public sector innovators must consider not just the merits of the potential innovation but how the innovation can be stopped and ‘undone’ if it turns out to have unexpected negative consequences.

The reader is referred to the work carried out by MAC for a more comprehensive discussion of the relevant of private sector innovation practices, procedures and lessons.
Profile of the Emerging Field of Inquiry into Public Sector Innovation

The academic literature is still in a formative state. For instance, just over half (51.5%) of the 167 academic journal articles examining public sector innovation tracked by the extensive Thomson-Reuters database publications in the period 1971–2008 were published in the three years: 2006–2008 (see Figure 1 and Figure 2). Nearly 70% of the cumulative total number of articles identified over this timeframe were published since 2003.

As is clear in Figure 2, this area of academic literature started to expand more rapidly from 2003 onwards, possibly as a response to practitioner-driven work published in the preceding few years (notably by the UK government). However, it is worth noting that there is no clear citation pattern linking the growth in academic publications to the UK government-produced documents that stand out in highlighting the importance of public sector innovation — notably (Mulgan and Albury 2003). The most plausible explanation for this is that the practice-led moves (notably by the UK government) from the mid 1990s onwards stimulated academic inquiry which started to get reflected in academic publications after the usual time-lags associated with securing research funding and publishing (a process that can take around five years before the publications finally emerge).¹

It is also worth noting that 2009 is a timely point in the growth of this new area of literature to establish a comprehensive bibliographic database (as has been carried out for this ANAO project) in order to track and monitor how understanding of public sector innovation evolves.

It is clear that a new field of inquiry has emerged and it would therefore be useful to practitioners in the public sector (and civil society) to establish a comprehensive bibliographic database able to track the growing number of publications and to identify the most highly cited and influential work.

¹ For example, a three-year research project is commonly followed by (at least) a two-year lead time before academic articles are actually published (in the social sciences). These time lags tend to be much shorter in the natural sciences.
Figure 1: The growth in the number of academic articles examining public sector innovation issues, 1971 to 2008


Technical notes: The search terms used comprised various combinations of the following keywords linked to ‘innovation’ and: public policy; government; public management; public procurement; public administration; public sector; public service. This is not an exhaustive count, simply one indication of the growth of this new field of inquiry.

Figure 2: Cumulative output of academic articles examining public sector innovation issues, 1971 to 2007 (%)

The data in Figure 3 places the preceding profile of academic articles relating to public sector innovation into context by detailing historical changes in the number of academic publications with either ‘innovation’ or ‘productivity’ in the title. This allows us to identify the more general levels of interest in innovation. In each case a distinction is drawn between publications in all areas and in the social sciences in particular.

It is clear that the rate of output of publications with a more general emphasis on ‘innovation’ has increased rapidly since 2003 — particularly across all areas of research (social and natural sciences). In other words, the growth pattern for studies of public sector innovation is similar to that for more general work on innovation. The inclusion of publications counts for work relating to ‘productivity’ allows the relative emphasis on these two issues to be judged.

**Figure 3: Profile of publications with ‘innovation’ versus ‘productivity’ in the title**

![Graph showing the number of publications with 'innovation' and 'productivity' in the title over time]


The rapidly developing nature of this area of inquiry means that some well established ‘quality assurance’ mechanisms have yet to be applied, namely systematic and peer-reviewed assessments of evidence, comparative peer-reviewed analysis of different case studies etc. Consequently, given the formative stage of this literature it is necessary to draw conclusions on the basis of what tend to be anecdotal and unsystematic observations that fall in the lower levels of the ‘hierarchy of evidence’ proposed following a recent Australian Treasury-supported examination of the robustness of evidence used in policy-making (see Leigh 2009).

Broadly speaking, Leigh’s hierarchy of evidence seeks to foster a greater use of statistically robust evidence (randomised trials of efficiency and effectiveness etc) as compared to more ad hoc and less reliable means of collecting the evidence used to propose new approaches in the public sector. The rationale for making more explicit use of a ‘hierarchy of evidence’ in a public policy context is pertinent to public sector innovation. The lower the use of potentially unreliable (not scientifically tested or testable) assertions — the lower the risk of proposing and implementing new policies and service delivery models that are either ineffective or turn out to be damaging (via unforeseen and/or unintended consequences etc). Indeed, it is for this reason that the Review of the National Innovation System noted the relevance of randomised trials to fostering effective public sector innovation.
Framing the Major Issues

The overall importance of innovation in the Australian public sector was highlighted by the current Secretary of the Department of the Prime Minister and Cabinet in 2004 (when he was the Secretary to the Department of Premier and Cabinet in the State of Victoria). Terry Moran set out five key points concerning the importance of innovation in a public sector context (Moran 2004):

Firstly, innovation is core to the role of the public sector. In fact, I believe it will be the main driver of the next wave of public sector reforms — reforms that focus on improving service delivery for citizens. Innovation should not be something that is confined to the private sector and exemplified by corporate entrepreneurship. Nor, as we know, should high quality service delivery be the preserve of the private sector.

Secondly, public sector innovation is about the relentless pursuit of better outcomes by all of us. We think too often of innovation as those ‘sparky’ ideas that, on occasion, totally reshape a debate overnight. But this is only one type of innovation. The other — often neglected, in my view — is the relentless pursuit of better outcomes in day-to-day service delivery.

My third point is that innovation strengthens our democracy. An innovative public service strengthens the connections between individuals, communities and governments. In particular, in the Australian context, innovation is the key that can unlock some of the untapped potential of our Federal system of government.

A related point is that innovation can better align the activities of government with the needs of citizens. We have all been involved for some years now in discussions about the need for better co-ordination — ‘citizen-centred service delivery’, as I like to think of it, or ‘joined up’ government. Yet delivering on this new agenda is not easy, and requires the constant pursuit of innovation and flexibility in both policy and service delivery.

Finally, innovation can help resolve policy failures. The dark secrets of governments — areas of policy where we know our current approach is failing — should have the bright light of innovation turned on them more often. We are, at times, too soft and too complacent about the fact that policy failures exist — and are afraid to discuss innovative solutions because of this. The most obvious example of this is the ongoing public policy failure relating to the well being of indigenous Australians.
Terry Moran concludes by naming a number of areas for further discussion. ‘By their nature, they are all areas where head offices and central agencies can have real impact in building a culture of innovation within the public sector’:

1. Clearly articulating roles and responsibilities in ways that devolve authority and emphasise and encourage innovation.
2. Developing performance measures that identify and reward innovation.
3. Further developing public sector financial management practices.
4. Encouraging client focus, and community engagement, in all of our services.
5. Avoiding continuing growth in the number of programs and policies.
7. Increasing the innovative capacity of our people.

These observations provide a useful statement of intent for developing a new agenda for innovation management in the public sector. The remarks stress the departure from older assumptions that the public sector is neither equipped to be, or should seek to become more innovative.

The remainder of this literature review contributes to the process of fleshing out details of this new innovation management focused public sector agenda.
Key Findings

Putting public sector innovation in the broader context

The emergence of studies of, and commentaries on, public sector innovation stems from the confluence of a number of factors — some internal to the public sector and others of a wider provenance.

Firstly, the last few decades have seen the emergence of a major new area of academic and business interest: the study of ‘innovation’ as a systemic objective. This body of literature spans economics, business studies, science and technology policy, law, sociology and other established areas of work. At its heart, lies the recognition that the world we live in changes in part because of purposeful efforts to define, invest in, and then achieve new ways of doing things using new and improved products and processes. This literature is extensive and only tangentially relevant to this highly focused review.

As the prominence of innovation studies has grown this, in turn, has led to questions being raised about the nature and extent of innovation in the public sector. As Richard Nelson, one of the leading academic researchers in the innovation studies area has noted, whilst there is a vast literature on how the public sector operates ‘very little of this literature has been concerned self-consciously with innovation in public services’ (Nelson 2008).

Secondly, there has been growing recognition of the role of the service sector as a whole in modern economies. This means that the competitiveness of the overall economy is increasingly dependent on the productivity growth achieved in the service sector. In this emerging view, the manufacturing sector is no longer seen as the main driver of national competitiveness.

This emphasis on the importance of services as a whole, in turn leads to attention being directed at the role of productivity growth in the public sector. Given the widespread recognition of the importance of innovation to long-term productivity growth in the economy as a whole it is natural to start to examine the role of innovation in productivity growth in the public sector. In so doing, this focus challenges accepted wisdom (amongst some) that public sector organisations are ‘static bureaucracies in which new ideas are stifled’ (Windrum 2008).
Thirdly, and arguably most significantly, the incoming Blair Government in the UK sought to develop exactly the sort of ‘self-conscious’ account of the importance of public sector innovation that Richard Nelson has argued was lacking in discussions on the public sector. This policy stance included the launch of a major new funding mechanism aimed at supporting public sector innovation in the UK, known as the *Invest to Save Budget* (ISB). ISB was originally promoted by HM Treasury as ‘venture capital for oiling the wheels of government’ and involved funding a wide range of innovative partnership based projects that sought to enhance the efficiency and effectiveness of public services. The explicit provision of ‘risk-capital’ within the public sector both addressed a substantive constraint to innovation and also served to draw attention to the importance of seeking to innovate within the public sector (UK Treasury 1999, 2007; NAO 2002).

In parallel, the Cabinet Office Strategy Unit also carried out widely cited and influential work aimed at promoting a more ‘self-conscious’ account of the importance of public sector innovation, (Mulgan and Albury 2003; see also Albury 2005). The very useful Strategy Unit report is referred to in greater detail at relevant points in the rest of this document.

Finally, the UK’s *National Audit Office* (NAO) started to take a closer look at its approach to risk-taking. This involved accessing relevant academic expertise via a visiting scholars arrangement and commissioning external reports in risk management issues (Hood and Rothstein 2000). Some of this work ended up being published as official NAO outputs (see NAO 2000). The main emphasis on this work was to reflect on whether existing approaches to risk-taking were adequate and to explore opportunities to re-engineer NAO approaches to risk-taking in the light of the importance of achieving innovation in a public sector context. The NAO also used their review of the ‘risk capital’-based ISB (requested by a House of Commons Select Committee) to inform their evolving stance toward risk-taking (NAO 2002).

The NAO report on the ISB sought to articulate how failures should be treated in such a context — stressing that measured risk-taking was necessary in order to obtain the rewards of improved efficiency and effectiveness in public services. This growing interest in risk management was also reflected, in a different policy context, in work by the Cabinet Office Strategy Unit (COSU 2002).

As regards risk-taking in a public sector context it is noteworthy that the practice-led work on public sector innovation in the UK recognises (if implicitly) that improvements to the efficiency and effectiveness of public services delivery in the future will require managed risk-taking in the present — risk-taking that may compromise current levels of efficiency and effectiveness. This is a natural feature of experimentation — a process in which some failures are to be expected. This means that the *timeframe* over which performance is to be assessed needs to be sufficiently long to allow for the eventual longer-term benefits to offset shorter-term costs.

This ethos has been supported by the way in which the UK Treasury’s ‘Green Book’ (guidance on investment appraisal and evaluation methods for Central Government) has evolved over the last decade (UK Treasury 2009). Periodic revisions to the Green Book have progressively sought to promulgate a more ‘risk-aware’ approach to appraisal and evaluation.

In the current edition of the Green Book, this is reflected in new guidance on the use of discount rates and on related matters. The latest version ‘unbundles’ the discount rate to be used in Net Present Value (NPV) calculations, introducing a new 3.5% social time preference-based rate and recommends that handling other discount-rate related factors (often reflecting risks) should be handled explicitly rather than bundling them in a 6% discount rate (as was done previously). Explicit methods for addressing optimism bias in public sector investment appraisal have also been introduced (UK Treasury 2009).

One result of this practice-driven move to promote a new ‘policy narrative’ in the UK has, arguably, been the growth in the volume of the academic literature noted above, together with a burgeoning range of practice-oriented reports and literature reviews carried out by officials in the public sector seeking to define how best to achieve innovation, see for example (IDeA 2005).
Notable aspects of this literature are a tendency to:

- stress the links between innovation potential and approaches to risk management within the public sector (issues that are also important in the private sector);
- focus on ‘success cases’ aimed at demonstrating the basic case that the public sector is in fact innovative;
- highlight the importance of entrepreneurial leadership and ‘innovating championing’ in forcing through innovations;
- under-play instances of failure — the reasons for these problems emerging and the wider implications; and
- avoid more detailed prescriptions over how best to achieve innovation within current country-specific contexts.

The overall conclusions reached on the broader context to the literature on public sector innovation are that:

1. The literature on public sector innovation has established the (important) basic points and principles pertinent to facilitating public sector innovation;
2. The literature also articulates areas of commonality and difference with private sector innovation; and
3. The literature does not currently articulate the sort of comprehensive ‘better practice’ principles and guidelines necessary to form the basis for a Better Practice Guide: in terms of the details of decision making parameters and processes, appropriate and prudent risk management procedures etc.

The following sections of this literature review seek to extract useful insights from the literature that relate to specific aspects of public sector innovation.

**Defining innovation in the public sector**

Currie et al. 2008 define innovativeness in a public sector context as the quest for creative, unusual or novel solutions to problems and needs, including new services, new organisational forms and process improvements. They go on to associate innovativeness with risk-taking and ‘pro-activity’. Risk-taking involves the willingness to take moderate risk in committing resources to address opportunities. Pro-activity ensures that entrepreneurship functions by anticipating and preventing problems before they occur, exhibiting perseverance, adaptability, and assuming responsibility for failure (Currie, Humphreys, Ucbasaran and McManus 2008).

Mulgan and Albury (2003) define innovation as ‘new ideas that work’:

*Successful innovation is the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in outcomes efficiency, effectiveness or quality.*

These innovations can be:

- incremental: relatively minor changes to existing services or processes;
- radical: new service, product or delivery method, but dynamics of the sector remains unchanged; or
- systemic or transformational: major innovations often driven by the emergence of new technologies, which transform sectors, giving rise to new workforce structures, new types of organisation, new relationships between organisations and step-change in overall performance.
Windrum (2008) suggests a possible taxonomy of public sector innovation, comprising:

1. **service innovation** (the introduction of a new service or an improvement to the quality of an existing service);
2. **service delivery innovation** (new or altered ways of supplying public services);
3. **administrative and organisational innovation** (changes in organisational structures and routines);
4. **conceptual innovation** (the development of new views and challenge existing assumptions);
5. **policy innovation** (changes to thinking or behavioural intentions); and
6. **systemic innovation** (new or improved ways of interacting with other organisations and sources of knowledge).

He stresses that whilst the first three of these categories have already been explored in relation to private sector innovation, the remaining categories are new and relate in a more distinctive manner to public sector innovation.

As Mulgan and Albury point out, cost of public services tends to rise faster than the rest of the economy. This is because of lack of competition within the public sector and also because gains in labour efficiency lag behind gains in capital efficiency. As a result, in order to avoid public service costs increasing faster than those in the rest of the economy, innovation to increase efficiency must occur. The alternative solution is to address the pressure to contain costs governments by cutting direct costs (mainly by reducing the wage bill) and restructuring the work and operations of the public sector (Mulgan and Albury 2003).

In this context, the OECD notes that there has also been greater specialisation in the provision of ‘individualised’ services to citizens; the demands for improved accountability and transparency etc. (OECD 2004).

Mulgan and Albury also stress the following impediments to public sector innovation:

- **Delivery pressures and administrative burdens:** In general, within the public sector the majority of service managers and professionals have little time to dedicate to thinking about doing things differently or innovations in delivery service that might be more time and cost effective. Rather, the overwhelming proportion of their time is spent responding to the day-to-day pressures of running their organisations, delivering services and reporting to senior management, agencies and inspectorates.

- **Short-term budgets and planning horizons:** Often the inability to think outside of day-to-day pressures on how things could be improved is exacerbated by short-term budgets and planning horizons. When faced with a requirement of for example, 2 or 3% efficiency gains a year, the need to innovate is seen as less necessary and more as an ‘optional extra’, given the time scale than being faced with a call to produce 20% efficiency gains over five years.

- **Poor rewards and incentives to innovate:** Whilst governments across the world have sought to strengthen incentives in the private sector for innovativeness, e.g. through trademark protection, employee share option schemes, and the corporate tax regime, including R&D tax credits; an active incentives drive for innovation has yet to be established in the public sector. Rather, the tradition of higher penalties for failed innovations than rewards for successful ones remains within the civil service. Furthermore, the basic people management systems, for example the core competencies for recruitment, development and performance assessment within public and civil services, do not sufficiently recognise or value innovativeness.

- **Culture of risk aversion:** Within the public sector there is an obligation to provide acceptable standards in key services, maintain continuity for the public, and account to tax payers through local authorities and Parliament. These primary concerns of accountability, standards and continuity induce a culture of risk
aversion that impedes innovation. Whilst existing services may only function at an ‘acceptable’ level, as opposed to demonstrating high efficiency and performance, they nonetheless will receive less critical attention from the media, Parliament, National Audit Office and Public Accounts Committee, than a new program that has the potential to offer far greater value. In addition, high risk, high reward innovations are usually treated the same as low risk, low reward projects. The former may, however, mean extremely public failure for those involved, which itself acts as a disincentive for public service workers to engage in such innovations.

- **Poor skills in active risk or change management:** It is suggested that there are three necessary conditions for innovation to flourish — opportunity, motivation and skills. Within the public sector it is often the case that, whilst opportunity and motivation may be present, there is a relative paucity of skills in change and risk management. A relative dearth of requisite skills can, in turn, severely hinder and potentially terminally threaten the innovation process.

- **Reluctance to close down failing programs or organisations:** Although private sector companies typically need to innovate in order to survive, it is extremely unlikely that public sector organisations will cease to exist as a consequence of not being innovative. Paradoxically, within public services higher standards are set for new programs than for old ones, and historically established failing functions are rarely closed down. In contrast, innovations that have shown problems at the testing stage will be abandoned, although perseverance with the new service or process may still result in high value benefits.

- **Technologies available but constraining cultural or organisational arrangements:** Innovation emerges in the context of technological and organisational factors, with systematic innovation requiring that organisations align their culture, systems, management methods and processes. Within the public sector innovation is often impeded or thwarted because there is a resistance or failure to embed innovation within the organisational fabric.

Complementary insights are provided by Stanford Borins, who sought to stimulate a culture of public sector innovation by highlighting successes captured in survey work, see (Borins 2001). His survey of 300 government reformers worldwide generated the following generic lessons as regards impediments:

- **Barriers that arise from within the bureaucracy/organisation:** These were identified as hostile or sceptical attitudes; turf fights; difficulty in co-coordinating organisations; logistical problems; difficulty in maintaining the enthusiasm of program staff; difficulty in introducing new technology; union opposition; middle management resistance; and public sector opposition to entrepreneurial action.

As Koch and Hauknes (2005) elaborate, a number of barriers within the public service may be related to the size and complexity of a large-scale organisational entity composed of ‘multiple-tiered interlinked systems; high staff numbers; a large range of professional, semi-professional and ancillary occupations; and a diversity of organisational arrangements and service processes’. Such factors can lead to a ‘lack of clear agreement with respect to perceived problems, approaches and solutions, and communication (particularly knowledge management) difficulties’. Hence, such large-scale organisations ‘may be prone to the development of internal barriers’ or even ‘silos mentalities’ ‘wherein parallel systems maintain their own organisational norms, beliefs and practices with little communication with each other’.

Public sector organisations may also have ‘entrenched practices and procedures’ which have worked well in the past and lead to an attitude that ‘if it isn’t broke, don’t fix it’ or ‘an unwillingness to accept novel ideas from outside the immediate organisational peer group’.

And with a possible lack of dialogue between different parts of the public system, horizontally or vertically, innovation and its dissemination may be hindered. For instance, different medical professions ‘may be unwilling to accept the ideas of others, even if both share similar professional status (for example, surgeons and anaesthetists), whilst the problem may be exacerbated between members of (perceived) hierarchically separated professional levels (for example, gynaecologists and midwives, or doctors and ambulance staff)” (Koch and Hauknes 2005).
• **Obstacles that arise primarily in the political environment:** These include inadequate funding/resources; legislative or regulatory constraints; and political opposition.

• **Barriers that exist in the external environment:** These were cited by survey respondents to comprise: public doubts about the effectiveness of programs; difficulty in reaching the program’s target group; opposition by those affected in the private sector, including entities that would experience increased competition; and general public opposition or scepticism.

As Koch and Hauknes note, public resistance to innovation may become evident if there is ‘no discernible change to the service or “product” from the public user’s perspective’, with opposition magnified by various factors such as age, ethnic background, personal wealth, and access to information and communications technologies (Koch and Hauknes 2005).

**Contemporary developments in public sector settings**

It is clear from public sector literature that there is currently a significant increase in government activity associated with fostering public sector innovation.

The UK’s 2008 innovation White Paper *Innovation Nation* has a major emphasis on public sector innovation (Chapter 8) — which is now framed as a key imperative for the UK. The White Paper states that:

> The Government is uniquely placed to drive innovation in public services, through allocating resources and structuring incentives. Major forces such as attitudes to risk, budgeting, audit, performance measurement and recruitment must be aligned to support innovation. Together, and with effective leadership, these will progressively overcome existing cultural and incentive barriers. Those responsible for public service delivery must also learn the lessons of open innovation and adopt innovative solutions from the private and third sectors.

> The NAO will conduct an audit-orientated study on innovation in the public sector. NESTA will establish a Public Services Innovation Laboratory to develop and trial the most radical and compelling innovations in public services. DIUS will establish a Whitehall Innovation Hub to disseminate learning from this and other sources to improve understanding of innovation at the highest levels of Government. DIUS will also convene a network of senior Whitehall innovators (DIUS 2008).

The general view is that the UK public service is quite innovative — certainly more than popular perception. This is due in part to the increasing involvement of private and third sector involvement. Front line delivery bodies are seen as a ‘rich source of innovations in public services’. However the current UK stance recognises that more needs to be done: the major forces that govern the public services (such as policy, budget requirements, guidance and legislation, and performance reporting) are not designed to create the incentives, signals and spaces for innovation and often create barriers and a heightened aversion to risk.

As a result, the current UK public sector innovation agenda is seeking to achieve a step-change in innovation performance, requiring simultaneous action on five levels:

1. creating the conditions for innovation by aligning the major forces of the public sector to be pro-innovation;
2. promoting the importance of innovation and of the tools that help it flourish within the highest levels of the public sector;
3. supporting and disseminating successful innovations that are already underway but go unnoticed;
4. drawing on all sources of innovation by engaging users and front line workers and looking at innovation systems from outside of the service; and

5. realising the potential of innovation as an enabling force in driving related policy initiatives and change programs.

It is worth noting that, in line with the 2008 innovation White Paper, the UK NAO has published a new report on *Innovation across Central Government*. In addition, the *National Endowment for Science, Technology and the Arts* (NESTA) is also now active in the public sector innovation area (following a specific recommendation in the 2008 innovation White Paper). NESTA is developing an *Innovation Index* — a process that requires a comprehensive literature review. Findings currently made available stress that the literature is in its infancy and therefore the quality relatively low (NESTA 2008).

### Defining the pre-conditions for public sector innovation

According to Geoff Mulgan (2007: 18), ‘Human beings are rational and without licence from the top, few people in hierarchical organisations will be willing to take risks. Political and official leaders can establish a culture in which innovation is seen as natural. In some cases the cultures then become embedded at least for a time’.

Though ‘the successful fruition of an innovative idea requires that many people come together throughout the innovation journey’, it has also been noted that ‘innovation champions’ can be critical at the stage at which an idea is turned into a viable prototype for testing. Innovation champions are those individuals who are willing to invest resources and organisational capacity for designing, implementing and evaluating an innovation (IDeA Literature Review 2009).

Leadership does not always need to be attributed to the role played by one individual, as a minority coalition can advocate and influence public sector change. For example, though it was Steve Kelman who led the initiative to reform the US Federal government’s procurement system, around 18% of the employees were already active advocates of the reform even before its launch. In time, this minority influenced a second group to support the initiative with their ranks increasing to around 40% soon after the initiative was launched (Eggers and Singh 2009: 26).

Others, however, highlight the need for a ‘collective or distributive model of leadership’. The individual model does not appear to account for significant variety and complexity in organisational contexts. An exclusive focus on individualised leadership also misses the opportunity to use the potential of staff both individually and collectively. Identifying and enabling emergent collective leadership approaches allows for the development of leadership appropriate to the context, and which can develop beyond the restrictions of universally prescribed models. Emergent approaches also allow staff and teams working together to develop their own sense of meaning rather than allow it to be imposed or assumed by others more powerful in the organisational hierarchy (Lawler 2007).

Enabling collective relationships to develop, with clearly identified outcomes, such as improved professional skills and service delivery, can counteract the potential alienation between staff and their employing organisations, which can result from the increasingly contract-driven nature of organisational relationships (Lawler 2007).

Mulgan notes that there are four horizons of effective leadership. The first concerns leaving a legacy for future generations such as policies towards CO₂ levels and pensions. The second horizon refers to a long plan (3–20+ years) where radical innovation is necessary and likely. The third horizon concerns medium terms policies (1–3 years) which encourages incremental innovation, efficiency and performance. The fourth horizon is short term policies (days, weeks, months) for issues such as fire fighting (Mulgan 2007: 14).
And as Koch and Hauknes (2005) suggest, public service leaders share some of the ‘same personal qualities as are attributed to entrepreneurs’. They try to promote a view about how society should work to help ‘people achieve their aspirations and secure their quality of life’, and they must offer expertise to help counter the reality that politicians are unlikely to understand new technological potentials in a particular area or possess ‘deep insight into all policy areas’. With civil servants having professional education and qualification in their specialised field, they may often need to lead to counter the reality that politicians often do not have the same background nor opportunities to explore policy areas in depth. As a result, public servants may argue that a proposed policy will not work, or try to influence the decision making process with ‘their knowledge of how the policy should be best be framed’.

The degree of entrepreneurship within public leadership differs between nations and at different times in regard to the context of the day. As noted by Bernier and Hafsi (2007:492):

*When the environment is resource tight, turbulent, or both, the risk for individual entrepreneurs is often perceived to be excessive, and the type of entrepreneurship that emerges is of a different nature.*

Or as Heilmann (2008:5) puts it:

*Experimentation can innovate policy only as long as the dynamism of growth expectations is intact and newly emerging interest groups feel comfortable in a fluid policy environment. As soon as expectations and interests begin to shift in defence of the status quo or in favour of redistribution, experimentation becomes subject to increasing limitations from both the demand and the supply side: interest groups and citizens come to ask for universal and irreversible regulation; domestic and transnational economic actors come to demand equal legal protection; and policymakers come to see experiments as a political risk that can be avoided by legislative incrementalism. A hardening of political and legal constraints on policy experiments is the result. In most political economies, this mechanism works against extensive experimentation, despite the many obvious advantages it would entail for institutional adaptation.*

How much resources are needed to aid innovation within the public sector is a matter for debate. Normally around 3–4% of public spending is thought to be around the right amount in R&D, compared to 20–30% typical for a biotechnology company (Mulgan 2007; NAO 2009).

Another pre-condition for public sector innovation is the acceptance that there is a role for what Jason Potts calls ‘good waste’ in the sense of the inevitable consequences of experimentation. An over-zealous emphasis on demonstrated efficiency at all costs will lead to an avoidance of risk-taking experimentation that will in turn limit the scope for innovation. This will constrain the potential for long-term improvements in policy and service delivery (Potts 2009).
Risk-taking and innovation: Lessons from the private sector

An appetite for risk is critical to achieving innovation. Achieving the sort of major breakthrough innovations that create major new firms and even industries can involve taking abnormally high investment risks in order to generate the (usually remote) possibility of making abnormally high returns. When this process is particularly successful the result is, in statistical terms, an ‘outlier’ — a rare event that deviates from the norm (Hartmann and Myers 2001).

One of the problems faced in public policies toward innovation is a tendency to ‘scale-up’ from these rare statistical outliers and assume that the overall level of very successful innovative activity can be increased by generating a much larger number of outcomes that are in statistical terms unpredictable ‘lightening strikes’ (see Matthews 2007).

Businesses tend to avoid basing their innovation strategies on seeking to achieve rare ‘outlier’ outcomes in preference to a more balanced approach based upon seeking incremental improvements. They recognise that innovation takes place across the spectrum of the risk-reward relationship, effective innovation strategies involve a mix of lower risk–lower reward and higher risk–higher reward investments.

Consequently, the appetite for innovation focused risk-taking in the private sector stems from the way in which the risk-reward relationship is managed in the same manner as any investment portfolio.

The main lesson for public sector innovation is that developing the necessary appetite for risk-taking may require that a public sector version of the risk-reward relationship is developed. Risks, of different types and different degrees, are worth taking because they can be set against the rewards that it may be possible to achieve. However, as Matthews has stressed, the distinctive role of the public sector in handling the uncertainties and risks that markets cannot cope with means that the risk-reward relationship is both more complex (involving the avoidance of punishments as well as reaping rewards) and more severe in downside terms. Whereas a failed attempt to innovate in the private sector may only put that business at risk, the failure of the public sector to innovate in response to a crisis or other major challenge may put a whole industry or economy at risk (as the global financial crisis has illustrated), see Matthews (2009).

This means that the public sector requires more sophisticated and complex risk-management methods than the private sector in order to address areas of innovation for which the consequences of failure are severe (such as in the national security domain). When the consequences of failure are closer to those in the private sector (e.g. they tend to be internal to the project itself) then the utility of private sector approaches to risk management is far greater.

To summarise on the risk dimension:

- an appetite for risk-taking related to innovation in the public sector will be assisted by stressing the importance of the risk-reward relationship (why risks are worth taking in a public sector context);
- it is useful to recognise that innovation in the public sector will tend to require a broad spectrum of activity across this risk-reward relationship, from low risk–low reward objectives through to higher risk–higher reward objectives; and
- public sector innovation will be facilitated by developing a version of the risk-reward relationship that is sensitive to the distinctive aspects of what the public sector does (especially as regards the fact that governments handle the uncertainties and risks that the private sector cannot handle).
Selecting a model of the public sector innovation process

The UK Strategy Unit’s work on public sector innovation advocated the following model of the innovation process.

![Diagram of the innovation process]

Source: Mulgan and Albury 2003.

This model is broadly similar to the generic Shewart-Deming learning cycle used in private sector management (and that has its roots in statistical process control approaches developed in the US in the 1930s). This sort of approach had a major impact on improving quality in manufacturing processes in the post-World War II era (particularly in Japan) by establishing a continual iterative learning process aimed at improving predictability in operations and in product performance when in-service.²

As popularised by Edwards Deming, this learning cycle involves the following stages in an experimental cycle. Note: in subsequent industrial applications the ‘act’ stage is sometimes treated rather differently as an ‘adjust’ stage.

<table>
<thead>
<tr>
<th>Stage in the cycle</th>
<th>Description of activities (in a process control context)</th>
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</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Establish the objectives and processes necessary to deliver results in accordance with expected outputs</td>
</tr>
<tr>
<td>Do</td>
<td>Implement the new processes</td>
</tr>
<tr>
<td>Check</td>
<td>Measure the new processes and compare the results against the expected results in order to ascertain differences</td>
</tr>
<tr>
<td>Act</td>
<td>Analyse the differences in order to determine their cause</td>
</tr>
</tbody>
</table>

The Deming model is more generically applicable to currently established public sector approaches, not least because this approach has influenced public sector management thinking. It is therefore preferable to consider ways of integrating the Mulgan-Albury characterisation of the public sector innovation cycle with the Deming cycle. This will be a task for the BPG itself because no such model can be readily identified in the existing literature.

² The essence of the approach is the application of the formal scientific method (hypothesis, experiment, test) to other forms of process with a view to reducing the likelihood and severity of deviations from intended plan.
It is, however, important to note that framing a generic model in terms of ‘plan’, ‘do’, ‘check’ and ‘adjust’ in an innovation context aligns more closely with existing public sector appraisal and evaluation procedures (where reviews and evaluations perform the ‘check’ and ‘adjust’ functions by making recommendations aimed at improving performance in the future).

For a more comprehensive conceptual explanation of public sector innovation, we suggest the following four themes that build upon a chart put forward by the UK’s National Audit Office (2009:5).

**Implementing successful innovations depends upon clear drivers, strong incentives, good ideas, an absence of barriers to their implementation, and means for learning and replicating success**

<table>
<thead>
<tr>
<th>Clarify drivers and offer incentives</th>
<th>Develop innovative ideas</th>
<th>Implement innovations</th>
<th>Scale up and replicate innovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>There need to be clear drivers for innovation and incentives for organisations and individuals to innovate.</td>
<td>Organisations need to draw upon all possible sources of ideas, including staff, suppliers, customers and other parts of government.</td>
<td>The successful implementation of innovative ideas requires strong leadership and risk management and action to overcome cultural and organisational barriers.</td>
<td>Strong organisational learning helps successful ideas get scaled up and replicated.</td>
</tr>
</tbody>
</table>

Source: National Audit Office.

**Step One: Promoting public innovation within the public sector**

As argued by South Africa’s Centre for Policy Innovation (CPSI 2008), strategic public service leadership is crucial to capacity building to foster innovation in the Public Sector. Strategic leadership must encourage responsible risk-taking and be open to ideas from members of the team. If an innovation is based on a leader solely and is not institutionalised, the innovation may die when leadership changes. Therefore, an effective public sector leader will promote “an organisational environment that values a sense of ownership among all employees as this empowers them to take proactive measures”.

Though referring to its own South African experience, it is recommended that strategic public sector leadership ‘should also ensure diversity of staff in terms of background because innovation depends on the ability to see things differently’ (CPSI 2008).

Eggers and Singh also argue that a dynamic public sector workplace must also put in place measures that acknowledge and implement the ideas of employees, or else employees may ‘get the signal that their ideas are not being heard’ (Eggers and Singh 2009: 38). The authors note that cultivating innovation is an evolutionary process which takes time, involves trial and error, experimentation without undue risk, and the need to adapt to change (Eggers and Singh 2009: 45).

Covey also argues that APS leaders must ensure that adequate time and resources are set aside in order to deal with important (but not urgent) issues given that innovative approaches can have multi-dimensional benefits (Covey 2004).
Another paper by Behm, Bennington and Cummane notes that traditional evaluation of the quality of policy services, which has tended to rely on definitions and process practices determined by the service provider rather than customer definitions of value, needs to give way to a model of policy service provision that provides guidance for the development and evaluation of policy services in order to lead to greater customer satisfaction. This finding was based on a study of ministers, ex-ministers, department secretaries and key advisers, who were asked what the ideal characteristics of policy services were and what would create value (Behm, Bennington and Cummane 2000).

As stipulated by the NAO (2009:8), departments:

… need to develop plans which set out their own priorities and the means by which innovation will be facilitated, including how they will use management information, horizon scanning and customer feedback to identify specific areas for innovation. The priorities for innovation vary between sectors which will therefore need specific approaches. Departments need to decide where their priorities lie, for instance increasing productivity, devising innovative solutions to new problems, or improving customer experience, and where they need to strengthen the support for innovation. Leaders should clearly communicate their plans to staff and suppliers throughout the delivery chains.

The NAO (2009) urges central government leaders to move beyond supporting individual cases of innovation to allow and promote innovation. Even if government organisations ‘have a portfolio of innovations at any one time’, not all of which are expected to succeed, leaders must promote a view that makes it clear that it is acceptable for a project to fail, as long as lessons are learned from any failure which must be brought to a quick halt. Therefore, departments should find ways to encourage frontline staff to play an active role in innovation, including reward schemes and better budgeting outcomes to provide time, resources and expert support for the development of ideas (NAO 2009).

As Koch and Hauknes (2005:45) suggest, along with the need for adequate resources, there is a need for:

- actual structures and systems designed to promote, stimulate or disseminate innovation (e.g. staff suggestion boxes, staff fora, stakeholder feedback mechanisms, networking activities, competence building, encouragement of alternative thinking, etc.). These may operate either from the top-down or from the bottom-up. Both mechanisms may also monitor external sources, such as practice in other public service systems either domestically or abroad for transferable examples of innovations.

Though frontline public servants are in a good position to understand how service delivery might be improved, the 2007 UK Innovation Survey found that only half of respondents from central government organisations agreed that ‘my organisation provides incentives for individuals to generate ideas for innovative products, services and processes’. Discussion with frontline staff, particularly amongst teachers and civil servants, indicated that many ‘could not justify spending time developing new ideas at the expense of their day to day duties’ (NAO 2009).

The CPSI (2008) has suggested a number of strategies to test public service leadership (see box).
TOOLS FOR INNOVATION

Tips for public servants

Step 1: Build a point of view — Know what is changing in the world and what opportunities make these changes possible.

Step 2: Write a manifesto — Your manifesto must build a case for your intellectual authority — the depth of your analysis, quality of thinking and clarity of reasoning.

Step 3: Create a coalition — You can’t change things all by yourself, more so within the public sector. Talk to people about your ideas; tap into cross-departmental initiatives.

Step 4: Pick your targets and pick your moments — Do not look at senior managers as out-of-touch reactionaries rather than as potential allies. This is self-defeating. Find a way to help them see what you see, to learn what you have learned, and to feel the sense of urgency and inevitability you feel.

Step 5: Co-opt and neutralise — Have win–win propositions. Reciprocity is important. Be more of a catalyst and less of a competitor.

Step 6: Be mindful of diversity — Different experiences. Different languages. Different values. All this diversity needs people who have the skills to deal with it. You must be understood.

Step 7: Win small, win early, win often — People can argue with position papers, but they can’t argue with success. All your organising efforts are worth nothing if you can’t demonstrate that your ideas actually work.

Step 8: Isolate, infiltrate, integrate — The objective is to turn experiments into radical organisational models with the power to change the direction of an organisation or department.

The CPSI (2008) also has a tool for assessing innovation leanings at a departmental level. The questionnaire in the following box can assist managers to measure the level and extent of the innovation in an organisation.

1) Our department is seen by citizens as being responsive to their needs.
   1. NEVER  2. SOMETIMES  3. ALWAYS

2) Our department allows the ‘freedom to fail’ and gives careful consideration to new ideas, no matter what their origin.
   1. NEVER  2. SOMETIMES  3. ALWAYS

3) Innovative people in our department are held up as examples and are clearly recognised by senior management for their contributions.
   1. NEVER  2. SOMETIMES  3. ALWAYS

4) My department tends to hire people for their talent, welcoming diversity, and doesn’t attempt to hire people all cut from the same mould.
   1. NEVER  2. SOMETIMES  3. ALWAYS

5) We look at seemingly unrelated events in the environment to determine how they might benefit us and our service to our customers.
   1. NEVER  2. SOMETIMES  3. ALWAYS
6) We are methodical about innovation, particularly in utilising processes to assess the relative value of new ideas that come before us.

   1. NEVER  2. SOMETIMES  3. ALWAYS

7) Our departmental culture tends to look at change as presenting opportunity, not threat.

   1. NEVER  2. SOMETIMES  3. ALWAYS

8) Our department, both line and staff, tends to get excited about new developments, new ideas, and new service delivery approaches.

   1. NEVER  2. SOMETIMES  3. ALWAYS

9) My immediate colleagues present a good sounding board for new ideas and are not hesitant about generating new approaches and new ways of doing things.

   1. NEVER  2. SOMETIMES  3. ALWAYS

10) Rules and standard operating procedures are sometimes broken when there seems to be the opportunity to achieve a breakthrough or a new level of performance.

   1. NEVER  2. SOMETIMES  3. ALWAYS

11) In their oral and written messages to me and my colleagues our superiors cite the need to be innovative, entrepreneurial, and creative.

   1. NEVER  2. SOMETIMES  3. ALWAYS

12) Articles, war stories, and examples of innovation in other departments and other environments are the topic of conversation in our department, both formally and informally.

   1. NEVER  2. SOMETIMES  3. ALWAYS

Add up your scores, and rate your department as follows:

1–9: Your organisation is decidedly not innovative, and is probably geared toward frustrating innovation.

10–18: Your organisation tends to be slothful about innovation and is able to achieve it only through the efforts of forceful personalities.

19–27: Your department is situationally innovative. This means there are repositories of innovative thinking and action throughout the organisation. It’s more a matter of luck, however, than design.

28–36: Your department is a highly innovative organisation. Procedures and techniques are in place to foster, stimulate and reward creativity. Although the personality of top officials may be largely responsible, the probability is that such an innovative culture is institutionalised and perpetuated by the organisation itself.

The NAO also recently carried out a survey of 27 central government organisations inquiring about a list of 24 factors which help or hinder innovation within their organisation (NAO 2009: 46).

Finally, the CPSI (2008) urges departments to share information and innovation experiences as a powerful tool to inspire other public entities in their service delivery endeavours.
Step Two: Working with various actors within civil society to help develop the best policy ideas

There is now a general consensus that better policy outcomes are more likely to evolve from a policy framework that seeks to incorporate the many ideas put forward from interaction by a variety of actors within a civil society. As Eggers and Singh (2009: 21) remind us, ideas can die fast, but especially ‘when only a single person or committee at the top of an agency decides which ideas move forward’.

By encouraging input from a variety of actors, this supports De Bono’s (2000) emphasis on a six thinking hats process which looks at the effects of a decision from a number of different perspectives to allow factors such as necessary emotion and skepticism to be brought into what would otherwise be purely rational decision, and to enhance opportunity for creativity and provide opportunities to sport issues that one might not otherwise notice (De Bono 2000).

As suggested by the following chart in Koch and Hauknes (2005:36) which highlights the complexity of civil society with its many interactions:

In order to learn and innovate, the actors must interact with other actors, this being people, organisations or various sources of information. Their ability to innovate is dependent on their ability to find such relevant competences, understand them and make use of them… The better the actors are at developing networks that can help them get access to relevant competences and partners that can help them in their learning processes, the greater are the chances that their innovation processes will succeed.

The public innovation systems as seen from the perspective of the policy maker

<table>
<thead>
<tr>
<th>International setting</th>
<th>Political system</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGOs</td>
<td>Research institutes</td>
</tr>
<tr>
<td>Policy maker</td>
<td>Consultants</td>
</tr>
<tr>
<td>• Learning</td>
<td></td>
</tr>
<tr>
<td>• Networking</td>
<td></td>
</tr>
<tr>
<td>• Innovation</td>
<td></td>
</tr>
<tr>
<td>Other policy institutions</td>
<td></td>
</tr>
</tbody>
</table>

Source: Koch and Hauknes 2005: 33.

As the next chart in Koch and Hauknes (2005) indicates, any bid for effective public sector innovation is further complicated by a variety of information and expertise coming from a number of sources.
Therefore, as elaborated upon by the NAO (2009), there is a need for central government organisations to do more to develop ideas from interaction with suppliers and service users. Departments need to explore what solutions suppliers may have to offer to policy problems, and commission for outcomes rather than procure predetermined products.

In the case of citizens, the NAO (2009) notes the need to explicitly involve them in service design, learn from customers’ experience of services, and apply a government standard for customer service excellence to measure progress against it. In March 2008 the UK Cabinet Office launched Customer Service Excellence, a government standard which includes ‘a self-assessment tool to allow organisations to measure how customer focused they are and identify areas for improvement’.

There is also a need to ensure that new ideas are not alien to an existing culture, although there may well be a need to change. For instance, Africa proves that merely copying ideas from the developed world often fails if not adapted to the local context. Any government must align innovation ‘with the goals and capabilities of the local jurisdiction and also overcome legal, institutional, and ideological hurdles’ (Eggers and Singh (2009: 58). For instance, a Chicago South Shore Bank program ran into resistance in communities that preferred local credit unions (Eggers and Singh 2009: 51).

Nevertheless, the CPSI (2008) stresses the need to promote awareness and involvement amongst citizens to promote the process of innovation. It argues that ‘citizens or beneficiaries of change must have a feeling of ownership and roles to play because they are the main recipients of reforms’. But to ensure such an important link between the public sector and community participation, the CPSI stresses the need for citizen centric services which are compatible in line with previously identified values, simple so services are easy to understand for potential beneficiaries, and highly visible to enhance public awareness.
The NAO (2009) urges greater openness to identify opportunities from outside the public service, including new technology, ideas tried elsewhere or opportunities for partnership. For instance, the Department for Work and Pensions has adopted the concept of lean processing which was initially developed by the automotive industry as a means of eliminating waste from the production cycle. With the department visiting several organisations who use lean processing, including HM Revenue & Customs, Rolls Royce and Unipart, it was able to both learn new efficient processes which delivered 15–30% efficiency savings and helped secure £37 million of departmental funding. This was despite initial concern by some within the department that associated efficiency gains with job cuts (NAO 2009: 29).

Another example of efficiency gains from an association with the private sector is demonstrated by the Prison Service’s procurement of prison mattresses. With the Prison Service spending around £2 million per annum on buying about 60,000 mattresses each year and disposing 40–50,000 annually with the majority of which go to landfill, it encouraged private sector solutions. After the Prison Service published a call for competition from private sector proposals to deal with the issue incorporating requirements such as comfort and fire retardancy, and the procurement process itself taking 18 months as opposed to the Prison Service’s standard 8–12 months, two solutions have been developed by different suppliers with trials indicating that either solution ‘is expected to reduce the requirement for landfill from the equivalent of over 30 double-decker buses to virtually nil’ (NAO 2009: 27).

The advent and promotion of new technology has also been utilised by government departments. For instance, the UK’s border control system promoted the use of IRIS which results in registered passengers being processed more efficiently at UK airport borders by photographing individuals’ irises and comparing them with the record held on a database, thus meaning less interaction with Border Force Officers. After initial pilot studies at busy periods at two terminals at Heathrow, the IRIS project has now been installed at 10 sites (five terminals at Heathrow, two at Gatwick, Birmingham and two at Manchester) (NAO 2009: 28).

The CPSI (2008) has also suggested the need to recognise problems associated with intellectual property rights. Though noting the need for future legislation that would govern protection of copyright and intellectual property, the CPSI argues that ‘innovations developed in the course of public sector processes must be made available for use by third parties under conditions which will promote their effective development and application (including, where appropriate, securing formal intellectual property protection).

There are many different ways that demonstrate how public sector innovation can be enhanced by greater interaction with a variety of players to encourage and incorporate ideas and information.

In regard to learning from interaction with the private sector, diverse groups of US government and private sector experts have gathered during the summer of the past three years for four weeks in classified locations to tackle difficult intelligence challenges. The annual Summer Hard Problem (SHARP) program, sponsored by the federal US Office of the Deputy Director of National Intelligence for Analysis, in 2009 focused on two issues: potential intelligence uses for computer-based virtual worlds such as Second Life, and how to slow the global growth of extremism. The program, which fosters interaction between government officials and outside experts including authorities on anthropology, social psychology, insurgency, and Islamic thought, identifies novel approaches which enhance national security. This approach mirrors the approach taken by a long-running and highly successful project by the National Security Agency which enlists top mathematicians to work on sophisticated encryption issues (Eggers and Singh 2009: 44).

There are also lessons to be learned from local expertise. For instance, the US Department of the Interior adopted a new approach to land management known as ‘cooperative conservation’ by seeking solutions by combining local understanding with scientific knowledge. One outcome was that the endangered short-tailed albatrosses were less likely to be caught on the fishermen’s hooks in the waters off Alaska after innovation encouraged and devised weighted fishing lines which sunk the hooks well below the water surface so they could not snag the birds (Eggers and Singh 2009: 35–36).
The benefit of greater employee input has also been promoted, an idea long established in the private sector. For example, Southwest Airlines employees spent 10 hours a week for six months evaluating changes in the company’s aircraft operations. After meetings which included members of the airline’s in-flight, ground, maintenance, and dispatch operations, 109 ideas were generated in regard to high-impact changes with one director from the schedule-planning division successfully challenging assumptions held by the maintenance and dispatch personnel for 30 years (Eggers and Singh 2009: 29).

In the public sector, there are many examples of greater employee involvement in terms of innovative ideas which improve a department’s performance. For instance, the US Transportation Security Administration launch of an Idea Factory in April 2007 provided a secure intranet site that allows employees to submit ideas to improve the operation of the agency. By February 2009, employees had submitted 7,837 ideas and 69,712 comments with 39 ideas implemented (Eggers and Singh (2009: 9). Further, the In-House R&D Network at the Bureau of Motor Equipment of the New York City Department of Sanitation permits worksite committees of mechanics to adopt proposals and implement changes, as long as there is agreement of the facility manager. The Bureau helps work out the business case for each project, encourages coordination with other government agencies if required, and seeks approval for bigger projects through New York’s budget process. Innovations generated include a patented device which shuts down the engine to protect it from burnout when the oil in a truck drops too low (Eggers and Singh (2009: 35).

The public sector can also benefit from the knowledge and input of employees via the use of new technology. For instance, the Central Intelligence Agency (CIA) has used a wiki (like Wikipedia where information is added by anyone with or without security settings) to develop its Intellipedia to allow employees across a number of security agencies to engage in open discussions on topics of concern to them. In addition to wikis, organisations may use peer-to-peer networking sites (which allow users to share files and data through high-speed connections). Currently the US military is experimenting with such peer-to-peer networking to allow ground troops ‘to interact and collaborate instantaneously, without being bogged down by organisational and technical protocols and hierarchies’. The use of peer-to-peer communication among ground soldiers may help overcome the problems evident in Kosovo and Afghanistan when disparate computer systems blocked communication between the Army, Navy, and Air Force (Eggers and Singh 2009: 37).

Important information to help the public sector may also be generated from a mere examination of online sources. For example, a paper by two Wharton professors used the number of documents discussing corruption and other social issues on an Internet search to rank cities and states for their levels of corruption and other social phenomena. This method may help intelligence and law enforcement agencies (Eggers and Singh 2009: 89). Such information may help decide the allocation of resources and attention needed to address issues in different locations.

There is also an ongoing need for leaders to learn from greater interaction with upfront services, as again demonstrated by the example set by the private sector. For example, in Tesco, the UK’s largest supermarket chain, each year the top 2,000 executives spend a week on the shop floor at the checkout counter or in a warehouse stacking shelves in order to get feedback from colleagues and customers, then collate all the information, and send it to the relevant division heads (Eggers and Singh 2009: 35).

**Step Three: Creating a public sector structure that can evaluate and promote innovation**

As Eggers and Singh suggest, ideas need time to develop as premature rejection of them will hamper the idea generation process and each has to be nurtured to explore its full potential ‘before it is subjected to rigorous risk assessment and other forms of evaluation’ (Eggers and Singh 2009: 20–21).

But in the end, some criteria need to be established to determine which ideas are given assistance.
Recent challenges, especially from the global financial crisis, have heightened the need for bold, innovative solutions within the public sector. The first need, given the task of balancing risk-taking with some financial scrutiny, is to ensure that any appointment to an innovative public sector board is more daring than traditional public officials such as auditors who are primarily concerned with not wasting public funds.

Once a board is elected to particular organisations, the question becomes just which ideas are worth pursuing and what is the best way for the public sector to select the ideas ‘that are big, bold, and transformative, while also being feasible and workable?’ (Eggers and Singh 2009: 21).

There are many national examples of how public sector innovation projects are judged or assisted. Singapore has the Enterprise Challenge (TEC), an initiative driven from the Prime Minister’s Office to fund untried and untested ideas or an existing idea to be implemented in a different field or in a different manner which can create new value or substantial improve the public and society.

Introduced in 2000, the TEC has a number of steps before an innovative proposal is supported. First, any potential innovator has to complete an online application at TEC’s websites. Once submitted, the TEC secretariat works closely with the innovators ‘to nurture their proposals, bringing out their uniqueness and value propositions to the public service’. Only then are the more promising proposals sent to the TEC panel for evaluation. The TEC panel comprises CEOs, academics and leaders from both public and private sectors. One panel member noted that the decision-making process is rigorous with gem ideas judged by the value of the innovation in terms of public benefit, ‘the scale of the project, the budget required and the proposed framework to make the innovation a reality’ (The Straits Times 2005).

Successful examples that received full or partial government assistance have been:

A) The development of the Singapore Civil Defence Force’s proposal for the ‘Water-mist gun’, now used by fire-fighters, which releases ‘a fine, high-pressured spray of mist that effectively puts out fires, uses far less water, causes much less damage to property’ and thus cuts manpower costs and deployment time as it needs to be operated by just two men (The Straits Times 2005).

B) Assistance given to two young, engineering graduate students at Nanyang Technological University who needed a million dollars to fund a project to turn toxic industrial waste materials into safe and re-usable bricks, pavers and aggregates.

C) In 2007, a project was given assistance to help conduct research trials and develop a DNA kit for the market from the work of forensic scientist Simon Lim (who helped identify tsunami victims in Thailand) and research partner Tan Wai Fun that would help identify badly decomposed bodies previously difficult to make conclusive judgments using the available DNA technology.

D) A nine-member team from Tan Tock Seng Hospital, the National Neuroscience Institute and the Institute for Infocomm Research, was assisted to help develop what was believed to be the first project to integrate a brain-computer interface and robotics into a stroke rehabilitation system that would hopefully allow for improved reorganisation of neural circuitry to enhance brain repair and functional recovery. The project, which aims to shorten the recovery period of stroke victims through sensors detecting the brain signals and ordering a robotic shell around the arm to move it to complete the arm action, was given assistance through a trial for 12 months tested on around 60 patients.

Since 2000, the TEC has invested around $32 million into 86 projects (The Straits Times 2007).

In the US, a number of approaches to aid public sector innovation have been demonstrated. In New York City, when Mayor Michael Bloomberg wanted to transform the city’s underperforming public school system, he used partnerships with the private sector to launch innovative pilot programs and sidestep organisational obstacles. By using funds from private organisations to test ideas before spending public money on a citywide rollout, the
Empowerment Schools program was established with schools signing performance agreements committing them to high levels of student achievement in return for schools receiving greater local autonomy over their operations. The Fund for Public Schools, a nonprofit fund that attracts private financing for diverse school reforms, represents a strategy where a government collaborates with individuals and businesses interested in improving education. In New York City, the city government even encouraged Joel Greenblatt, a successful hedge fund manager, to create a charter school called the Harlem Success Academy with a model that demands strict accountability and measurable results, although cost cutting was also achieved by classes being taught by non-union teachers (Eggers and Singh 2009: 66–68).

New York's Center for Technology in Government (CTG) also allows state and local agencies to experiment with computer-based processes before making big investments. For example, the state's Office of Children and Family Services recently conducted a pilot study in two counties to evaluate whether portable information technology (IT) platforms, such as wireless laptops, could improve child protective service investigations while reducing costs. After a detailed assessment based on surveys, interviews, and analysis of data from the central case management database, the pilot study showed that mobile devices indeed improved performance. However, analysis also revealed a need to account for individual work preferences and organisational support which then led to a second phase of larger-scale trials before full deployment.

Such pilot studies, established within a concept known as ‘safe havens’, gives employees time to develop emerging ideas while protecting them from short-term budget constraints and premature criticism.

Safe haven pilot studies also provide an approach which can work as motivators for ‘renegade’ thinkers — those independent visionaries looking to achieve positive results. They provide an opportunity for talented individuals to work in small teams with little bureaucracy and paperwork to promote innovative ideas. Known as ‘skunk teams’, a term that originated in 1943 at the Lockheed Aircraft Corporation where a small group delivered the prototype XP-80 fighter plane in 143 days (seven days ahead of schedule), there has been recent government examples. For instance, the Technology Strategy Board within the UK Department for Business Enterprise and Regulatory Reform established a small group of people from diverse backgrounds (business, government, and academia) in order to translate knowledge into innovation, set priorities for research and funding, and devise the government's strategy to help the UK become a global leader in innovation and technology. Already, it has set up the Low Impact Buildings Innovation Platform that brings together key players from industry, academia, and government to reduce carbon emissions from buildings which are responsible for 45% of total UK carbon emissions (Eggers and Singh 2009: 42–43).

With public scrutiny and media cynicism making it dangerous for public employees to launch a new initiative, except a kind that is virtually guaranteed to succeed, rewards should also be adopted to encourage public sector innovation. This may take the form of governments providing financial rewards (bonuses and performance pay) or the offering of awards and recognition to innovators (Eggers and Singh 2009: 38).

In the UK, a Show Us a Better Way website and competition was launched in July 2008 to encourage individuals to submit innovative ideas as to how government could make its data available to citizens in a more useful way to ‘improve health, education, justice or society at large’. After more than 450 entries were received, the winning entries were announced in November 2008 to share a prize fund of £80,000. The overall winner, ‘Can I Recycle It?’ , promoted a concept that allowed people to enter their postcode into a website in order to find out which materials could and could not be recycled in their local area. Other ideas to receive assistance included a website which would link information on cycle lanes to a route planner with information on local road works and weather conditions, a plan to plot the catchment areas of local schools on a map, and another which would show the location of the nearest postbox (NAO 2009: 24).

In the US, the Ash Institute for Democratic Governance and Innovation awards, made in conjunction with the Harvard Kennedy School, also recognise and promote excellence and creativity in the public sector by awarding innovative proposals each year (Ash Institute 2008).
Step Four: Evaluating the success of public sector innovation to ensure its sustainability and success

As the NAO (2009) indicates, successful public innovation requires considerable resources. This is evident by the UK’s Department of Health looking to invest £120 million over the next two years specifically to enhance innovation activity.

So evaluating the viability of innovative public sector innovation proposals is absolutely crucial to uphold any call for public resources at any time, particularly in these difficult economic times.

Hence, the NAO (2009) highlights how ‘piloting and testing can identify the risks, allow lessons to be learnt and permit unsuccessful innovation to be stopped early’.

There is also a need for a government to measure the impact of public sector innovation. This is despite even the UK’s Department for Innovation, Universities and Skills currently having no means yet for measuring the impact of its policies or other central government initiatives on innovation. NAO (2009) proposes a national audit model by suggesting that:

To measure progress in the shorter term, and as a stepping stone to a comprehensive measure, DIUS should develop these sources into a tool to track departmental innovation, including progress against all the recommendations below, with results to be reported in the Annual Innovation Report. Projects supported by departmental innovation budgets should have measures in place to determine that their benefits have been realised.
Examples of Public Service Innovation

The Australian Public Service Commission’s State of the Service report (2008) summarises a number of relevant examples of public sector innovation (as elaborated upon earlier). The following examples illustrate the nature and the extent of public sector innovation, including the need for a policy framework that encourages public sector innovation which benefits from the dynamic interaction that occurs between government, business and civil society, as evident in other national contexts.

Raising standards in education

An OECD study indicates that science performance was better where principals reported greater academic selectivity in admitting students; publicly posted school achievement data; promoted higher in-school learning time spent on science, maths and language and higher levels of student self-study; and school activities were conducted to promote science, such as science clubs, field trips etc. A better science performance was also suggested where schools had a higher degree of autonomy in regard to budgeting.

In contrast, lower science performance was observed where school principals reported grouping students by ability in all subjects, while countries that divided students into different school groups at relatively early ages increased the socio-economic differences in results without leading to gains in overall performance (Box 2009).

As Sabel (2004) has also illustrated, innovation has been crucial to public education in Texas, Kentucky, North Carolina and elsewhere in the US to help teach ‘poor children of colour to read and do mathematics with proficiency comparable to that attained by rich, white pupils’. Though there are different national approaches to education with all likely to have strengths and weaknesses, teaching in US has been aided by an emphasis upon building:

… an organisation that detects and corrects errors at the lowest levels, and then adjusts the higher level structures to generalise successes and encourage more refined error detection, and so on … Teachers identify the strengths and weakness of each student’s mixture of strategies by sampling their skills in brief, daily sessions, and suggest improvements (local diagnostic monitoring, or first-order error detection and correction). The performance of students in the same grade is measured periodically state wide by a standard test, allowing for the comparison of the performance of teachers within schools, schools, and districts (general diagnostic monitoring, or second-order error detection) (Sabel 2004).
Overseeing such an approach is a district supervisor whose prime purpose is to ‘intensify’ assistance to a struggling education facility with perhaps a more successful principal or more professional teachers. When an individual school fails to improve, the district supervisor may even dissolve the institution and reassign students and capable teachers elsewhere (Sabel 2004).

North Carolina Program’s Commitment to Improve High School Graduate Rates and Increase College Access, awarded an Innovations in American Government Award in 2008 by Harvard University’s Ash Institute, also provides an excellent example of public education innovation.

Launched in 2004 throughout the state, in 2008 there were nearly 20,000 students from around the state enrolled in these free online courses which gave students an opportunity to graduate from high school with an associate’s degree or two years of college credit in no more than five years. Not only did the program offer ‘a more rigorous project-based curriculum than traditional high schools’, but graduates with certain grade requirements could receive Education Access Rewards Grants ($US4000) to make college more affordable. At the time, around 25,000 students were eligible for the grants.

In early 2008, the Learn and Earn program graduated its first class of students with much lower dropout rates and nearly 50% of Learn and Earn schools reporting no dropouts at all. Participating ninth graders had a pass rate of 96% compared to 80% for their peers in non-Learn and Earn schools, and Learn and Earn schools cited higher job satisfaction and retention rates for their teachers than from those in non-Learn and Earn schools (Ash Institute 2008).

The Florida School Year 2000 Initiative also demonstrates public sector innovation with its reform program that provides teachers with a handheld device to record information on students that can be retrieved later for assessment and reporting. With teachers spending up to a week getting the records together to prepare student progress reports, the new technology substantially reduces the time needed. The program was implemented despite the initiative running into problems early because Florida schools had walls made of high strength concrete as they often double up as hurricane shelters which meant they were impenetrable by the proposed new Wi-Fi technology. Problems were quickly overcome by moving to a wired network and handheld devices that had high information storage capacity that could dock with the computer network at the end of the day to transfer information (Eggers and Singh 2009: 24).

In Canada, the government of Ontario established the E-Learning Ontario initiative in a bid to create a flexible educational plan that is customised to the learning choices of teenagers to enhance their ability to develop solid reading, writing, and math skills. Targets were for ‘75% of students achieving at the provincial standard in literacy and numeracy by 2008 and 85% of students graduating from high school by 2010–11’. The benefits of the innovative initiative included an online repository of resources developed by teachers that can be customised to local needs with this cache of information available to teachers and students at no cost. Credit courses, a technical help desk, and professional development programs for teachers and school board members, were made available free of charge. The initiative was deemed especially useful to small, rural, and isolated schools which confronted less educational resources and lacked specialised teaching staff (Eggers and Singh 2009: 98).

**Health**

One paper (Blum 2007) suggests that ‘new governance offers exciting approaches to government efforts to more efficiently oversee, and in some cases, actually influence the directions of health services’.

Highlighting the existing Quality Assessment Performance Improvement (QAPI) program, which already mirrors themes evident in new governance approaches, the scheme incorporated requirements on hospitals to improve performance yet enhance a regulated framework and uphold an individual approach to address problems
unique to its own situation. The four criteria were ‘an ongoing, hospital-wide program that measures reduction in medical errors; a clearly defined policy on supporting data to identify and measure quality; a priority-setting process for improvements that tracks and analyses adverse patient events and implements preventive actions; and the implementation of quality improvement projects proportional to the scope and complexity of a given hospital’s services’.

While Blum notes that the QAPI program ‘is structured in such a way that if the flexibility model wanes, traditional command and control mechanisms are readily available to be drawn upon’, he suggests that this is ‘not outside the concepts of new governance’.

And after the 1999 report by the Institute of Medicine (IOM), which was critical of American hospitals given its estimate that between 44,000 to 98,000 patients died as a result of preventable errors, there has been a greater willingness to identify medical errors, analyse causes of such errors and develop guidelines to prevent future mistakes. For instance, US federal legislation was enacted in 2005 to establish regional Patient Safety Organisations ‘to voluntarily collect reported data on medical errors from physicians and other providers, analyse this data to discern patterns and trends, and feed the data into a national database’. By 2002, 20 US states had enacted legislation ‘mandating the reporting of adverse events as part of their hospital licensing requirements’ (Blum 2007).

There is also the British example where a number of innovative changes have been applied to reduce the number of stillbirths at Luton and Dunstable hospitals. With involved people keen to make changes that would reduce the incidence of stillbirths, particularly community midwives who deal directly with patients, an interaction of ideas had led to policy changes with long-term potential. Though still early to make an absolute conclusion, the stillbirth rate has improved from 9.5 per 1,000 births in 2004 to 7.2 by 2007 with the number of stillbirths classed as avoidable reduced from 11 in 2004 to two in 2007 (NAO 2009: 22).

**Prison rehabilitation**

There is also a need to encourage public innovation in prisons. Arizona’s Department of Corrections received a 2008 Innovations in American Government Award was with its Getting Ready: Keeping Communities Safe Prison Re-entry Initiative, implemented in 2004 and developed with no new funds or enabling legislation. This involved promoting inmate re-entry into society by structuring the prison environment like the outside world with real-world job training and educational opportunities. In contrast to conventional correctional systems which give staff almost complete control over prisoners, the Arizona scheme provides inmates ‘with graduated incentives and privileges to reward good behavior’, which include being ‘encouraged to earn high school equivalency diplomas, achieve and maintain sobriety, work full time, and participate in victim-focused volunteer activities during leisure time’. Further, prison life mirrors the real world with wages improving with post secondary education and good work evaluations, while status improves with community service.

The results are indeed positive for both the community and prisoners given that three quarters of the inmate population earned high school equivalency diplomas and completed bona-fide jobs training. With about 42% of all Arizona inmates released returning to prison within three years prior to the program, prisoners who participated in the Getting Ready program prior to their release were 35% more successful in the community than inmates of comparable risk. In addition, inmate-on-inmate violence was reduced by 37%, inmate-on-staff assaults by 51%, and inmate suicides by 33%. It was estimated that lower rates of institutional violence and re-offending saved Arizona taxpayers about $US1.6 million (Ash Institute 2008).

Also winning an award from Harvard University’s Ash Institute as the winner of the 2008 Annie E. Casey Innovations Award in Children and Family System Reform was Missouri’s Division of Youth Services (DYS). Heralding a new philosophy for youth offenders at its 42 locations across Missouri, DYS has taken a therapeutic
approach by viewing youth ‘as a direct product of their experiences and capable of turning their lives around through a step by step change process’. Included in the program are group meetings with 10 to 12 of their peers to talk through challenges, and individualised educational assistance and participation in a host of volunteer and community engagement activities. In addition to the youth served by DYS treatment centres, others are diverted from the juvenile justice system all together through community-based programs supported by the Division, while low risk youth ‘receive day treatment and family support while living at home’.

Measured improvement is indicated by a reduction of juvenile crime with 90% of youth avoiding further incarceration for three years or more after graduating from the program. Other studies indicate that a re-offense rate of 9% for Missouri youth compare favourably with Florida, Maryland, and Louisiana (29%, 30%, and 45% respectively). Further, DYS promotes academic achievement with 90% of involved youth earning high school credits, 48% returning to public schools, and 70% progressing more rapidly than same-age peers in core subjects (Ash Institute 2008).

Renewable energy

The importance of public leadership in regard to the promotion of renewable energy has been illustrated by the example of Rizhao, a coastal city of nearly 3 million on the Shandong Peninsula in northern China. There the Shandong provincial government provided policy measures to encourage the development and adoption of solar energy use. This included subsidies to the research and development activities of solar energy industries to improve efficiency and reduce costs of their products.

As a result, the cost of a solar water heater was brought down to the same level as an electric one (about $190), equivalent to about 4–5% of the annual income of an average urban household and about 8–10% of a rural household’s income. Solar water heating over 15 years amounted to savings of $1800 when compared to running a conventional electric heater. Benefits included 99% of households in the central districts using solar water heaters; most traffic signals, streetlights, and park illumination being powered by photovoltaic solar cells; over 30% of households in the suburbs and villages using solar water heaters, and over 6000 households have solar cooking facilities; and a reduction of 3,340,000 tons of CO₂ emissions and SO₂ by 12,500 tons annually (Bai et al. 2009).

Environmental warning systems

The UK’s Environment Agency also proved innovative with an improved Flood Warning direct system. With Britain hit by severe flooding in Autumn 2000, affecting 10,000 properties in over 700 locations and costing about £1 billion, the Environment Agency’s investigation produced a report featuring recommendations for improvements to flood warnings, emergency planning and flood defences. With feedback suggesting that the system would be more effective if it could deliver flood warnings in the way that best suited the individual user: by telephone, SMS message, fax, or e-mail, the new Flood Warning Direct system is now centred around a computerised map with a database of properties and registered user details with a flood warning sent automatically sent to registered users within the affected area via their preferred means (NAO 2009: 25).

E-governance

The importance of e-governance has proven vital to any government’s bid to modernise service delivery online and save resources, as indicated by governments typically spending around 1–1.5% of GDP on public sector information technology (IT) systems to aid communication about the availability and use of government services to the public beyond the use of the telephone.
Take the example of Service Canada, begun in 2005 after a decade of efforts and extensive research and planning to improve e-governance in Canada. Designed to provide a one-stop service through in-person, telephone, Internet and mail delivery channels, it employs over 22,000 employees to serve the country’s 32 million citizens with over 580 in-person points of service across the country.

Though a 2006 national survey showed that only a small percentage of Canadians were aware of its existence and responsibilities, Service Canada answers more than 56 million telephone calls (over 80% of all calls to the federal government, excluding the Canada Revenue Agency) and handles more than 14 million unique visits to its website.

More importantly, the benefit of Service Canada is illustrated by improved service delivery to disabled Canadians. At the time of writing, the Province of Ontario had 44 separate and different programs providing services and benefits for disabled persons living in the Province. Because they do not share information readily, Service Canada will be to integrate such programs to ensure one-stop access that will require applicants to provide their personal information only once (Flumian, Coe and Kernaghan 2007).

**Housing**

Receiving a 2008 Innovations in American Government Award in regard to public housing was New York City’s Acquisition Fund as National Model for Creating and Preserving Affordable Housing, a key element of New York City Mayor Michael Bloomberg’s $US7.5 billion New Housing Marketplace Plan to provide affordable housing for 500,000 New Yorkers. In a $US230 million partnership with the private finance sector, the Fund finances the purchase of land and buildings for affordable housing by encouraging small developers to compete in a tough real estate market. Established in 2006, and supported by the City’s leading financial institutions, 10 national philanthropies, and the City of New York, the Fund encourages banks to offer credit to smaller developers by providing low-interest capital at higher advance rates and lower recourse levels than are available from conventional financial institutions, and it can respond faster than typical government funding cycles.

With the Foundation contributing $US33 million, city funds $US8 million, and private banks $US192.5 million, the Fund will build and preserve 30,000 affordable housing units over 10 years with 75% of units reserved for low income residents (Ash Institute 2008).

**Regionalism in federal societies**

The importance of ‘experimental regionalism’ helps explain Germany’s attempt ‘to instigate regions to cooperate and to define regional development programs’ (Furst 2006). The discussion of ‘experimental regionalism’ refers to the state confining itself ‘to defining the objectives, “organising the game” and assessing the results but relies entirely on the voluntary participation of regions/joint local actors to comply and to be inventive enough to find new solutions. In addition, competition is crucial for motivating and challenging regions, at least at the outset of ‘the game’, when regions submit their proposals and bid for the financial resources offered by the agency’.

The example of Bavaria promoted experimental regionalism where the government takes over the costs of a number of projects for a period of four years (around half of the cost) but with regressive contributions (in the first year 80%, in the second 60%, in the third 40% and in the fourth 20%). Further, a ‘balance conference’ is to be held every two years to disseminate and assess the knowledge on regionalisation and to initiate exchanges of experiences (Furst 2006).
Government service delivery

An excellent example of improved government service delivery is demonstrated by US attempts to improve complaint and inquiry services to government departments. Starting in Baltimore and soon spreading to Chicago, New York City, Barcelona, Tokyo, and dozens of other cities around the world, the ‘311’ phone service speeds up the inquiry process. By dialing 311, the program offers an immediate response via a highly sophisticated customer relationship-management software system which directs one’s issue to the appropriate agency and then logs, tracks and monitors the inquiry to the end. After speaking to a real live person within 10 seconds of placing the call, with well trained customer service representatives dealing with the inquiry 85% of the time, the inquirer is given an email acknowledgment of the call, detail of how it will be resolved, and a tracking number for the inquirer to go online anytime to see if the issue has been fixed and who is working on the complaint. Within a few days, the inquirer is sent a follow-up letter from the chief executive officer (or equivalent). Such a process hastens the ability of citizens to report quality-of-life issues which helps government and society improve services. For instance, New York City has seen excessive noise inspections increase by 94% and rodent exterminations increase by more than a third, while the waiting time for the building review process with an inspector has improved from more than a month to less than a week.

The 311 service also improves government planning performance. This is because the millions of data points collected each month encourage better resource decisions because trends are spotted that would be previously unseen. For example, whereas New York City had a chronic Sunday morning parking problem before 311, thus leading to a flawed conclusion that churchgoers are habitual parking violators which infuriated fellow New Yorkers, parking complaints are ‘now geocoded and routed directly to the nearest police precinct’s computer so they can be handled more expeditiously’ (Eggers and Singh 2009: 56–57).

The benefits of improved public sector phone systems is also demonstrated by a recent joint initiative in the US by multiple levels of government (Summit county, Ohio and they city of Akron) to purchase a single 911 emergency phone system that displays the location of calls made from cell phones on a map at the 911 dispatch centre. With this system saving the city and county nearly $150,000 and expected to lower operating expenses by 40%, both levels of government are strengthening their Collaboration Committee to identify new areas for sharing services and resources (Eggers and Singh 2009: 69–71).

Other US public sector innovation examples that improve service delivery have been a Florida Department of Children and Families program that has slashed customer wait times by 45 minutes, reduced turnover, and saved $11 million annually, developments that led to that department earning several awards and other state and federal agencies copying its efforts (Eggers and Singh 2009: 28).

Further, after the experience of airlines showed that higher toll prices during peak landing times could be used to regulate congestion, an initial Californian commercial pilot study applying the same principle to roads began to be replicated across the US. The 91 Express Lanes in California gave drivers a choice between ‘using a congested freeway, paying a heftier fee to use a less congested express lane, or altering their time of travel to avoid super-peak rush hours’ (Eggers and Singh 2009: 66).

In the UK, the British Broadcasting Corporation (BBC) has upheld its longstanding role to utilise the latest technology to improve service and information delivery for customers which also provides an important public policy benefit. For example, after numerous surveys revealed that the BBC’s customers wanted more innovation in regard to public programming and technology choices, the BBC developed ‘backstage.bbc.com,’ in order to promote the ability of amateur innovators to use BBC content and tools to build sites and projects that meet the needs of customers in unique needs. As a result, rather than rely on headlines like ‘A1 Cambridge shire — Narrow lanes both ways at the B1081 Old Great North Road junction in Stamford, speed restriction of 40 kms,’ the new system combines such linear data with feeds from Google maps to help readers to locate bottlenecks in real time. Further, the Homepage Archive, by keeping all the information published by the BBC, allows users
to track the evolution of the homepage and its content from one day to help innovation processes. This builds upon the BBC’s own continued efforts to develop R&D activities that maximise the new digital technologies by taking advantage of development ideas from all over the world (Eggers and Singh 2009: 77–78).

**Working with the community for mutual public-community benefit**

An example of community input to help government address a complex and difficult problem was illustrated during the 19 days it took to control Southern California’s wildfires in October 2007, a disaster that destroyed nearly 1500 homes and more than 500,000 acres of land with around one million people evacuating their homes.

This was seen by the role citizens played in assisting local fire departments. With disaster management and recovery efforts requiring constant information flow on fire perimeters, evacuation centres, and road closing, it was citizens who organised themselves rapidly through social networking sites to assist the authorities to coordinate the emergency response. After pictures of fires were posted on Flickr; more than 100 social groups were established on Facebook to support people affected by the fires with KNBC.com (a digital news channel) also receiving live streaming video and user-submitted photos.

Of course, government agencies also sought to harness the collective wisdom via technology. This was achieved via a wiki application to give citizens, disaster relief associations, and private companies, real time information in case of a wildfire breakout in their area, while the National Aeronautics and Space Administration (NASA) provided detailed satellite images that showed active fire zones and the speed at which the fires spread.

However, the state’s fire agency was linked to the Web site of KPBS, a San Diego radio station, which provided 24/7 coverage of the wildfires using wikis to coordinate the effort. Using a fairly new application My Map, earlier used as a fun tool to pinpoint the best places to play golf or get a drink, KPBS employees produced a virtual map of Southern California with symbols for where to find shelter, what roads were closed, and what had burned, thus attracting more than 1.2 million hits (Eggers and Singh 2009: 85).

The importance of community efforts is also illustrated by the ‘Fix My Street’ website in the UK built by the voluntary organisation My Society to help fix physical problems such as potholes and vandalism in the local community. With users required to enter their postcode or street name, click on the exact location on a map of the area, write a detailed description of the problem, and even add a picture if they choose, about 25,000 problems were reported to local municipal councils (Eggers and Singh 2009: 87).

Another example of major input by the community was illustrated in Chicago where the Bethel New Life community-based organisation created the Bethel Center to represent the huge resistance in Chicago’s West Garfield Park neighborhood to the transit authority’s proposed closure of the elevated Green Line transit rail stop. By using grants from various government agencies and nonprofit foundations, Bethel built a three-story, 23,000 square foot, environmentally friendly, state-of-the-art facility across from the transit stop which offered employment counseling and job placement, commercial services, a computer technology centre, a 106-child day care centre, and retail space. The building not only made it viable for the transit authority to retain the stop in the economically weak neighborhood, but led to the US Environmental Protection Agency awarding the centre its 2006 National Award for Smart Growth Achievement for equitable development (Eggers and Singh 2009: 68).
Government leadership in regard to public–private partnerships

The role of government leadership to enhance the performance of public–private arrangements has been recently demonstrated by policy development in the European Union. In response to earlier criticisms about not enough accountability and the risk of fragmentation of the single market, the European Union introduced a New Regulatory Framework for electronic communications networks and services in 2002 that requires Member States to guarantee independence of National Regulatory Authorities from service providers in order to promote the interests of citizens (universal service, consumer protection, data privacy) (Sabel and Zeitlin 2008).

The role of government leadership in public–private partnerships to achieve certain goals is also illustrated by policies intended to relieve traffic congestion and raise important taxation revenue. For instance, the experience of the Netherlands demonstrates that the use of tariffs and collection by commercial organisations at well-designed parking facilities at the right locations has helped deal with congestion problems and generate a considerable positive cash flow for local governments (Koppenjan and Enserink 2009). And as evident by the national audit offices of the United Kingdom and the Netherlands, the focus on economic performance has now been softened with sustainability targets attached to public–private partnerships to help ‘establish a framework for sustainable urban infrastructure policies by developing indicators and standards, formulating ambitions, benchmarking local, regional, and provincial authorities, and developing accountability and reward systems’ (Koppenjan and Enserink 2009).

The CIA also use the private sector to enhance its security needs. For instance, the CIA funds a nonprofit organisation, In-Q-Tel, to fund and deliver technological solutions for many CIA needs, including data mining, strong encryption, and the ability to search the Web for valuable information. This is achieved by In-Q-Tel providing seed capital to small start-up companies to develop new technologies. In-Q-Tel invested in the Keyhole, Inc. company in February 2003 after the latter developed the software now known as Google Earth before Google acquired Keyhole in October 2004. As a result, the CIA links to In-Q-Tel allow the intelligence agency to receive relevant information tailored to the CIA’s needs in line with stringent security requirements (Eggers and Singh 2009: 82).

Another successful public–private partnership is illustrated by the United Nations Foundation and the Vodafone Group Foundation co-launching a $30 million technology partnership (EpiSurveyor) in 2005 to enhance develop mobile technology to respond to emergencies and collecting health data. EpiSurveyor provides the first free, open-source software for collecting health data with researchers in the field using handheld computing devices to collect data and transfer the information to desktop computers for processing and analysis. It is estimated that this approach will cut the cost of program assessments, which account for 10% of project expenses (Eggers and Singh 2009: 63–64).

The BBC has also formed multiple joint ventures to overcome constraints such as borrowing limits, reduced risk-taking ability, and marketing inexperience in order to generate additional revenue. For example, a 1998 joint venture with the media company Discovery allowed the BBC to greatly expand its reach via BBC America in the US and Animal Planet worldwide. Further, Discovery invested £175 million in factual programs to take advantage of the BBC’s reputation (Eggers and Singh 2009: 71).

The BBC, by promoting Innovation Labs with its series of creative workshops, has also allowed independent media companies an opportunity to offer their ideas to BBC commissioners. After the program attracted 29 companies in its first year and generated 170 ideas, 13 external ideas were selected for further development. Since the first year, the Innovations Labs has gained popularity in more regions and has built traction among start-up private media companies (Eggers and Singh 2009: 77).

Another UK example of public–private partnership to enhance innovation has been the launch of the Oyster card (the contactless ‘smartcard’) in 2003 by Transport for London in partnership with a private company. The
Oyster card, which allows passengers to ‘touch in’ and ‘touch out’ on the automated barriers, has resulted in cheaper travel while reducing queues to buy paper tickets. It is currently used to pay for 90% of all London bus and underground travel (Eggers and Singh 2009: 66).

There is still a long way to go in terms of public sector innovation, although the above examples are all positive examples that prove that it works and is needed.

But some nations are leading the way. For instance, the 2007 UK Innovation Survey suggested that all central government organisations surveyed were able to cite innovations either currently underway or already delivered, although data was not available. And evidence from senior civil servants indicates that 96% of respondents agreed that their organisation provided support when things go wrong despite good risk management, compared with 65% when asked a similar question in 2004. In addition, nearly 90% of respondents agreed with the statement ‘my organisation looks upon risk as an opportunity as well as a threat’, compared with 65% in 2004 (NAO 2009).
Overall Conclusions

The current state of the literature provides a useful, but only partially complete, set of insights and practical recommendations useful to fostering enhanced public sector innovation. Consequently, the ANAO’s BPG on Public Sector Innovation will be a valuable contribution to a rapidly developing field.

Given similar initiatives underway overseas (particularly in the UK) it will be important to establish and exploit effective liaison mechanisms in order to avoid wasteful duplication of efforts and to exploit useful synergies between different national approaches.
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