INNOVATION IN THE PUBLIC SECTOR

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This paper is intended to provide a framework for thinking, debate and action on the conditions for successful innovation and its diffusion in the public sector. It represents work in progress. As such we would very much welcome any comments, criticisms or case studies from both the UK and other countries, and being kept in touch with relevant on-going research and networks. Please send any material or information to David Albury, in the Strategy Unit, at: suinovation@cabinet-office.x.gsi.gov.uk or Admiralty Arch, The Mall, London SW1A 2WH, UK

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This paper and its future evolution, including the development of toolkits to help government departments, are complementary to the Strategy Unit's Strategy Survival Guide. Links to relevant elements of the Guide are given in specific sections of this paper.

1. Executive Summary

- This paper suggests a framework for thinking and action by Government and public sector organisations in promoting successful innovation, and its implementation and diffusion in the public sector.

- Innovation should be a core activity of the public sector: it helps public services to improve performance and increase public value; respond to the expectations of citizens and adapt to the needs of users; increase service efficiency and minimise costs. Moreover the public sector *has* been successful at innovation in the past (cf. Open University)

- How to seek out and foster innovation from all levels is crucial to continual development and improvement: only half of all innovations are initiated at the top of organisations. Maintaining a diversity of staff, paying attention to the needs and expectations of users and frontline staff, and promoting formal creativity techniques are all valuable tools to this end.

- Managing risks and incubating new ideas means that there is a need for prototypes, as well as the willingness to invest time and resources for their evaluation. The replication of successful pilots and prototypes is often achieved centrally through legislation, or through the dissemination of evaluations, but in contrast to these 'idea-push' models, the private sector literature has emphasised 'diffusion' rather than dissemination.

- In the public sector it is unlikely that organisations will expire if they do not develop new ideas. In the absence of the profit motive it is essential to provide other incentives for individuals and organisations, such as greater recognition of success amongst one's peers.

- Particular barriers to innovation that must be overcome in the public sector may include a culture of risk aversion, and a focus on short-term delivery pressures, both of which can hinder organisational development and progress.

- Whilst incremental innovations can have some success without the need for policy or legislative modifications, systemic changes are often required in order to create higher levels of successful innovation. This may mean radically reducing the number of targets and planning and monitoring requirements as this would create freedom for creative thinking and an examination of other possibilities. For example, aligning funding streams with improvements in performance and outcome would act as a stronger incentive.

- This is a working paper, and we welcome any comments and contributions you may have, which may be sent to su_inovation@cabinet-office.x.gsi.gov.uk or the address on the cover sheet.

2. **Definitions and scope**

2.1 We define innovation as ‘new ideas that work’. To be more precise:

> “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”

2.2 The majority of innovations do not attract headlines. They are relatively minor changes to existing services or processes: for example, using ICT to handle school finances, or introducing a new technique into hospital space management. On their own they rarely change how organisations are structured or the relationships and dynamics within or between organisations. But they are crucial to the relentless pursuit of improvement in public services, to the tailoring of services to individual and local needs, and to value-for-money. Successful organisations are generally fertile of innovations at this level, allowing them to stay ahead of ‘competitors’. Such innovations are labelled *incremental*.

2.3 Less frequently, new services are developed (e.g. Diagnostic and Treatment Centres, LearnDirect or Surestart) or fundamentally new ways of organising or delivering a service are established (*e.g.* online tax returns, distance learning, day surgery instead of in-patient surgery). Organisations that generate or adopt these innovations may achieve marked improvement in performance in relation to others in their sector, may have significantly different modes of working and can alter the expectations of customers and users, but the overall dynamics of the sector remains unchanged. Such innovations are termed *radical*.

2.4 From time to time, major innovations develop, 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. The development of printing, electrification and mass production are examples from previous eras: information and communications technology (ICT) – is seen by many as the enabling technology of such innovation in the current period, and bio-technologies may have similar impacts for healthcare and related sectors. Typically they take decades to have their full effects, and for the innovation to be fully exploited. These are called *systemic* or *transformative* innovations. They require fundamental changes in organisational, social and cultural arrangements.

2.5 Systemic innovations can also be driven by changes in mindsets or new policies. Welfare to Work or a primary care led NHS are examples. They entail constructing different relationships between users and services, new institutions and relationships between institutions, new funding regimes, major alterations in governance and accountability, and, not infrequently, a redistribution of rights and responsibilities among the public, managers and professionals.

2.6 Although these types of innovation – incremental, radical, systemic – can originate at different levels – local, cross-organisational, national – government departments have three inter-related policy roles with respect to innovation:

- Policy innovation: new policy directions and initiatives
- Innovations in the policy-making process
- Policy to foster innovation and its diffusion

2.7 In exploring these we also make a distinction between 'top-down' innovation (*e.g.* the National Literacy Strategy) where a specific change is driven through the delivery system by prescription, regulation and support and 'bottom-up' innovation where government enables and facilitates the development and diffusion of an innovation which originates in an organisation or network within the delivery system.

2.8 Too often, discussions of innovation focus on the origination and generation of innovation. At least as important, and a major focus of this paper, are the mechanisms and processes by which innovations are implemented, and adopted and adapted by other organisations – diffusion or dissemination.

3. Why is innovation important to the public sector

3.1 Effective government and public services depend on successful innovation – to develop better ways of meeting needs, solving problems, and using resources and technologies. Innovation is sometimes seen as an optional luxury or an added burden. It should be seen as a core activity

- to increase the responsiveness of services to local and individual needs;
- and to keep up with public needs and expectations

3.2 The practices, structures, cultures and modes of operation of public services, government departments and agencies were formed in a time when Britain's population was relatively homogenous, stratified by class, comparatively static and, to a large extent, lived in 'conventional' households. Increasingly, it is highly diverse, multiply stratified, mobile and in a growing variety of living arrangements. "One size fits all", with the implication that everyone should receive the same service, if it was ever appropriate, is ill-suited to the wide variety of demands, needs and aspirations of individuals and communities in the 21st century. Additionally, private sectors in banking and financial services, in fashion and retailing, in media and music have accustomed people to 24/7 personalised provision which harnesses new technologies. For public services to keep pace, high levels of national and local innovation are required,

To contain cost pressures, and increase the efficiency of public services

3.3 Without innovation public services costs tend to rise faster than the rest of the economy.[1] Without innovation the inevitable pressures to contain costs can only be met by forcing already stretched staff to work even harder.

To improve outcomes

3.4 Although considerable progress has been made in improving the outcomes of public services, *e.g.* reducing crime levels and unemployment, and raising educational attainment, most public services practice is far from optimal. There remain major challenges, *e.g.* in transport, harm caused by drug usage, marginalised communities, where innovations in policy, provision and practice will have a key role to play.

> "The UK has traditionally had one of the highest rates of social innovation of any country in the world"
>
> Bill Drayton, Ashoka

3.5 There is a widely held assumption that the public sector is inherently less innovative than the private sector. Imputed reasons include a lack of competition and incentives; a culture of risk aversion and bureaucratic

[1] Reasons for this include the lack of competition in the public sector and 'Baumol's disease', where gains in labour efficiency tend to lag behind gains in capital efficiency (the public sector is disproportionately subject to this due to the nature of its service provision).

conservatism; a workforce which is unresponsive to, and unwilling to change. However, there is a strong history of public sector innovation. This ranges from new clinical and teaching practices to new organisational structures (*e.g.* the NHS, the BBC), to major infrastructure developments (*e.g.* the Joint Academic Network (JANET) in higher education, the National Grid for Learning for schools) and stimulus for fundamental technological breakthroughs like the Internet and the World Wide Web.

3.6 Over the last four decades a substantial body of empirical, theoretically-informed research has developed on innovation in the private sector (see, for example, the work of the Science Policy Research Unit at Sussex University and of Policy Research in Engineering Science and Technology (PREST) at the University of Manchester). But there is a dearth of high quality research on innovation in the public sector. A key question is how transferable understandings, insights and approaches are.

3.7 In the private sector, the main motivation for innovation is the need to maintain or increase profitability, which in turn provides an incentive to innovate to cut costs, improve market share and to create new products and services. The public sector has some parallel motivations but value in the public sector is different from value in the private sector, and can be more complex and more difficult to measure. It includes some readily quantifiable outcomes (such as less crime, poverty or violence), and some 'softer' outcomes such as the quality of services and trust between service providers and users (see the Strategy Unit discussion paper on the creation of public value)

3.8 Among the conditions which research has indicated affect the inventiveness of organisations in the private sector are:

- structure of the sector (*e.g.* the nature of competition, degree of market concentration, regulation)
- management (*e.g.* degree to which innovation is a formal goal, ability to create space for innovation, focus on outcomes)
- rewards (*e.g.* bonuses, property rights, recognition)
- culture (*e.g.* attitudes to risk, learning from failure, encouragement of radical thinking)

3.9 Some of the most consistently innovative organisations (*e.g.* Unilever, Shell) do not focus on innovation as such. Instead, they focus on clear outcomes, supported by the right organisational cultures, rewards and methods that ensure innovation is pervasive.

Case study in private sector innovation

BP has changed radically over the past 10 years, from a hierarchical monolith, employing some 129,000 employees, to a smaller more focussed organisation of about 53,000. The CEO, Lord Browne, has built a very flat, team-based organisation based around processes rather than tasks or hierarchies. "Processes linked to a purpose are powerful at changing behaviour because people can see what they are aiming for."

When an oil field was discovered close to Poole Harbour, there was a significant technical challenge of accessing the oil without disturbing an area of Special Scientific Interest. The 'brute force' solution of creating an artificial island in the harbour and drilling from there was rejected, and eventually the solution of drilling horizontally from an existing on-shore locations was developed. The technical innovations required for drilling at the Wytch Farm oil field displayed a single minded focus on solving a particular problem that arose from external pressure through open learning with another organisation with complementary skills (in this case Slumberger), where the rewards for success were high, but the possibility of failure, and ruining one of their wells was also accepted.

One of the few significant surveys[2] of innovation in the public sector indicated that innovation:

- is initiated by front line staff and middle managers (50%)
- is not a response to crisis (70%)
- cuts across organisational boundaries (60%)
- is motivated more by recognition and pride than financial reward

3.10 Arguably, those innovations which are a response to crisis, manifest failure, or awareness of potentially acute problems have tended to be organisational in nature, rather than process or service innovations. The creation of the Food Standards Agency or the Financial Services Authority, the re-organisation and melding of the benefit and employment systems, and the setting up of Primary Care Trusts are all responses to problems with the systems they replaced.

[2] S Borins *The Challenge of Innovating in Government* February 2001

4. Learning by example: some case studies

4.1 As indicated in the previous chapter, the public sector, contrary to some perceptions, has been rich in innovation. Before considering a general framework for fostering successful innovation, we identify here some key learning points that can be extracted from striking past and current examples.

The Open University

- A major innovation of the 1964-70 Labour Government
- Massively expanded participation in higher education through bringing in new students – adult, not necessarily pre-qualified, part-time students
- Used new mode of delivery exploiting established technologies: non-residential, supported self-learning, radio/TV, printed materials and summer schools
- Resisted and scorned – opposed and ridiculed – by several vice chancellors, other HE interests and sections of the media
- Now the largest UK provider of part-time HE, and acknowledged world leader in distance education

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- Simple idea: nurses plus telephones giving round-the-clock access to health and healthcare advice – combines old elements in new ways
- Migration path to new technology (Internet access) as user acceptance increases
- Highly popular, but what impact? Has it taken pressure off or added to pressures on other parts of the health system? Created new demands – the 'worried well'?
- Is there clarity on what are or should be its measures of success?

SureStart

- A cross-cutting programme for the unified delivery of childcare, early education and health and family support
- Clear outcome goals: multi-agency, problem focused
- Has provided framework for bottom-up (local) innovation on complex issues
- Pathfinders used to speed understanding, refine proposals and generate new ideas
- Beginning to make major impact

The National **Literacy** *Strategy*

- Top-down innovation
- Firmly based in research and evaluation evidence
- Rigorous implementation plan with clearly assigned responsibilities throughout delivery chain (from PM to teacher in classroom) and high quality support and development materials
- Resulted in largest-ever five-year rise in literacy standards

Collaboratives

- Health 'collaboratives' are sponsored by the NHS Modernisation Agency
- Take a whole-systems view of the treatment and needs of a particular user group
- Bring together contrasting occupational and disciplinary perspectives across organisational boundaries: a diagonal slice through the thousands of people working on cancer
- Create and legitimate space for thinking, trialling and disseminating new modes of service delivery

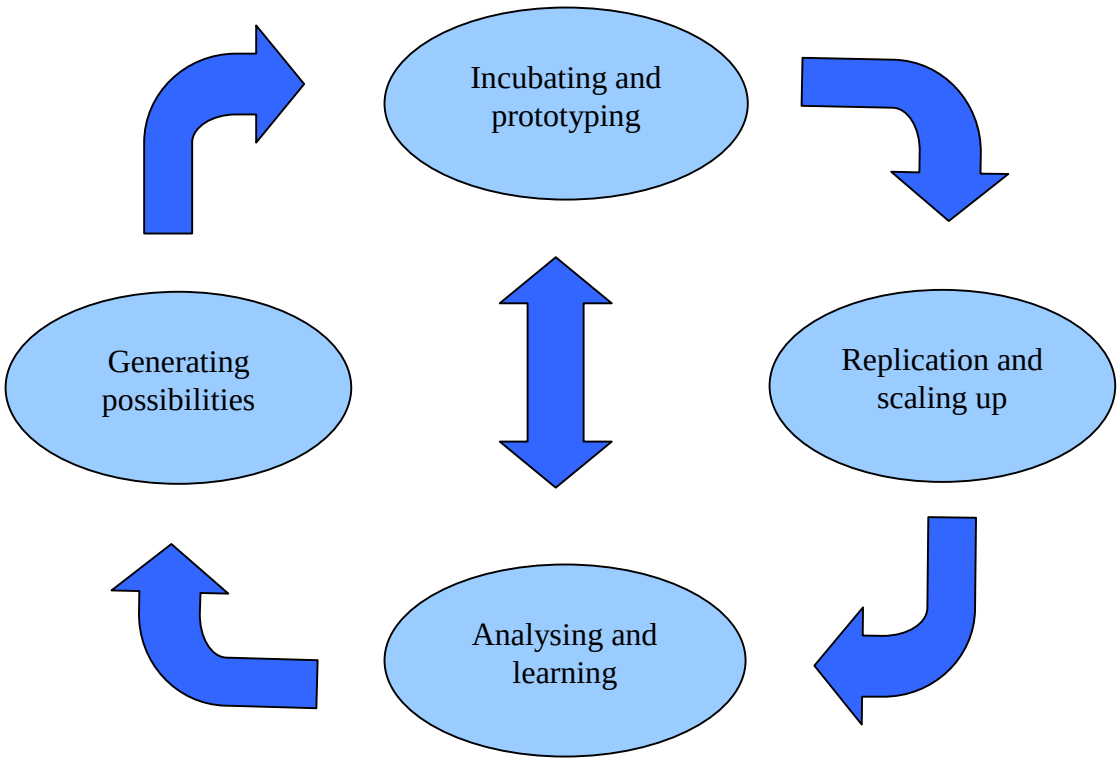
- The Construction Best Practice Programme identifies, publicises and supports the use of improved business and management practices for the construction industry.
- It is funded by the Department of Trade and Industry and is steered by the Government and the Construction Industry
- It provides a unified framework for the establishment of best-practice and ensures that innovations don't remain isolated, but are appropriately disseminated throughout the industry
- Results have been positive: 30% fewer projects are reporting construction defects, 15% more projects are finishing ahead of schedule and budget and the average value added per employee is £10,000 more than the industry average. (http://www.rethinkingconstruction.org/rc/publications/reports/Rethinking_Construction_2002.pdf)

West Midlands Ambulance Service NHS Trust

- West Midlands Ambulance Service NHS Trust provides emergency ambulance services and patient transport and is host to NHS Direct Birmingham, Black Country and Solihull. It received a three star rating in the NHS performance rating of Ambulance Trusts for 2001/02.
- It has become celebrated for its development of innovative services such as: health advice and information through NHS Direct; putting paramedics on bikes; message handling and co-ordination services provided by First Response a system developed by WMAS; and Capacity Management services to assist hospital admissions, and software design.
- All of these innovations have been driven by the need to improve/reduce response times to meet the centrally set target of 75% of life threatening calls to be reached within 8 minutes. WMAS has achieved 76% in 2002. WMAS has achieved a high degree of operational flexibility in the provision of its core services, and, as the WMAS Annual report states: 'Integral to the process has been the development of a blameless culture encouraging staff to report concerns openly.'

5. **A framework for fostering innovation**

5.1 A better understanding of the process of innovation can illuminate where there is room for improvement and where there are blockages. From the above examples and from the research literature we have formulated a framework to help understand how to foster innovation.



5.1.1 In the following four chapters, we discuss and outline some specific approaches in each of the main elements of the innovation process:

- generating possibilities – how can we stimulate and support ideas for innovation?
- incubating and prototyping – what mechanisms are there for developing promising ideas and managing attendant risks?
- replicating and scaling up – how can we promote the rapid and effective diffusion of successful innovation?
- analysing and learning – how should we evaluate what works and what doesn't to promote continuous learning and improvement?

5.1.2 Each element of the process draws on different skills, resources, organisational methods, leadership and cultures. As shown in the above diagram, the process is not linear. For example, analysing and learning from current successes and failures can generate possibilities and suggest methods of incubation and prototyping. The simplicity of the above diagram disguises the complexity and serendipity of innovation in the real world. "The process of innovation (is)

lengthy, interactive and social; many people with different talents, skills and resources have (to) come together."[3]

5.2 Generating possibilities

5.2.1 Many of the examples of more radical or systematic innovation – such as the creation of the NHS in the 1940s, and the privatisation of utilities in the 1980s - have been driven by Ministers. Manifestos and political commitments often provide the broad frameworks that encourage a flow of new ideas, however, public organisations cannot simply depend on politics as the main source of new ideas. In the past many successful innovations have been generated internally, and, as a rule, those organisations and sectors that fail to generate new possibilities will be vulnerable to stagnation.

5.2.2 Most bureaucracies find innovation difficult and most tend to see new possibilities, particularly radical ones, as disruptive, and therefore often suppress them. As a result, organisations that are seeking to improve innovation usually need more systematic methods for generating possibilities.

Intensive attention to the views of users, frontline staff and middle managers

5.2.3 If, as research suggests, half of all innovations are not initiated by the top of organisations, it is important to have robust processes for researching and listening to what users and front line, new and younger staff say (and complain) about ways of working, services and their possible improvement. Although not all staff will be innovative – indeed some will be resistant to change – encouraging them will, over time, provide a stock of new ideas and can be a powerful way to identify new needs and alternative possibilities. For example, the drive to integrate welfare services into one-stop shops with a personal adviser for every claimant came from listening to the annoyance of welfare recipients with separate functions, offices and schemes.

Ensuring a strong diversity of staff and exploiting difference

5.2.4 Innovation depends on the ability to see things differently. Organisations whose staff are diverse in terms of background and ways of thinking – that bring together strongly contrasting disciplinary and professional perspectives - are more likely to be innovative.

"Innovative thinking and action can flourish in conditions of heterogeneity and even constructive conflict"[4]

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[3] C Leadbeater *The man in the caravan and other stories* … Improvement and Development Agency, 2003. This book contains many illuminating case studies of innovation in local services

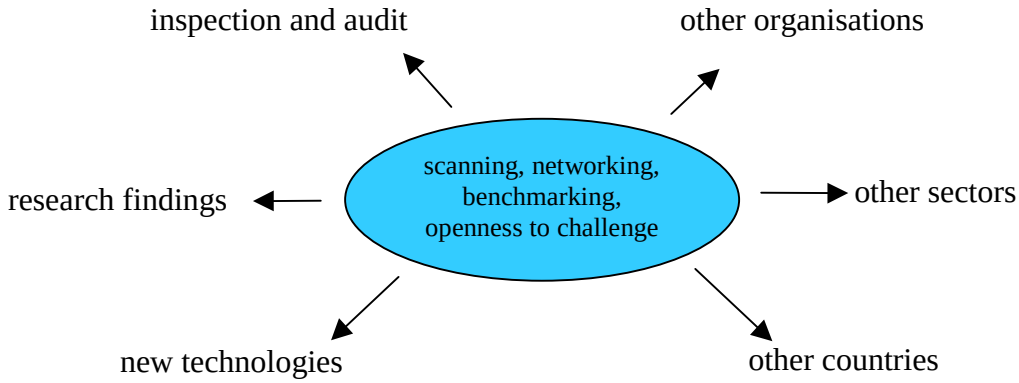
[4] J Benington & J Hartley "*Inter-organizational collaboration for knowledge generation and application between academics, policymakers and practitioners*" Warwick Business School, Apr 1999

5.2.5 People from the airline industry have helped rethink flows of patients through hospitals. The insights of community activists from Asia suggested micro-credit schemes as a way of tackling poverty in UK cities. IT and software companies have recruited anthropologists and dramatists to create breakthroughs in interface technologies. This diversity often creates relatively high levels of abrasion or creative tension: a tension whose management is not easy or comfortable.

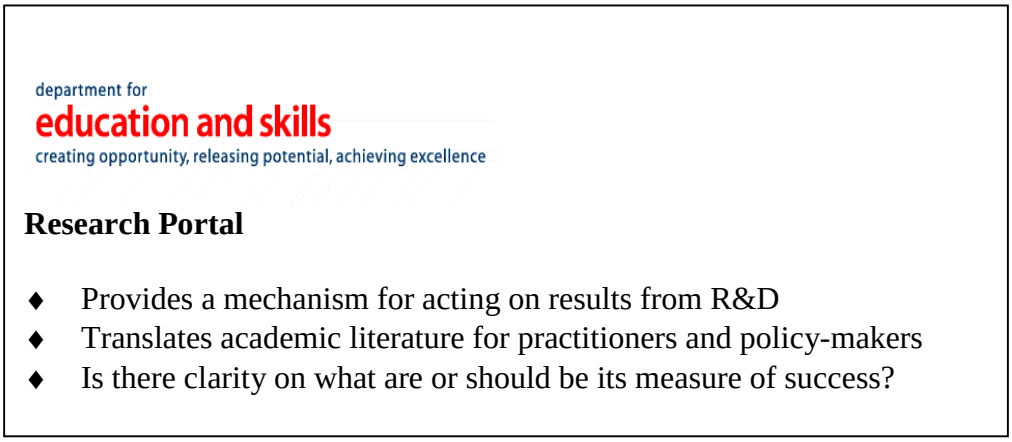
Constant scanning of horizons and margins: learning from others

5.2.6 Individuals and organisations generate possibilities for innovation by observing and reflecting on what others are doing and thinking, and by benchmarking themselves against good practice - wherever it might be found. Systematic scanning can identify promising ideas.

5.2.7 Change often originates on the margins of society and from the experience of other countries. For example, hospices pioneered new ways of looking after the terminally ill; restorative justice models - which bring the perpetrators of crimes and victims together - originated with the Maoris in New Zealand, before being taken up first in the New Zealand criminal justice system and then in the UK. And Britain's Welfare to Work programme was adapted from similar policies and initiatives in Scandinavia and the US.



Some of the different areas scanning might focus upon



The DfES Research portal provides an example of scanning in practice

Developing the capacity for creative thinking

5.2.8 Formal creativity techniques help organisations and individuals to suspend judgement, linear, rational thought, and their proven knowledge (the things which helped them adapt in the past) to generate the unexpected. There is now a very wide range of methods in use for doing this, including fiction, role playing, imagined worlds, 'systematic inventive thinking'[5] and the six hats techniques of Edward de Bono. Their use remains more common in the private sector than in public organisations, and there are some cultural barriers to their use in more traditional and hierarchical organisations though some governments (*e.g.* Denmark and Singapore) are deploying them effectively. Cleverness is not the same as creativity.

Working backwards from outcome goals

5.2.9 Methods which work backwards from outcomes rather than forwards from existing policies, practices and institutions often generate a much wider range of potential options. For example, analyses of how to achieve crime reduction which begin with a blank sheet of paper are likely to arrive at very different conclusions from ones which start with the existing institutions of police, prisons and probation services.

Creating space

5.2.10 Day-to-day delivery pressures often crowd out the time for thinking about and developing the very innovations that could alleviate the pressures. Creating time (*e.g.* through awaydays or 'golden hours') and physical and organisational space for structured and informal discussions for groups and

[5] J Goldenberg *et al* "Finding your innovation sweet spot" *Harvard Business Review* Mar 2003, pp 120-129

informal teams is critical[6]. The Commission for Architecture and the Built Environment (www.cabe.org.uk), Schoolworks www.school-works.org and Prisonworks are encouraging the design of built environments to foster innovation and improve services, and to support team working and the development of shared communities of ideas.

Breaking the rules

5.2.11 There is a need to develop a dissident culture in which organisational rule-breaking is encouraged and managed. This is not a straightforward process- it is a significant management challenge in both large and small organisations. Innovation means breaking rules and new discoveries often depend on suspending logic. Spaces can be created in which permission is given for experiment: 'skunk works' in big US firms and policy zones in the British public services are examples of these. The Education Act 2002 is another example. It allows schools to apply to have any rule suspended if they can make a reasonable case that this will improve results – an echo of the Empress Maria Theresa's famous medal for officers who turned the tide of battle by disobeying orders.

Competition

5.2.12 NASA's most famous innovation – the manned landing on the moon – was the result of competing teams, one of which ended up with a radically different approach involving a small landing craft.

5.3. Incubating, prototyping and managing risks

5.3.1 Many good ideas start half-formed, half-baked, crude or naïve. They are often strongly opposed by powerful vested interests (the Open University was a striking example) and can be easily killed off by bureaucratic procedures and premature analytical criticism. Equally, not all ideas for innovation are good ideas – perhaps only 1 in 10 or even 1 in 100 are worth developing. Hence, organisations need selection rules for deciding which ideas merit further exploration and support. These 'rules' might include evidence that:

- the innovation is likely to succeed (is the problem the innovation is designed to address well-formulated? have similar innovations been tried elsewhere?)
- there is a clear plan for how the idea can be developed; and

[6] The effectiveness of formal 'innovation units' in organisations is questionable. They can have a temporary catalytic effect in organisations that are traditionally not innovative. But equally they risk 'innovation' being marginalised rather than seen as part of mainstream activity. Over time such units in both the public and private sectors have an inadvertent tendency to bureaucratise and hence stifle the innovation process.

- the potential benefits are commensurate with the development costs.

5.3.2 However, if the selection rules are too tough, innovation, particularly in organisations without a strong history or culture of innovation, is likely to be stifled.

5.3.3 In general, the more radical the innovation the higher the level of risk, and the greater the possible benefits. Private sector innovations may have economic and employment consequences, and, in some cases, significant public health and safety considerations. But the risks of public sector innovation are potentially greater:

- Schooling has long-term impacts on an individual's life chances;
- hospitals deal with life threatening and life determining conditions; and
- care services have responsibilities for vulnerable children.

Additionally, unlike companies, public bodies often face intense political and media scrutiny of proposals before ideas have been fully developed, adding to the disincentives to innovation.

5.3.4 Hence, innovation in the public sector requires high quality risk management and safe spaces in which to test and develop promising ideas. (For further discussion of risk management issues see the Strategy Unit report *Risk: Improving government's capability to handle risk and uncertainty*, November 2002). The lack of adequate testing can be very costly – as the nation-wide introduction of the Community Charge, and, more recently, problems surrounding the operation of Individual Learning Accounts have demonstrated.

5.3.5 The process of innovation, therefore, typically involves a stage in which ideas are turned into more viable prototypes which can be tested. This requires champions willing to invest at least some resource, and organisational structures for designing, implementing and evaluating them.

Safe spaces

5.3.6 Pathfinders, pilots, controlled experimentation and 'zones' are 'safe spaces' for managing risks within defined parameters.

Pilots

5.3.7 Over the last two decades, 'pilots' have increasingly been used to test out new ideas and policy proposals. For example, literacy and numeracy pilots, electronic curfews for offenders, and training and testing for the European Computer Driving Licence in the NHS. Most recently, pilots of alternative voting mechanisms – e-mail voting, postal voting only, text messaging, etc – were tested in local elections.

5.3.8 The Earnings Retention and Advancement (ERA) demonstration project is designed to test measures to improve the retention and advancement of workers in low earning and low status jobs and is probably the most sophisticated pilot yet designed in the UK. It is testing out the impact and best forms of delivery of a range of tools including personal advisers, tax incentives and training bonuses, using randomly assigned client groups

5.3.9 One problem for piloting and testing specific to the public sector is that of universality of application, whether laid in legislation or simply on the grounds of fairness. For example, trialling new (and intentionally better) services can be seen to disadvantage those left out. The massive trial of new and old mental health services undertaken in Southampton in the 1970s might not be feasible now. In what has broadly been a successful trial, there was some criticism in the recent Education Maintenance Allowance (EMA) pilot that young people in neighbouring areas had differential access to the scheme (albeit, criticism that arose because of the popularity of the pilot scheme). However, examples from drugs research and trials demonstrate these difficulties can be overcome, for example, by preparedness for implementation of a change as soon as it is proven to be successful in a pilot or test - or the converse.

5.3.10 A review of pilots undertaken by the GCSRO has confirmed their usefulness in the right circumstances: where the time-scales are right (a reasonable link between actions and results); a readiness to respond to results, including funds for scaling up; and sufficiently clearly defined models. The review also pointed to some of the necessary limitations, for example the requirement to 'freeze' a design in order for results to be meaningful.

Pathfinders

5.3.11 Some of the limits of pilots have prompted more use of pathfinders, particularly where there is strong political pressure for action. The private sector has also recently emphasised fast-tracking prototype development as a way of quickly de-bugging ideas. Recent examples of pathfinders include:

- The New Deal model which was initially implemented in a small number of areas several months ahead of nation-wide implementation. This made possible quick learning about potential pitfalls;

- Surestart is another example of a pathfinder approach. A clear set of organisational principles was defined and levels of funding identified. An initial set of partnerships was supported - usually run by voluntary organisations - to operate services. Their experiences and lessons were quickly tracked to help a larger group which was established a few months later.

5.3.12 Prototyping and piloting become more complex the larger the system and the more interconnected its elements. Two recent examples illustrate this. The new emissions trading system was launched in London in 2002 and has the potential to become a critical part of reducing CO_2 emissions. However, its success depends on a wide range of factors, including the response of industry,

international negotiations and the response of other trading centres (*e.g.* Chicago). A very different example is the Connexions service providing holistic support for teenagers, which was launched with coverage of about 10% of the country, and now covers 100%. Its success depends critically on the behaviour of other agencies – both public ones such as youth offender teams, social services and the NHS, and private ones such as the consortium providing a smart card for 16-18 year olds.

Zones

5.3.13 The Employment, Education and Health Action Zones were deliberately designed to suspend some of the rules constraining local agencies and managers. In some cases these specifically tested out alternative models (such as the Personal Job Accounts in the Employment Zones); in others they were meant to operate as sources of new practices which could then be replicated more widely. These are designed to provide a safe space for experiment. One criticism of their operation was that they were not given long enough to develop, and there was insufficient monitoring to identify promising ideas.

Incubators

5.3.14 Good incubators provide money, advice and general support, and freedom from excessive external pressure and rules. Within the private sector, 'incubators' are fairly common – particularly in venture capital. They provide seed capital, business advice, technology and infrastructure support and space to allow ideas to develop (and in return seek a high share of high returns). Other examples include "new products" departments in manufacturing firms, often working closely with the marketing departments.

5.3.15 The Singapore government, for instance, has created an incubator called the Enterprise Challenge. The incubator supplies small amounts of funding and support for ideas which "have the potential to create new value or significant improvements to the delivery of public service"[7]. Crucially, these ideas can be submitted by anyone, or any organisation, openly inviting public involvement and entrepreneurialism in government affairs. Similar incubators, such as Community Partners in the US, provide support mainly for charitable and voluntary sector entrepreneurship.[8] The UK Office of the e-Envoy has established an incubator for new e.government initiatives. Partnerships UK was set up to provide a "venture capital" fund for new approaches to service delivery with the private sector. Similarly, the new Schools Innovation Unit[9] in the Department for Education and Skills and the Department of Health's Modernisation Agency both will act in some measure as incubators for new approaches, which may not fit the rules as they currently exist.

[7] www.tec.gov.sg
[8] www.communitypartners.org
[9] Department for Education and Skills *Schools Achieving Success* The Stationery Office, 2001

Modelling

5.3.16 In some fields, the costs of developing working prototypes are very high. In these cases modelling methods may be more appropriate. The Performance and Innovation Unit report Adding it Up: Improving Analysis and Modelling in Central Government January 2000 set out how modelling could be used more extensively to test potentially promising ideas at low cost. Further guidance can be found in the Strategy Unit Survival Guide here

5.3.17 There is a long history of testing out potential models in conditions that approximate to reality: for example, building a 'model office' to test the then Department of Social Security operational strategy for computerising benefit payments.

Simulations

5.3.18 Most complex policy proposals involve too many variables and too many aspects that involve human behaviour to be formally modelled. Open, behavioural simulation is a way of capturing this complexity and safely testing innovations.

A core study in simulation

'Rubber Windmill' was a simulation, designed and facilitated by the Office for Public Management, of the proposed NHS internal market reforms in the early 1990s. Key messages from the simulation included:

- If purchasers compete for limited health services in a market where volume and budgets are relatively fixed, quality will suffer
- Financial stability is essential to the success of the internal market. The contracting process is especially vulnerable to cuts in funding.
- Quality control cannot simply be left to the contracting process. Monitoring may prove difficult, and under financial pressure, both District Health Authorities and hospitals may have other higher priorities.
- Managers will need improved skills in risk and change management as well as more effective information and communication systems.

Controlled experimentation

5.3.19 For problems which have appeared intractable to current or past policies, or in service areas where overall performance is not satisfactory and where there is little or no evidence on the 'best' way forward, it may well be appropriate to

deliberately set up a series of controlled experiments trying out and comparatively evaluating different approaches.

Funding for early development

5.3.20 Most innovations require financial support to turn ideas into prototypes. Formal R&D budgets and innovation funds are possible mechanisms though they carry the danger of innovation being seen as a marginal rather than mainstream activity.

5.3.21 A series of new funds have been established to support innovation, notably the Invest-to-Save Budget (ISB) and the Departmental Challenge Fund initiatives. A good example of an innovation funded by the ISB was joint working by ambulance, fire and police services in one area to share their communications and response facilities (an example which also highlights the extent to which the most valuable innovations tend to challenge existing organisational boundaries). While these are relatively new developments, their impact has been limited so far[10]. For example, a large part of the ISB was devoted to supporting developments in the DWP Welfare to Work Programme that, albeit new, were already part of the policy agenda.

The Invest to Save Budget

- The Invest to Save Budget is a fund for public sector entrepreneurs to try out new ideas in service provision, run a joint initiative by both HM Treasury and the Cabinet Office.
- It provides a funding mechanism for projects that are too risky for any individual partner to take on, but may provide significant gains to the wider public sector. £358 million has been allocated so far to an array of projects.
- The ONE project, comprising 12 pilot studies, was the largest ISB project receiving £79.5m and was started in June 1999 by the former DfEE. It brought together local staff of the Employment Service, Benefits Agency and those in local authorities administering Housing Benefit to provide a unified 'work-focussed gateway' for all people of working age who claim benefits—not just the unemployed.
- Much has been gleaned from the project, which has made it possible for people (about 10% nation-wide) to obtain employment information and advice and to claim the full range of working age benefits from one office that would previously have required three offices.

[10] NAO, *The Invest to Save Budget – Report by the Comptroller and Auditor General*, Nov 2002 http://www.nao.gov.uk/pn/02-03/020350.htm

Involving end-users

5.3.22 Whatever the mechanism for testing and developing new ideas, involving end-users early in designing and developing prototypes increases the likelihood of identifying and remedying flaws and weaknesses.

5.3.23 The above tools and approaches provide some ways in which the risks of innovation can be actively managed. But risk can never be totally eliminated. For there to be high levels of successful innovation in the public sector, there needs to be a tolerance of 'honourable' failure. This requires not just high-quality risk management within and across organisations, but accountability, audit and inspection regimes that are sympathetic to well-judged risk-taking and encouraging of controlled experimentation whether they succeed or fail. In the past, accountability and audit arrangements have made high risk but potentially high reward experiments problematic.

In 1999 legislation was enacted that allowed the Greater London Authority to introduce congestion charging. The Mayor of London and Greater London Authority introduced congestion charging for the central business district in February 2003.

- Would the Congestion Charge have been brought in without a Mayor?
- Would a national Minister 'experiment' with London?
- Is the risk-reward equation best handled where the scope of responsibility aligns with the boundaries of experimentation?

5.4 Replication and scaling up

5.4.1 If the pilot or prototype broadly works, the challenge then is to launch the innovation on a larger scale. This is when selection has to be most ruthlessly focused: only a small proportion of ideas and pilots deserve to be replicated. Formal evaluations, qualitative assessments, assessments of organisational capacity, and political viability all contribute to these judgements (though often the formal evaluations come too late).

5.4.2 Two further factors also need to be taken into account: Hawthorne effects and learning curve effects. In essence, Hawthorne effects are the label given to changes in organisational behaviour which result not from the innovation or pilot itself but from the fact that the innovative or piloting organisation (or relevant part of it) has been the subject of focus or attention. Conversely, learning curve effects are the changes in organisational behaviour (or, for example, understanding of customers or users) in the piloting organisation resulting from learning during the *process* of developing the innovation. In either case (or both) an organisation which simply tries to adopt the final innovation often fails to achieve similar levels of performance improvement as the originating organisation.

5.4.3 It is perhaps neither in generating possibilities nor in processes for developing and testing ideas where the public sector is weakest, but in finding effective ways of replicating, mainstreaming and scaling up successful pilots and prototypes. In general, Governments have relied on two sets of mechanisms:

- law, central direction and administrative command; and
- dissemination of evaluations of pilots, case studies and best practice

Both can be appropriate in particular circumstances but both have their weaknesses.

5.4.4 Central command and control methods can be effective where there is compelling evidence that the innovation is highly likely to increase performance, irrespective of context and locality, and where the available management and administrative levers are of sufficient power. A good recent example is the 'literacy hour'. Because of poor reading skills in many schoolchildren and adults, government specified one hour of reading teaching, and then required every school to follow it. The prototype was research-based, effectively designed, rapidly tested and then rolled out within the space of 12 months. It achieved a greater improvement of reading results than over any other equivalent period of time.[11]

5.4.5 Dissemination is most effective as a mechanism for replication where there is a strong expressed demand among the organisations targeted. For example, the pressure to cut the maximum time a patient is in an Accident and Emergency

[11] In other cases, scaling up may involve some diversification to fit local circumstances: the Youth Offender teams and Surestart are examples.

unit to four hours makes hospitals receptive to examples of how this has been achieved.

5.4.6 But both sets of mechanisms suffer from an implicit 'ideas-push' model of innovation: generate possibilities and then drive them through the organisation, service or system. This model was the dominant framework in early policy and studies on industrial innovation. For the last 40 years it has been under sustained and intensively empirically-based criticism. Research and experience has demonstrated the critical importance of 'pull' or 'pull-through' factors, especially being very close to customers and markets. Hence the literature on private sector innovation emphasises 'diffusion' and rarely speaks of 'dissemination'.

Incentives

5.4.7 In the private sector, these pull factors are relatively simple and direct. If company A innovates successfully, and company B in the same sector fails to follow suit, over time consumers drift to company A and company B loses market share, has declining profitability and, eventually goes out of business. These dynamics are relatively well understood by private sector employees, which increases their receptivity to change[12].

5.4.8 Quasi-market dynamics have been introduced in some public services through a combination of (limited) user choice and information on the comparative performance of different service providers. The power of choice - even in areas where there is a realistic possibility of exercising choice - as a driver of innovation is limited by the reluctance and difficulty in finding mechanisms for allowing public service *organisations* to fail (i.e.: 'go out of business') while ensuring continuity of public *services* to users.

5.4.9 Nevertheless, more could be done to incentivise the adoption and adaptation of successful innovation by individuals, teams and organisations.

Incentives for individuals and teams

5.4.10 Additional monetary reward is less powerful as a motivator for innovation in the public sector. Recognition, especially by peers, is more effective. The person or team whose innovation is adopted widely feels a sense of pride and contribution to public service and the creation of public value. The identifying of 'beacon' schools, hospitals and local authorities feeds on these motivations, as well as encouraging the lateral spread of good practice by creating networks around the best. Formal prizes and awards also have their place.

[12] Though it should be noted that there is increasing evidence that performance related pay can act as a disincentive to innovation, see, for example, J Day *et al* "Has pay for performance had its day?" *The McKinsey Quarterly* 2002, no 4

Incentives for organisations

5.4.11 While direct monetary reward to individuals may not be effective, giving organisations additional funding for having successfully adopted or adapted an innovation can increase motivation by providing extra facilities and opportunities for staff and users.

Peers

5.4.12 Managers and, particularly, professionals are more influenced by their peers than their seniors (or users). Hence, for example, the success of 'collaboratives' in the health service – bringing together growing numbers of managers and professionals to develop, adapt and implement innovations – and the 'Talking Heads' network of over 10,000 headteachers. The formation of these improvement-focused communities of practice help break down traditional professional boundaries and create the expanding lateral (rather than top-down) communications vital to the diffusion of innovation.

5.4.13 Ikujiro Nonaka has also suggested that middle management has a vital role in connecting the top of the organisation with the bottom - driving innovation and learning as *knowledge engineers*. Middle management has traditionally been thought of as a conservative force that stifles innovation in both the public and private sectors, but Nonaka claims[13] that it plays a crucial role in mediating between frontline staff and senior management when processing information and knowledge into workable new ideas and concepts.

Scale and innovative capability

5.4.14 While ideas for innovation can and do originate in different sizes of organisation and within a variety of sectoral shapes, there is a strong difference between the nature of sectors which foster high levels of *incremental* innovation and those which foster high levels of *radical* or *transformative* innovation.

5.4.15 Incremental innovation is likely to occur in sectors where a multitude of relatively small organisations compete in a cost-pressurised environment for customers or users who have access to standardised comparative information. In addition, the regulatory regime governing the sector has to be sufficiently permissive for the potential benefits for an organisation of innovating are not outweighed by the costs (risks) of non-compliance. The schools sector with local management of schools, the introduction of parental choice and the publication of league tables has some of these characteristics.

5.4.16 By contrast, sectors which display high degrees of radical innovation and are capable of implementing systemic and transformative innovation often comprise an oligopoly – a small number of large organisations – with a

[13] A dynamic theory of organisational knowledge creation. Ikujiro Nonaka. *Organization Science*. Vol 5. No 1, February 1994.

periphery of many small-scale providers and suppliers. Sectors with these characteristics include pharmaceuticals, software, retailing (*e.g.* supermarkets), media and aerospace – some of the UK's most consistently successful sectors[14].

5.4.17 The reasons for this are complex but centre on the need for scope (freedom to act) and scale. Large organisations can marshal and distribute the necessary quantity and variety of resources and expertise, can exercise considerable leverage on suppliers, can spread risk, can (re-)integrate diverse activities, initiatives, social and organisational arrangements, and have an interest in high quality across all their operating units to maintain brand reputation. Although monopolies (national, *e.g.* government departments or pre-privatisation BT, or local, *e.g.* LEAs), share some of these characteristics, the absence of competitive pressures and contestability lessen the drive for radical innovation.

A case study in radical innovation

- Learn Direct is a network of learning and online information services that was developed by the University for Industry in 1999 and principally provides Skills for Life, business and IT courses.
- Large economies of scale were achieved though the centralised electronic architecture used to lower the costs of running the system.
- Learn Direct was given the scope to respond to the course demands from customers, rather than having to provide a fixed course structure dictated in a top-down manner that risked being inappropriate for current or future customer requirements.

5.4.18 Generally, the more radical the innovation, the more necessary is scale and scope for effective trialling and implementation. For example, in education the combination of a monopoly state purchaser plus 25,000 schools has meant that while there have been important incremental changes brought about by using ICT, the transformative potentials of ICT have not been realised[15].

[14] While SMEs (small and medium sized enterprises) can, as many commentators note, often be innovative, their radical potential is more effectively exploited in oligopolised sectors where the rewards are higher and venture capital more abundant. There has been a long history of such capitalisation on the innovation of small firms by larger competitors in the software industry. For example, Microsoft has subsumed 29 small firms in the past 5 years

[15] An alternative to requiring scale is building systems (or sectors) with clear 'architectural rules' and high degrees of 'modularity'. See, for example, R Sanchez. *Modularity, Strategic Flexibility, and Knowledge Management*, Oxford University Press, 2000

Beware 'best practice'

5.4.19 One size seldom fits all. As discussed earlier (see page 4 – Why innovation is important to the public sector), public expectations are increasingly that services will be tailored to personal and local needs. And innovation takes place in highly differentiated organisational and local contexts. But there is a further reason for being cautious about the universalisation of 'best' practice. Even on the basis of robust evidence, standardisation reduces the ability of services and systems to innovate to meet future unforeseen and unforeseeable circumstances. A level of diversity is necessary for robustness against the future. For example, the widespread use of antibiotics in health care may have both created antibiotic-resistant conditions and inhibited the development of alternative approaches to disease prevention and treatment.

Change management

5.4.20 Key skills in scaling up or "spread" are also those of more general change management. For a discussion of these see the Strategy Unit's Strategy Survival Guide

5.5 Analysis and learning

5.5.1 As was indicated earlier in this paper, there is a dearth of high-quality research on innovation in the public sector. A number of major projects will start to remedy this situation such as the PREST project on innovation in the public sector, and the Kennedy School of Government programme**.** There has also been considerable progress in both the regularity and robustness of systematic evaluation of specific new policies and initiatives, including by inspectorates such as the Audit Commission, OFSTED, CHI and SSI. All too often these are concerned just with whether the policies and initiatives 'work' (produce the intended outcomes or outputs) rather than what works *in what circumstances and why*, and the cost-benefit analysis relative to other practices and interventions.

A deeper level of understanding and consequent improvements in practice could be achieved through a number of means:

Metrics for success

5.5.2 Clear measures and transparent measurement systems for assessing the success or otherwise of innovations are vital to robust analysis and creating cultures of learning. Areas in which appropriate and specific measures would need setting include:

- improvements in relevant outcomes
- service responsiveness to needs of individuals and localities; and
- reductions in costs for given set of outputs/increases in productivity.

5.5.3 The introduction of resource accounting, and some new initiatives such as developing measures of assessment based on the creation of "public value"[16] as well as expenditure, may help encourage both a more confident and a more realistic yardstick against which innovations in the public sector can be judged.

Real-time learning

5.5.4 Many evaluations, especially those relating to new policies or innovations with medium and long-term outcome goals, produce findings in a timescale that is not responsive to immediate delivery or political pressures. This has lead to the development of more real-time learning methods, including formative as well as summative evaluation. These are enabled by:

- the greater availability of real-time performance data to track successes and signal where problems are occurring
- developing interim markers of likely success, against which progress can be assessed[17].

[16] G Kelly, *Creating Public Value, an Analytical Framework for Public Service Reform*, Sept 2002
[17] see, for example, the Indepen/Bannock report: "Evaluation of New Ways of Working in Local Education Authorities", 2003

Peer and user involvement

5.5.5 The value of networks of peers, has already been discussed. Such networks can also play a critical role in learning from and supporting continuous innovation: the formation of real time learning communities around specific innovations or clusters of innovations – combining on-line discussion groups, face-to-face conferences and meetings, and research.

5.5.6 Equally, user involvement can bring added-value. The results of user surveys can be triangulated with formal performance data, and can identify important consequences of specific implications (for example, changes in the customer experience or satisfaction).

Trade-offs

5.5.7 Increasing user choice and contestability in public services poses particular challenges to evaluation. To be able to make a robust comparison between two different innovations, or between an innovation and current practice, each of them should be geographically separated and a local monopoly. Otherwise self-selection would make the comparison meaningless. But this stems choice and potential contestability.

Evaluation inhibiting innovation

5.5.8 Rigidly-fixed pilots and programmes may inhibit innovation. Formal evaluation requires that models are fixed, however in some areas it may be more useful for projects to adapt, learn and innovate in real time.

Double- loop learning

5.5.9 Processes and mechanisms need to be in place to analyse, evaluate and learn about the process of innovation more generally and how to spread understanding across organisations and across sectors – not just specific innovations.. Equally, how to spread understanding across organisations and across sectors. This highlights the importance of effective knowledge management systems and processes that capture knowledge on innovations both within and outside the organisation and facilitate further innovation and organisational learning.

Requisite variety

5.5.10 Nonaka describes[18] how the internal diversity in skills and experiences of the employees within organisations must match the variety and complexity of the

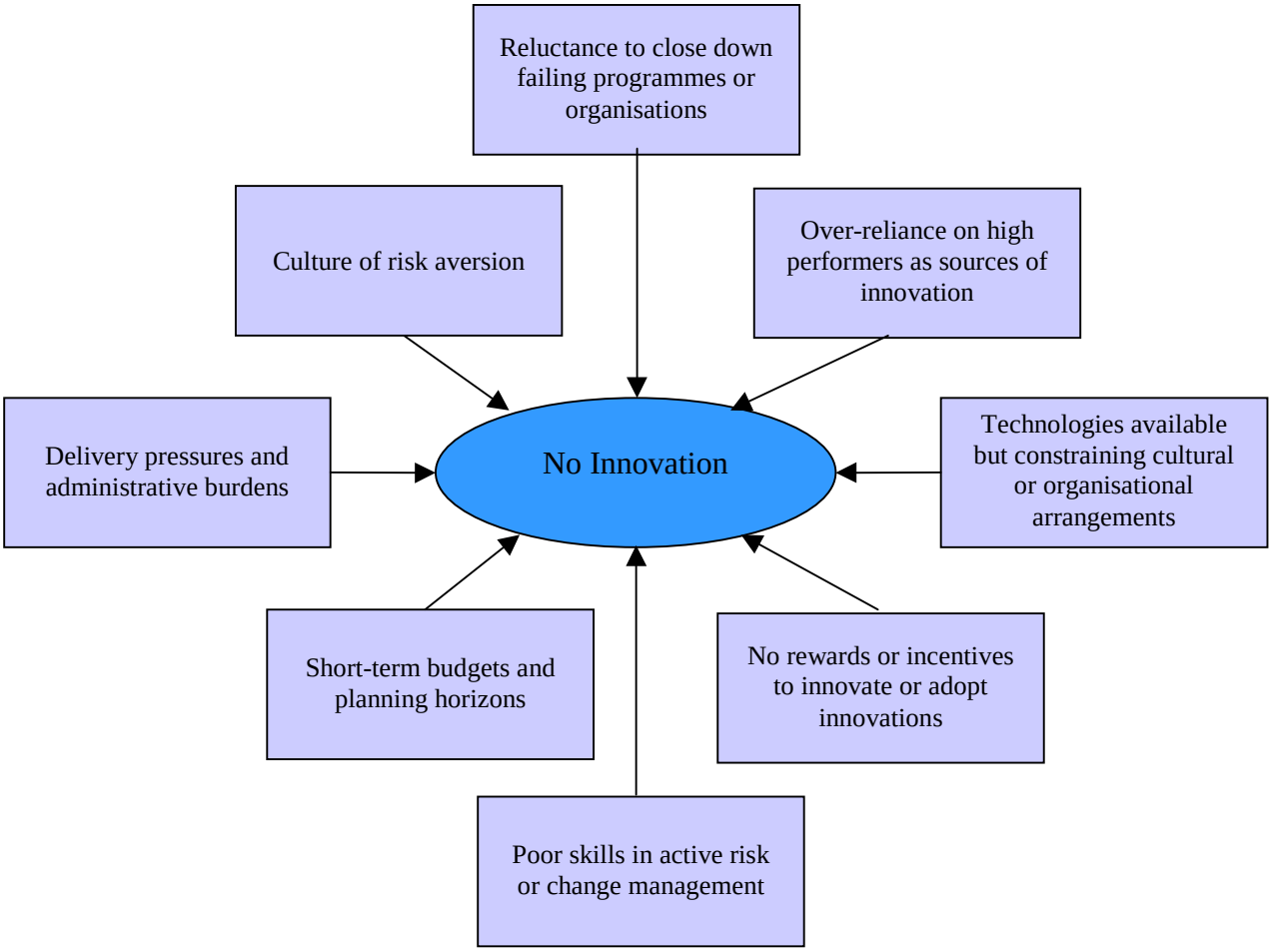
[18] Nonaka, I & Takeuchi, H *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation.* Oxford University Press, 1995

environment in order to deal with challenges posed by the environment. This diversity assists the organisation in dealing with myriad contingencies, but must be accompanied by flexibility and easy access to such pooled resources through efficient knowledge management.

5.5.11 All innovations can be valuable - the successful and not so successful – if lessons are learned and knowledge fed back into a continual loop of policy and service development. Successful learning organisations are aware of their past mistakes as much as they are of their successes. For the public sector a continuous stream of National Audit Office (NAO) reports has marked failure in large-scale business change IT projects, despite the existence of "lessons learned" reports.

6. Barriers to innovation

6.1 In previous sections of this paper, we have identified some methods and mechanisms for fostering successful innovation. Necessarily this has highlighted some barriers. In this section we pull together the discussion of barriers and suggest some further ways in which they may be overcome or reduced.



there are many potential barriers to innovation

Pressures and burdens

6.2 Most service managers and professionals spend the overwhelming proportion of their time dealing with the day-to-day pressures of delivering services, running their organisations and reporting to senior managers, political leaders, agencies and inspectorates. They have very little space to think about doing things differently or delivering services in ways which would alleviate the pressures and burdens.

Short-termism

6.3 These pressures are exacerbated by short-term budgets and planning horizons. Few innovative businesses would survive an obligation to break even every

year. And requirements for 2% or 3% efficiency gains per annum lead to less innovation than seeking, say, 20% or 25% over five years.

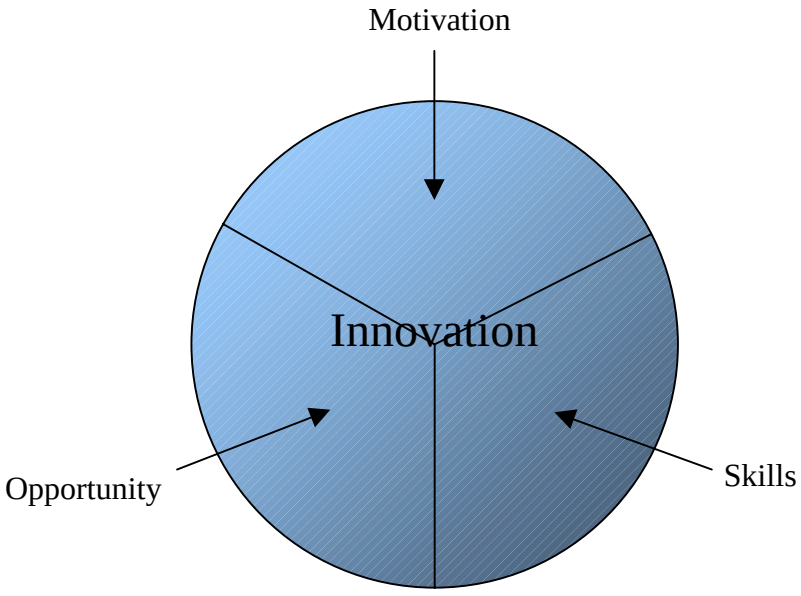
How short-termism inhibits radical innovation

The difference of strategy can clearly be seen within higher education. Where there were targets for efficiency gains of 2% per year, progressively, seminar group sizes were increased, student essay word lengths were cut (which reduces marking load), and the use of first-class post and peak-time phone calls were banned. This inexorably led to system exhaustion with efficiency gains being ever harder to achieve and a growing clamour for more resources.

In contrast, a group of vice-chancellors were asked what they would have done if set a goal of a 22% reduction in the ration of resources to students over 10 years. They reacted by suggesting models of planned transformational change: new models of learning and teaching, full exploitation of the potential of IT and a re-focussing upon institutional strengths. Such a perspective can only be encouraged by longer term thinking, yet the time horizons of administrations and ministers may work against innovations which involve short-term costs for longer-term gains.

Skills

6.4 Even where professionals and managers have the opportunity and motivation to innovate, a relative paucity of skills in change management and risk management can severely hinder or debilitate the innovation process.



There are three necessary conditions for innovation to flourish

Incentives

6.5 The civil service has traditionally had higher penalties for failed innovation than rewards for successful ones. Moreover, day-to-day business management and processes and the basic "people management" systems do not sufficiently recognise innovation, for example, in core competencies for recruitment, development and performance assessment. Some higher performance bonuses have now been introduced for individuals and teams; however their impact on innovation remains unclear[19].

6.6 Government policy has sought to strengthen incentives for innovation in the private sector through patents, trademark protection, the corporate tax regime (including R&D tax credits), employee share option schemes, etc. It might well be beneficial to experiment with methods of sharing with individuals, teams and units in the civil service and public service organisations some of the gains of their innovations.

Organisational arrangements

6.7 Innovation results from a combination of technological and organisational factors. Systematic innovation only comes about when organisations develop the appropriate alignment of culture, systems, management methods and processes that embed innovation in the fabric of the organisations.

Over-reliance on high performers

6.8 Although currently high performing organisations may produce innovations, there is considerable evidence (for example, Marks and Spencer or British Airways in the 1990s) that they can tend to complacency. Organisations in the 2nd and 3rd quartile of performance who are striving to equal the best, and start-ups and new entrants (for example, Next or EasyJet) are as likely or more likely to be important sources of innovation.

Dealing with failure

6.9 In business, organisations need to innovate – or die. In the public sector it is unlikely that organisations will collapse due to lack of innovation. Governments rarely close down failing functions and tend to set much higher standards for new programmes than old ones.

[19] for some of the difficulties of using incentives in the public sector, see S Burgess & M Ratto "The role of incentives in the public sector: issues and evidence", University of Bristol, May 2003

Risk aversion

6.10 The obligation to maintain continuity, the need to provide acceptable standards in key services and accountability to tax payers through Parliament and local authorities can induce a culture of risk aversion which impedes or blocks innovation. The focus of the media, parliament, National Audit Office (NAO) and Public Accounts Committee (PAC) tends to be stronger on new initiatives than existing programmes. High risk but high reward projects are treated in the same way as low risk but low reward ones.

"Any system of assurance that exists outside the normal management processes runs the risk of becoming a box ticking, compliance exercise that will not add value to the business *or promote innovation* and sustainable improvement. It will also duplicate effort, reduce empowerment and risk misalignment developing between reported and real positions."[20]

[20] R Nicholls, *Notes on Governance* Serco Government Services, Feb 2003

7. Fostering innovation: some prompting questions?

7.1 Based on the previous sections we present here a list of questions which government departments (and public service organisations) could use to assess how well they are doing in fostering innovation. This is not intended as a checklist or as a comprehensive monitoring tool, but as a prompt to thinking and action.

1 What is the R&D (research and development) budget? What financial resources are focused on investment in innovation?

2 Who monitors and assesses promising innovations? How are they supported, incubated and developed?

3 What is being done to encourage well-considered and informed risk-taking and rule-breaking?

4 If a new or junior member of staff has an innovative idea how does it get spotted, supported and developed?

5 Who is systematically scanning overseas practice? How is the information made available to all relevant people?

6 Are controlled experiments being used to tackle difficult problems?

7 Are there incentives, rewards and support for individuals, units and delivery organisations to adapt and adopt useful innovations?

8. **Systemic changes to foster innovation**

8.1 Many of the approaches, tools and mechanisms which we have suggested in this paper can be applied without policy or legislative changes. However to foster higher levels of successful and radical innovation more systemic changes may be required.

⇒ rather than being the author of innovations, Government might better see itself as responsible for creating the environment or conditions in which innovation can take place in the public sector, including encouraging the *lateral* diffusion of successful innovations

⇒ radically reducing the number of imposed targets, planning and monitoring requirements

⇒ aligning funding streams with *improvement* in performance and outcomes to incentivise, and create a more visible return on investment in innovation[21]

8.2 It is possible, to devise funding regimes which incentivise performance and innovation without perverse consequences (*e.g.* spiralling decline in resources for poor performers or those with severe demands). In general this requires rewarding *improvement* (on a moving average basis to smooth year-on-year fluctuations) rather than absolute performance.

⇒ reinforcing strong pull-through factors: increasing choice and contestability within public services and the public sector more generally

⇒ encouraging the formation of fewer, larger providers of public services

8.3 We have rehearsed key arguments for this in the *Replication and scaling up* section above. The traditional central pyramid structure of much of the public sector may need to be displaced by creating a small number of competing intermediaries. An additional advantage of this would be a set of providers with the scale, resources and expertise to rapidly take over failing and under-performing organisations.

⇒ creating a culture of well-judged risk taking and experimentation

8.4 While it is necessary to provide freedom and space for innovation, this, of itself, is not sufficient. Professionals and managers who have been used to operating in a culture of constraints and risk-aversion are unlikely to utilise freedoms that are offered until the surrounding culture - including auditing, inspection and regulatory regimes - facilitates it. Equally, many do not realise the freedoms they already have. For example, the DfES Innovation Unit reports that many of the bids they receive are asking for freedoms which are already available.

[21] In future editions of this paper we will explore the appropriate balance between using mainstream funding regimes and specific funds or budgets to support and incentivise innovation

We welcome any comments, criticisms on this paper. We also welcome case studies from both the UK and other countries, and would like to hear about relevant on-going research and networks. Please send any material or information to David Albury, in the Strategy Unit, at: suinovation@cabinet-office.x.gsi.gov.uk or Admiralty Arch, The Mall, London SW1A 2WH, UK

Appendix 1 Disposition towards innovation of different organisational types[22]

Broadly, organisations fall into one of five (strongly overlapping) categories – though, over time and especially through changes in leadership or major external pressures, they can change their category:

⇒ First movers or pioneers
⇒ Early adopters
⇒ Followers
⇒ Laggards
⇒ Resisters

First movers are generally characterised by possessing high degrees of creativity, a commitment to well-managed risk-taking (including learning from 'honourable' failure), and scanning other sectors, margins, technological developments and international experience. They employ people with a diversity of background and experience, welcome creative tension, constructive conflict and strongly contrasting views, display openness and tolerance and are organised in teams and "communities of learning"[23]. As pioneers they are capable of capturing profile and market share but also have to bear high costs of development and learning.

Early adopters are more cautious, carefully watching developments by first movers, but are quick, when innovations appear to be successful, to adapt and adopt them to their own organisational circumstances. They are generally strongly networked with other organisations in their own and adjacent sectors, their suppliers and customers (including funders).

Followers can often be found in 'benchmarking clubs' and among the first consumers of guides to good practice or users of web sites sharing information. They tend to be relatively risk averse and wait for innovations to be bedded down and their beneficial impact on organisations and users to be proved before seeking to introduce them into their own organisations.

Laggards generally lack internal innovative capacity and often require external pressures – threat to survival, contestability or take-over, overwhelming evidence of adoption of the innovation in the rest of their sector – before adopting an innovation. They focus on how their organisation or circumstances are different from others, without exploiting this difference to produce their own innovations.

Resisters are wedded to the existing way of doing things, see internal problems in their organisation or inadequacies in performance as stemming from external factors and are slow to recognise changes in the environments or markets within which they operate.

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[22] Further discussion of this typology and related issues can be found in F Damanpour *et al* "The relationship between types of innovation and organisational performance" *Journal of Management Studies* 26, 1989, pp 587-601; E Rogers *Diffusion of Innovations* Free Press, 1995; A Van de Ven *et al, The Innovation Journey* Oxford University Press, 1999

[23] Richard Florida's *The Rise of the Creative Class* is extremely illuminating on the importance of these characteristics in organisations and in cities and regions

Appendix 2 Role for ministers and political leaders

Without clear support from the top, most promising innovations are stifled. And without clear drive from the most senior levels of organisations, it will rarely be possible to create space for new ideas to develop, or for ideas to be pushed through to testing or implementation.

Leadership is also vital to counteract the very powerful tendencies towards inertia. The failure of any public service to radically reconstruct itself using IT is in part a consequence of failure of leadership and contrasts strikingly with private sector success in developing radically different models of retail, banking and work organisation.

Hence, elements of the role for ministers and political leaders in fostering innovation include:

- ⇒ setting and relentlessly communicating clear and aspirational outcomes for the organisations and areas for which they are responsible
- ⇒ creating and exemplifying a culture which encourages new ideas wherever they may come from
- ⇒ creating the legislative and policy framework to promote experimentation and piloting
- ⇒ supporting and defending experiments and high risk pilots
- ⇒ viewing national, regional and organisational devolution as 'laboratories of innovation'
- ⇒ galvanising others, championing and chivying promising innovations
- ⇒ developing visionary goals and driving them through (*e.g.* John F Kennedy's 'Man on the moon in a decade')

Appendix 3 User involvement in the innovation process