



WA Public Sector Innovation: Issues and Opportunities

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Ron J. McFarlane

Consulting
Research
Training
Support

Centre for Entrepreneurial Management and Innovation

Phone: +618 6488-3981

Fax: +618 6488-1072

Email: tim.mazzarol@uwa.edu.au

General Inquiries:

Email: admin@cemi.com.au

Website: www.cemi.com.au

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WA PUBLIC SECTOR INNOVATION: ISSUES AND OPPORTUNITIES

Ron J. McFarlane, Corporate Decisions (ronjmcfarlane@bigond.com)

ABSTRACT

Public sector organisations can embrace innovation through the integration and decentralisation of services, use of partnerships and via citizen engagement. The use of information and communication technologies (ICT) provides a means of facilitating these changes. Innovation must be supported within government agencies by senior managers and via the sharing of ideas. For the WA Public Sector to take advantage of the opportunity for innovation there must be several conditions met. A systematic approach to innovation is required and risk management plans implemented. Appropriate reward and incentives structures will need to be put in place and appropriate resources made available.

Key words: innovation, public sector management, Western Australia.

INTRODUCTION

The Western Australian Public Sector including Local Government has over 130,000 full-time employees. 79% of the workforce is employed by the 10 largest agencies. 75% of the largest agencies in the sector spend over \$1,421 per FTE on training, with medium sized agencies spending an average of \$1,090 per FTE. 73% of public sector employees (95,000) are based in the Perth metropolitan area which is around 12% of the total metropolitan workforce of 793,000 (Transport Department Master Plan 2006). The total public sector training market is estimated at in excess of \$150 million with the training investment per FTE growing 59% in the mean per centile and 72% in the 75th per centile (PSMO database 2004) from 1999 to 2005.

Public sector leaders are pre-dominantly male over 45 years of age, highly credentialed and increasingly studying business and management. (PSMO, 2003). In key observations about trends in public sector management it was claimed that economic influences of global economics and economic ideology had combined with new ways of management thinking in the late 20th century to profoundly affect beliefs about how public administration should be managed. (PSMO, 2001)

It was also claimed that governments everywhere are seeking more efficient methods of providing services under ever increasing cost and demand pressures. Concepts such as “flatter structures”, “contestability and competition”, “enterprise agreements” and “customer focus” have become associated with new styles of public management. The public sector workforce is challenged by the need to be more responsive and responsible for increasing efficiency and performance. Some of these challenges include the facts that:

- Public sector work is becoming increasingly complex and seamless in terms of the skills needed to serve a more sophisticated citizenry. Public sector work continues to include a high proportion of non-full-time workers and an increase in “virtual organisation” arrangements. “Joined up” government will be facilitated by and require new technological approaches to service delivery and a greater

integration of policy approaches. A more agile, flexible work force will be needed to deliver the services of tomorrow (PSMO, 2001).

- Innovation has been widely proposed as a leverage point for promoting the WA public sector as a dynamic and interesting working environment capable of attracting and keeping committed people (PSMO, 2004) In *People Making a Difference*, (DPC, 2004, p11) collaboration across government is essential to meet future challenges and maintain the necessary knowledge and skills within the public sector. However, traditional ways of working and lack of skills in working collaboratively create barriers to working across government. Excellence and innovation need to be fostered at all levels of the public sector to encourage service improvement and flexibility of approaches to problem solving and the more creative use of limited resources.

It was claimed that greater emphasis and value must be placed on active cross-learning between agencies and sharing good initiatives to improve efficiency and reduce duplications. This may result in the development of whole of government mechanisms that allow initiatives and best practice to be shared across the sector (*People Making a Difference*, DPC, 2004).

A NEED FOR CLEARER STRATEGIC DIRECTION AND CHANGE

WA Premier Alan Carpenter, in the forward to the recent report from Department of Premier and Cabinet "*Better Planning...Better Futures*" (DPC, 2006) acknowledged the need for a clear strategic direction for the WA Public Sector that reflects the contemporary, social and economic environment. Goal 5 in this report called for governance and public sector improvement through the development and maintenance of a skilled, diverse and ethical public sector.

It was also claimed in the 'report that a skilled diverse and ethical public sector would help Western Australia become a creative, sustainable and economically successful state embracing the diversity of its people and its rich natural resources. There is little doubt that a co-ordinated review and application of best practice public sector innovation approaches will improve both sectoral and individual creativity. This will assist the sustainable distribution of the State's human and natural resources.

A WORLD WIDE REVIEW OF PUBLIC SECTOR INNOVATION RESEARCH PROJECTS

CEMI has conducted an extensive literature review on worldwide views and activities in Public Sector Innovation. This review has covered North America, Europe, UK and New Zealand. CEMI has identified a number of leading practitioners and recent research studies conducted in the field of public sector innovation. We have compared these findings with some of the excellent work conducted by Associate Professor Tim Mazzarol in developing a one day training program for the WA Public Sector Management Organisation. This has been run for public sector executives and resulted in additional work for the Department of Treasury and Finance and the Health Department. Key concepts to emerge from the initial review of the literature include:

- A paucity of research material on public sector innovation processes and practices.
- The danger in comparing the drivers of private sector innovation as equivalent to those in the public sector.
- Innovation rewards, incentives and cross sector collaborations have different purposes and weightings in the decision to innovate in a public sector environment.
- There is a disparity in the working definitions for innovation in the public sector environment and often it is confused with best practice and continuous improvement processes.

- There are some strong innovation process models put forward by Borins, 2001, “The Challenge of Innovating in Government” and by Hartley, 2005 “Innovation in Governance and Public services”.
- The most vigorous studies conducted recently and marketed as Publin, Innovation in the public sector <http://www.step.no/publin/> were initiated by a consortium of ten universities including the Manchester Metropolitan University, University of Maastricht and the University of Manchester.
- Literature has also been reviewed from the New Zealand Institute of Economic Research on New Zealand Public Sector Innovation and a range of Publin research reports.

CONSOLIDATING THE LITERATURE REVIEW

CEMI has researched, reviewed and consolidated current research and literature on comparisons between private and public sector innovation issues. A 2,500 word overview has been integrated into this report encapsulating some of the key issues and observations. In the extensive literature review for the paper it became increasingly apparent that the public sector has a different innovation agenda, characteristics and imperatives to the drivers of private sector innovation.

TABLE 1: DIFFERENCES BETWEEN PRIVATE AND PUBLIC SECTOR INNOVATION

	PRIVATE SECTOR	‘PUBLIC SECTOR
Organising Principles	Pursuit of Profit, of Stability or of Growth of Revenues	Enactment of Public Policies
Organisational Structures	Firms of many sizes, with options for new entrants	Complex system of organisations with various (and to some extent conflicting) tasks
Performance Metrics	Return on investment	Multiple performance indicators and targets
Management Issues	Some managers have considerable autonomy, others constrained by shareholders, corporate governance or financial stringency. Successful managers liable to be rewarded with substantial material benefits and promotion.	While there are some efforts to emulate private sector management practice, managers are typically under high levels of political scrutiny. Successful managers likely to receive lower material benefits than comparable private sector managers.
Relations with: End-users	Markets may be consumer or industrial ones and firms vary in the intimacy of their links with the end-users of their products, but typically market feedback provides the verdict on innovation.	End-users are the general public, traditionally seen as citizens, though recently there have been efforts to introduce market-type principles and move to see them as customers or consumers.
Relations with: Supply Chains	Most firms are parts of one or more supply chains, with larger firms tending to organise these chains.	Public sector is typically dependent on private suppliers for much of its equipment and is a very important market for many firms.
Relations with: Employees	Nature of workforce varies considerably, and management range from fractious to harmonious. Efforts are made in some forms to instil company loyalty and/or a customer centric approach, but employee motivations are often mainly economic ones of securing a reasonable income.	Public sector employees are typically highly unionised (economists and social scientists in the central administration and health and social professionals such as nurses, social workers, child-care workers, teachers etc. in the public services). Many are also professional workers organised through professional associations. While usual concerns about status and salary are experienced, many workers enter public service with idealistic motivations.
Relations with: Sources of knowledge	Companies have considerable flexibility in sourcing innovation-related information from consultants, trade associations and public sector researchers but many smaller firms have limited resources to do so.	Despite larger resources, parts of the public sector may be constrained from using private sources of knowledge (other than those of suppliers). Public sector sources of knowledge (e.g. Universities) may be highly oriented to other parts of the public sector.
Time Horizon	Short-term in many sectors, though utilities and infrastructural services may have very long horizons.	Short-term: policy initiated innovations need to pay off within the election period.

(Koch, P, 2005 Publin Post Newsletter, pp2-3)

There are persistent areas of weakness identified in Australia’s innovation culture despite the perceived “Have a Go” and popularist “early adopter” mentality. (IBM, 2006) Australian managers have a negative perception of entrepreneurship, are often risk averse and unable to see failed attempts as learning opportunities. The lack of a deeply rooted entrepreneurial culture hampers entrepreneurship from becoming a socially legitimate activity (DEST, 2003). Also, limited progress is being made towards the development of entrepreneurial skills training or its integration into higher education courses especially cross-disciplinary or ‘innovation’ degrees. This development is often hampered by the lack of skilled and experienced university lecturers with appropriate cross-disciplinary backgrounds and experience (DEST, 2003).

Factors contributing to successful public sector innovation programs and environments vary in both inputs and desired outcomes. The public sector has a diverse range of aims spanning both services and policy outcomes. We need also discriminate between public entity outputs relating to policy and those about delivery-manufacture / provision and supply of products/and or services. There are different drivers and factors in public sector organisations focussed on delivering different types of outputs (Publin, D24, p 17, 2006).

In the context of these observations, the public sector can also be observed in the context of the following diagram.

TABLE 2: NEW ZEALAND PUBLIC SECTOR INNOVATION MANAGEMENT APPROACHES

INNOVATION	POLICY	DELIVERY
Internal orientation	Cost or process improvement in policy production	Cost or process improvement relating to delivery
External orientation	Client enhancement through improved quality of service	Client enhancement through improved quality of product or service

Source (NZIER, 2002, p7)

Innovation stories and analysis opportunities can be identified from the four parts of the quadrant as they are often require discrete management style, intellectual approaches and people/skills (NZIE, 2002). These are challenging times for governments around the world as they respond to increasingly complex demands from their citizens and significant and complex changes in their global environments.

THE GLOBAL CHALLENGE: RESPONSIVE GOVERNMENT RE-INVENTION

Within the framework of extreme diversity in local conditions and situations there are four major trends worldwide for state and public administration identified by United Nations research (UN, 2007) These include issues about:

- Construction or reconstruction of a state that operates according to the rule of law.
- Revitalisation of state and public administration, e.g. new public management and e-government concepts (Paulsin, 2006, Fang, 2002, SSCNZ, 2006).
- Reconfiguration of the role of the state.

- Growing demands to make democracy more meaningful and to allow more opportunities for participative policy making.

Overall, governments are faced with three challenges. The first is to operate and provide far reaching and higher quality service with reduced resources and limited operational capacities. Second, governments must make public institutions more accountable, responsive and effective by promoting a more citizen-oriented public administration. Third, government agencies must respond to citizens' demands for greater participation (UN, 2007). Introducing innovations in governance can help confront these challenges and maximise the utilisation of resources and capacity to create public value. Also, to encourage a more open and participatory culture in government.

By improving the image and services of the public sector, innovations can help governments regain people's trust and restore legitimacy. Innovations can also help boost the pride of civil servants working in the public sector, as well as encourage a culture of continuous improvement.

Documenting and sharing innovations in public administration can be a very important tool in fostering innovation in government and promoting its development.

INNOVATION: FULCRUM FOR ORGANISATIONAL CHANGE?

Innovation is being increasingly viewed as an important tool to assist organisational re-invention by providing a legitimate leverage point for change. This context for innovation as a potential change agent, although still a novelty, is receiving a high degree of interest from both the private and public sectors. Different organisations approach innovation from different perspectives and their approaches are largely driven by:

- The need to adapt locally to elements of multinational cultures.
- The need for the organisation to be more market driven and/or customer focussed.
- The need to capture or tap organic organisational creativity.
- The need for a leverage or focal point for change.

A recent global innovation research study conducted by IBM with over 700 business leaders identified innovation as the best opportunity to achieve sustainable growth, yet only 35% took direct responsibility for innovation. 65% identified substantial change as necessary over the next two-three years but only 15% were successful at managing it. 80% agreed that collaboration and networks were important yet there was a distinct gap between importance and practice (IBM, 2006). Government at 30%+ was seen to be the most difficult obstacle to private sector innovation.

The key area of innovation was seen to be in products, services and markets with over 40% of innovations coming from sources outside the company (IBM, 2006). Approaches to and the use of innovative techniques and processes vary significantly, dependent upon industry, culture and senior management experiences. Innovation concepts have come to involve two distinct concerns. One covering the development of science based industries and the other upgrading established industries through knowledge dissemination, (Marsh and Edwards, pp1-3, 2006).

A capability for change driven by public sector and policy innovation is imperative. Government policy systems and processes need to identify and assess strategic challenges without the constraints sometimes experienced by large complex organisations with multiple interconnections and dispersed and divided authorities.

CHANGE DRIVEN THROUGH POLICY INNOVATION NOT THE NEED TO COMPETE

Policy innovation presents challenges of differing complexity. (Hall, 1993) has suggested three broad categories in policy innovation. They include shifts in policy frames or paradigms, e.g. global warming; shifts in the means by which an existing policy objective is achieved and third a shift in specific policy instruments used to achieve the desired outcomes. Policy decisions are shaped through a complex series of interaction taking diverse forms that depend on the issue, political context and the actors. Also, the institutions involved and the problem/solutions and priorities combined with the resources and bargaining priorities.

The public sector relies on revenues not achieved through business growth, innovation or market performance but rather on those framed by political priorities, policies and political decision making. The link between revenues and services is often obscure. Some public services, e.g. health are in a vicious circle, in that achieving social benefit merely increases social demand and costs. Conversely in the private sector new consumer demand is a welcomed market opportunity. By comparison, in the public sector, it represents a political challenge (Roste, 2005).

The public sector sometimes operates in a different world altogether with the primary provision of public services not competition to make profit as its major driving force. The lack of competition is widely held to provide a lack of incentive for public sector improvement. Why should public organisations innovate when they are not challenged by competition in the marketplace or confronted with the need to expand to survive? In the public sector the role of policy-makers and policy advisors has a profound influence in the innovation process. (Benington and Hartley, 2001) have identified three competing paradigms of governance and public sector management that may influence the way innovation is evolved.

TABLE 3: INNOVATION AND IMPROVEMENT IN DIFFERENT CONCEPTIONS OF GOVERNANCE AND PUBLIC MANAGEMENT

	‘TRADITIONAL’ PUBLIC ADMINISTRATION	‘NEW’ PUBLIC ADMINISTRATION	NETWORKED GOVERNANCE
Innovation	Some large-scale, national and universal innovations	Innovations in organisational form more than content	Innovation at both central and local levels
Improvement	Large step-change improvements initially, but less capability for continuous improvement	Improvements in managerial processes and systems. Customer focus produces quality improvements in some areas.	Aiming for both transformational and continuous improvement in front-line services
Role of policy makers	Commanders	Announcers/commissioners	Leaders and interpreters
Role of public managers	‘Clerks and martyrs’	Efficiency and market maximisers	‘Explorers’
Role of the population	Clients	Customers	Co-producers

Source: Hartley, J. (2005)

Each view integrates world views and assumptions about the roles of politicians, managers and the population. The paradigms are illustrated in Table 3. The first two identify with ‘Traditional Public Administration’ and ‘New Public Management’ (NPM). A third paradigm is based on evidence of emerging patterns of governance and

service delivery which incorporate elements of citizen centred governance or ‘networked governance’ and cross over into IT enabled digital era governance concepts (LSE, 2005), (SSC:NZ, 2006).

TABLE 4: KEY COMPONENTS OF DIGITAL E-GOVERNANCE

Theme	Component
Reintegration	Roll back of agentification Joined-up governance (JUG) Re-governmentalisation Reinstating central processes Radically squeezing production costs Reengineering back-office functions Procurement concentration and specialisation network simplification
Needs-based Holism	Client-based or needs-based reorganisation One-stop provision Interactive and ‘ask-once’ information-seeking Data warehousing
Digitisation Processes	End-to-end service reengineering Agile government processes Electronic service delivery New forms of automated processes zero touch technologies (ZTT) Radical disintermediation Active channel streaming Facilitating isocratic administration and so-production Moving toward open-book government

Source: (Dunleavy et al, 2005 p 20)

PUBLIC SECTOR INNOVATION REQUIRES POLITICAL ACTORS (ENTREPRENEURS) AND PERSONAL REASONS

There are two main drivers for innovation in the public sector context. Primarily, the political context where governments face the test of competitive electoral politics with votes and support gained through being seen to perform better than other political actors. Secondly, more personal reasons in that public sector managers and workers gain satisfaction and status among their peers from seeing their knowledge applied to community improvement and the achievement of higher service levels.

Political actors are seen to need the same personal qualities as entrepreneurs. They may be driven to achieve a vision of how society should work in helping people and securing or improving their quality of life. The ability to convince other strategic actors is central for political actors as well as economic entrepreneurs (Roste & Miles, 2005). The better the actors are at developing networks that can get them access to competencies and partners the more likely their innovation efforts will succeed. Innovation networks may start informally or may form the basis for a more systematic innovation program development where the organisation is marshalling

resources to solve a particular problem. Successful innovation processes that lead to solutions to the problem at hand require:

- Networks
- Access to relevant in-house competencies
- Access to relevant competencies outside the organisation (Networks)
- Culture and organisation. An in house culture that encourages and supports innovation learning. An organisation structure that supports learning and innovative processes.

TABLE 5: PRIVATE AND PUBLIC SECTOR INNOVATION INCENTIVES

<p>Incentives for innovation in the public sector/Individuals:</p> <ul style="list-style-type: none"> Prestige Self-fulfilment Professional recognition Potential for spin off business Idealism Career Power Money (salary) 	<p>Incentives for innovation in the private sector/Individuals:</p> <ul style="list-style-type: none"> Prestige Self-fulfilment Idealism Career Power Money (salary, profits, bonuses) Job security via enhanced company competitiveness and profitability Imposed requirement
<p>Incentives for innovation in the public sector/Organisations:</p> <ul style="list-style-type: none"> Problem solving (in order to reach objectives) Increased funding The propagation of a policy , idea or rationality 	<p>Incentives for innovation in the private sector/Organisations:</p> <ul style="list-style-type: none"> Problem solving (in order to reach objectives) Profits Market-shares Pre-empt competition Growth (in size) Public relations

Source (Roste & Miles, 2005)

The barriers to public innovation also identified by the major European university consortium research project on public sector innovation Publin (2006) included:

- Size and complexity. The public sector comprises complex large-scale entities that may develop internal barriers to innovation.
- Heritage and legacy. Public sector organisations are prone to entrenched practices and procedures.
- Professional resistance. There are often strong professional groupings within their own communities of practice, rationalities and perspectives.

- Risk aversion. Public sector organisations are under close scrutiny of politicians and the media and not rewarded for taking risks.
- Need for consultation and unclear project outcomes. A large range of stakeholders generates an important requirement to consult and review any planned changes.
- Public resistance to change. Elements of the public may be risk averse.
- Absence of resources. As innovation results and outcomes are difficult to quantify finance, skills and resources can be difficult to marshal and maintain.
- Technical barriers to the problems at hand, e.g., joining up or integrating government services,

Source: (Publin: Koch D, 24, p2, 2006).

INNOVATION: POLITICAL SCIENCE OR ORGANISATIONAL THEORY?

Innovation in public sector organisations requires a broadening of the econometric scope that forms the basis of most innovation theories (Koch, et al D9, pp2-7). There are two general approaches to the role of public institutions and organisations in innovation performance. Innovation in market based activities and the role of the public sector in regard to established economic and sociological theories on innovation. Also, innovation and change in political and public systems from the perspective of political sciences and organisational theory.

Innovation in public sector organisations is sometimes seen as mirroring technology solutions provided by private firms and commercial technology providers. University research (Publin, D9 & D24, Hauknes, J., 2003) has indicated issues about the public sector as a generator of significant innovations; the role of the public sector in innovation and what the public sector can do that the private sector cannot, e.g. risk bearing; project scale and multiple technology pathways in e-government concepts.

It was claimed that public sector is not a homogenous entity and consists of a very diverse group of agencies. These agencies are often pulling in different directions with some serious external and internal conflicts, e.g. Western Power. In researching innovation in the public sector a wider and broader definition is required to embrace all the dimensions that are associated with innovation. These include:

- Innovations involving changes in the characteristics and design of service products and production processes including development, use and adaptation of relevant technologies.
- Delivery innovations-involving new or altered ways of solving tasks, delivering services or otherwise interacting with clients to provide specific services.
- Administrative and organisational innovations involving new or altered ways of organising activities.
- Conceptual innovations. The sense of introducing new ideas, missions, world views, strategies and rationales linking the social objectives of the policy and institution to the operational and economic goals and functions of the agency.
- Systems interaction. New forms of governance including interactive policy making and horizontal networks.

INTRODUCING INNOVATION TO GOVERNMENT

There are five main strategies to introduce innovation to government. They include:

- *Integrating services.* With the public sector offering increasing numbers of services, e.g. aged care, there is an expectation that these services will be provided conveniently and integrated with products to meet needs and expectations.
- *Decentralising services delivery and monitoring.* Bringing services closer to people ensures customisation and increased satisfaction. Encouraging new technology and economic development beyond centralised urban centres.
- *Utilising partnerships.* More inter-agency collaborations and public-private sector partnerships are occurring as governments strive to meet the public's increasing demand for more efficient services delivery.
- *Engaging citizens.* Innovative government authorities have come to realise the vital role the public plays when encouraged to participate in proposed changes. Involving public forums and exchanging views in process results in more innovative outcomes.
- *Taking advantage of information and communication technologies.* Internet services cut red tape, simplifying and improving information dispersion and communication also improving transparency and integrity in public administration, (UN, 2007 pp3-11).

The market rewards and incentives for innovation in the private sector are immense, whereas, the public sector does little to encourage innovation, if anything discouraging risk (Borins, 2001). Stringent central agency controls also constrain public servant innovativeness.

MAJOR CHARACTERISTICS OF SUCCESSFUL INNOVATION

These five major characteristics of successful innovation were identified by Borins (2001) after an extensive research study into public sector innovation. His views are supported by Publin and other studies. They include:

- *The use of a systems approach.* After planning to innovate it is important to map out the steps to implement it.
- *The use of new information technologies.* There is a trend to e-government and collaborative, information sharing behaviours important both within and outside the organisation as both formal and informal networks.
- *Process improvement.* The involvement of private or voluntary sectors in consultative and collaborative processes.
- *Empowerment of communities, citizens or staff.* Research studies indicate frontline staff and middle managers are the most frequent initiators of public sector management innovations (Borins, 2001, pp 11-17).

CHARACTERISTICS OF AN INNOVATIVE PUBLIC SECTOR MODEL EMBRACING SOCIAL INNOVATION

There is also consensus on the characteristics of innovative public sector organisations. These include:

- *Top management support of the innovation culture.* This involves organisational priorities, recognition and protection for innovators from constraints and latitude to experiment.
- *Increasing rewards and incentives for innovative individuals.* These include performance-pay relationships or non-monetary awards or recognition.
- *Diversity* is a great enabler of different views and perspectives and enhances innovation.
- *Sustainable resources* on an ongoing basis help fund innovation programs and keep them sustainable.
- *Information sharing networks.* Collaboration, information sharing network, participating in professional networks with suppliers and/or customers encourage new perspectives.
- *Ideas harvesting.* Innovation relies on the finding and harvesting of organisational ideas to add value and insights.
- *Experimenting and evaluating outcomes.* Lower the cost to staff of honourable failures and reward and incentivise success (Borins, 2001, pp 30-35).

Information sharing and innovation experiences in governance and public administration are powerful tools to inspire governments in their reform processes by creating bodies of new knowledge. The potential of innovation knowledge sharing can help leap frog development stages as no organisation has all the knowledge and capacity to accomplish its mission on its own, (UN, 2007).

New and improved ways of interacting with other organisations and knowledge bases combined with rapid changes in organisational operating environments caused by globalisation and new technologies now means that achieving more positive economic and social outcomes is more strongly reliant on structural renewal and innovation capability (Pekkarinen et al, 2005, pp4-5). In this contemporary techno-economic paradigm, innovation is seen a central driving force of competitiveness and productivity.

TABLE 6: CHARACTERISTICS OF INNOVATION IN PUBLIC ORGANISATIONS

The characteristics of innovations	Service, process and organisational innovations Ad-hoc innovations Practice-based incremental innovations External relationship innovations
The role of innovation in the value chain / economic logic:	To save money Separate from basic activities Often made by constraint
The organisation of innovation process	Lack of systematic organisational culture for innovations Lack of incentives for innovations External support services in a limited role
The nature of customers	The variety of roles and interests of the customers The customer as part of the product Minimum number of customers as a logic

Source: (Pekkarine et al 2006, p9)

Freeman (1994, pp. 463-514) attributed 80% of economic growth to productivity increases and 80% of the productivity growth through innovations. Innovation has been more traditionally been linked to technology/IT industries, however, the definition of innovation has recently been expanding enabling robust discussion about innovation activities within the public sector environment. This expanded frame of reference for innovation has enabled social innovation to be considered together with more traditional technology or product

innovation. The public sector makes social innovation more characteristic of it, defined as renewals related to regulations (legislation, official governance), government policies, organisational structures and systems aimed at improving the maintenance and performance of society at large.

Social innovations mean a significant expansion of the concept of innovation from technological innovations and related production, distribution and services. Services have until recently been considered of secondary importance in innovation as mainly consumers (Pekkarinen, et al, 2004, pp15-16). With the adoption of a broader innovation definition outside not only technological definitions, the public service sector has been found to be not only innovative but much more capable of embracing significant innovation.

COMPARISON OF THE FINDINGS

In comparing the findings of the literature review to what CEMI has achieved by practice in the Western Australian market, some of the key concepts that informed this review include:

- Professor Sandford Borins innovation process model (Borins, 2001) identifies five building blocks for public sector innovation to incorporate: a systems approach; the use of information technology; process improvement; involvement of the private/voluntary sector; empowerment of communities, citizens, or staff. There is also a prescriptive list of challenges to support innovation.
- Professor Jean Hartley has identified three competing ideological conceptions of governance and public management “Traditional”, “New Public Management” and “Networked” administration (Hartley, 2005). These conceptions change how innovation and improvement is established. Hartley also explores the relationship between innovation and improvement and identifies innovation catalysts
- The Publin study summary and policy recommendation (Publin, 2006) is the result of extensive field work and collaborations between the participating universities. It identifies differences between public sector and private sector innovation; barriers and drivers. It also has a number of policy recommendations including: building a capacity for innovation; learning and networking; convincing stakeholders; technical barriers and drivers; political push and policy learning. There are a number of eminent European researchers involved with this project that has informed an extensive list of discussion papers and articles.
- CEMI has succeeded in accessing an extensive literature review from the major studies including the Publin research work. Also, the book of abstracts from the International ProACT Conference “Innovation Pressures” March 2006, Finland which has an extensive range of abstracts and full text articles including public sector innovation issues.
- The New Zealand Institute of Economic Research-New Zealand public sector innovation (NZIER, 2002) refers to Borins (Borins, 2001) and Altshuler (Altshuler, 1997) as key actors on the innovation stage for the public sector and refers to an innovation process framework devised by Altshuler (Altshuler, 1997). This framework involves collaboration with other public agencies, building partnerships with the private sector; respects talent of frontline workers - 50% - 75% of innovation initiatives came from middle management; keeping a customer focus and working with parties affected by regulation.

KEY RESEARCH ISSUES FOR EXPLORATION

Some of the key research issues that could be explored as a result of this review include:

- Development of a contemporary range of public sector innovation process thinking and models for application within a wide range of public sector organisations. These may vary from service models to regulatory models depending on the organisation's charter.
- Development of a complete public sector innovation project checklist that will inform various stakeholders of the far reaching applications of an innovation program.
- Development of collaborative models and process guidelines for cross sector and private sector collaborations within an innovation program framework.
- A review of approaches to the treatment of intellectual property within public sector frameworks. Innovation programs will elicit both good and bad ideas and intellectual property will be created. How this IP is treated in a public sector context will be critical.
- A review of public sector reward and incentive programs. These programs must be workable within the WA public sector context and include appropriate risk management strategies.

KEY OBSERVATIONS FROM THE ENVIRONMENTAL SCAN

Some of these issues were identified in the literature review and Mazzarol's initial discussion paper 0304 (CEMI, 2004). In a recent one day innovation program conducted by CEMI for the Department of Treasury and Finance key issues identified from the management group work to be considered in developing their innovation program included:

- Having an innovation system or structure in place to identify, access, manage and support ideas.
- Having access to innovation resources, not just under budget left-overs and token start up funds.
- Appropriate and satisfying reward and incentive structures.
- Risk management plans came up in our study but not much in the literature although RMP is important in the public sector context.
- Many of the participants had the desire to do something innovative but were unsure of what to do next. This 'wheel spin' can hinder and detract from genuine intent interest and effort in the innovation context.

An extensive environmental scan was conducted of university education activities in the public sector innovation/entrepreneurship space. This involved reviewing course marketing materials and the connections of the PSI/E value proposition to various schools and faculties. Key universities active in the PSI/E space included: ANU post graduate courses in Techniques and Innovations in Public Administration; Public Sector Management and Innovation in Services. Curtin; Griffith, Macquarie and RMT Universities consortium offer the national Public Sector Management Program. Macquarie Institute for Innovation proposes to offer a Master of Entrepreneurship in 2008; The University of Queensland offers a post graduate course in New Public Management and Managing Creativity and Innovation. Flinders University offers an undergraduate course in Innovations in Public Policy and Management.

Stanford Centre for Social Innovation offers a Public Management Program, Leeds University offers a Master of Public Sector Innovation through their Faculty of Information and Technology; University of Essex offers Bachelor Science degrees in Marketing and Innovation, Lillehammer University offers a Master in Innovation and Business Development, McMaster University Political Science Department; Harvard University-Centre for Government Studies, Innovations in Governance and executive education programs on leadership and change in public policy and management.

The Centre for Public Service Innovation offers an Executive Development Program in Innovation Management. It is a joint venture between Da Vinci Institute for Technology Management and the South African Management Development Institute. Some observations about the activities of these Universities include:

- *Setting up specialist innovation centres to address public administration innovation.* Macquarie University Harvard, Stanford and Yale have specific centre approaches to education and training in the public sector with innovation as a central topic.
- *Innovation integrated into related subject agendas* and directed to change management within the public sector environment. Areas innovation has been combined with include: Marketing and Creative Thinking; New Public Management and Digital/E-Government Concepts and Policy Innovation.
- Stanford has identified the *whole concept of social innovation* in both the Public and NFP sectors joining up a range of both entrepreneurial activities and innovation concepts.
- A common observation emerging from the literature review was the need for *networks and connections in both private and public sectors* for innovation to succeed. There is also a trend emerging in “Digital Government” for services to be “Joined Up”. Successful universities are joining up related innovation agendas and presenting them as integrated offerings, e.g. Social Innovation.
- Universities that only *focus on more specialised streams of the innovation* agenda, e.g. Public Policy, SME and Creativity run the risk of being marginalised with low volume, high value courses that are highly recruitment intensive and generate marginal returns for the efforts required.
- There is a natural tendency for innovators and innovation to be random and episodic and as such they are more likely to be attracted by a range of opportunities *to explore and be flexible in the innovation skills and capabilities developed.*
- *The Australian innovation education market is in its developmental phase* and the market is likely to remain specialised until increasing acceptance and opportunities cause the market to aggregate.
- *The public sector market is likely to cluster around policy innovation, public sector management and digital/E-government* before evolving and migrating to broader concepts of social innovation.
- *The notion of “Joined Up” innovation approaches* may challenge UWA in finding suitably qualified teaching staff who have both the teaching capabilities and practical experience to embrace the wider notions of innovation as indicated earlier in the report.
- *The innovation landscape provides a number of opportunities*, directions and subsets of related activities. UWA will need to assign some priorities in terms of student numbers, ROI and political/image considerations before deciding on a way forward.

- *There is a lack of both experience and capability in leaders and managers of organisations to use innovation as a change agent. This lack of knowledge means that CEO and senior management may favour more familiar tools not associated with the perceived risk of innovation programs.*
- *There is a growing trend in the humanities area for social innovation, which is the flavour of the month, driven by Global Warming; Water Scarcity and Drug Endangered communities. A tightly engineered Social Innovation offering may appeal to a wider management and student market rather than highly prescriptive offerings.*

Some more research will need to be done regarding the *WA Government's view and policies on digital government*. It has some very strong proponents in the UK and New Zealand but it has far reaching implications and costs across government.

OPTIONS FOR ACTION AND RECOMMENDATIONS

The global literature review and the identification of key concepts from public sector innovation academics and thought leaders indicate that there are some very challenging issues emerging. Some are similar to those CEMI has identified at an operational level over the last four years. Other issues have emerged as the global innovation landscape has been populated by actors, research, theories and the development of innovation business models and propositions by other universities. The key issues and options for action are identified as follows:

The Australian innovation business skills market is in its early developmental phase. The prevailing senior management culture has little experience of using innovation as an effective business tool and is highly risk adverse. Using new ideas and processes that both reward and highlight failures, albeit as a learning experience will limit innovation's ability to gain mainstream business traction in a highly risk averse WA public sector.

INNOVATION - SCIENCE AND/OR SKILL?

The early development stage of innovation has resulted in it seeding a range of business areas. Public Sector Policy development; Digital Governance and Social Innovation concepts are some examples of how innovation has been interpreted in different contexts. However, innovation is much like marketing in its early development stages, still lacking the integrative business models and wider market approaches to skills development and diversity of applications. We are yet to see innovation managers or leaders with broader landscape skills and vision. This restricted world view will limit innovation to a more tactical tool used in specific situations rather than a legitimate mainstream science and skill based business improvement tool kit.

JOINING UP INNOVATION ACTIVITIES

There are opportunities for innovation in the public sector context to be developed as both an integrating and catalysing agent. Since it has a wide span of applications in the public sector context from PSM management processes, innovative policy development and science, change agent, digital government and social re-engineering. The opportunity to develop specialist rather than niche courses or Centres could be attractive

FOCUSING ON SOCIAL INNOVATION:

Stanford, Harvard and McMaster focus on key areas of public sector management such as Political Science, Government Studies and Governance and the new area of Social Innovation. Social Innovation integrates a number of humanities-based disciplines including: Active Citizenship, Communities Development etc. These areas have very contemporary issues, e.g. global warming. Social innovation actively engages with communities on contemporary challenges. The public sector could actively engage in innovative public policy development, development of joined up online services and community consultation.

FOCUS ON SPECIALIST STREAMS IN INNOVATION:

In this early adopter/start up stage of the market, niche courses will suffer from a lack of numbers and commercial viability. If the University needs to bring innovation into a more mainstream revenue earner and increase student numbers then innovation will need to be addressed and offered as either a specialist centre or much broader based business model. Otherwise, innovation activities will always be piecemeal and tactical relying on the intermittent demand requirements for “Top-Up” courses.

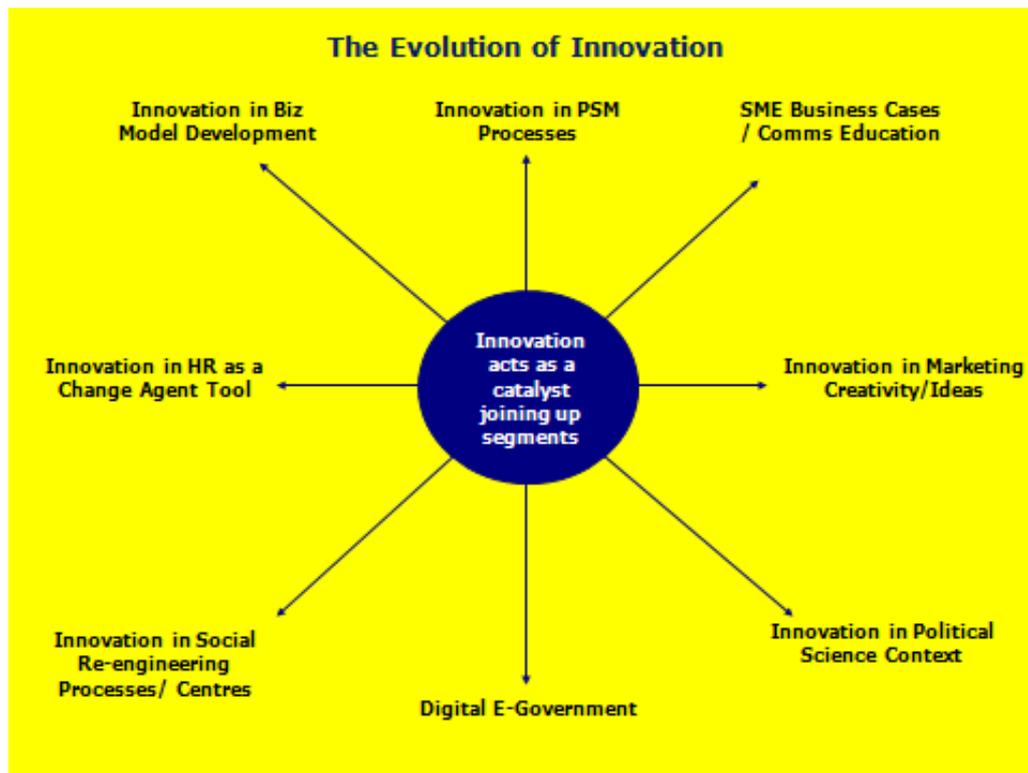


FIGURE 1 THE EVOLUTION OF INNOVATION IN GOVERNMENT

SUMMARY

Allocating resources, process issues, incentive structures and risk management are all critical elements of public sector innovation. There is a market readiness for Innovation in the WA Public Sector with a high FTE training spend level and pressure on the public sector to engage with more part time staff and EEO issues. There is an attendant desire by public sector managers to extend their management education and a large proportion of public sector managers are degree qualified. There is clear intent from Premier Alan Carpenter’s “Better Planning. Better Futures” Framework 2006 that a skilled and capable public sector workforce is a necessity. With the Premier’s background in industry development and a strong commitment to innovation this is an area that supports both the public good and a commercial opportunity.

Much of the initial development work has been done in positioning CEMI in a favourable position on the innovation agenda. There is an existing footprint and courseware in the public sector innovation space. Future work will involve the completion of discussion and research papers to present to public sector stakeholders and actors. These are with the intention of sharpening the focus on courseware development and financing a best practice research study on Australian public sector working process models with case studies. This is to include a review of incentive programs, process management, IP and risk management models.

Collaborating and linking with leading practitioners in this space. Three eminent professors have indicated their availability to provide visiting fellow support for our efforts. CEMI's aim is to identify thought leadership connections between entrepreneurship in the public sector and the specific interest areas of these professors to put a business case for visiting fellow funding. Additional work will require the preparation of further courseware and specialist modules to enable the existing one day introduction course to be expanded to a three day course with specialist stream modules.

CEMI has developed a strong footprint in the innovation space and has a legitimate and earned right to occupy this challenging and potentially commercially rewarding space for both the good of the sector and the public good at large.

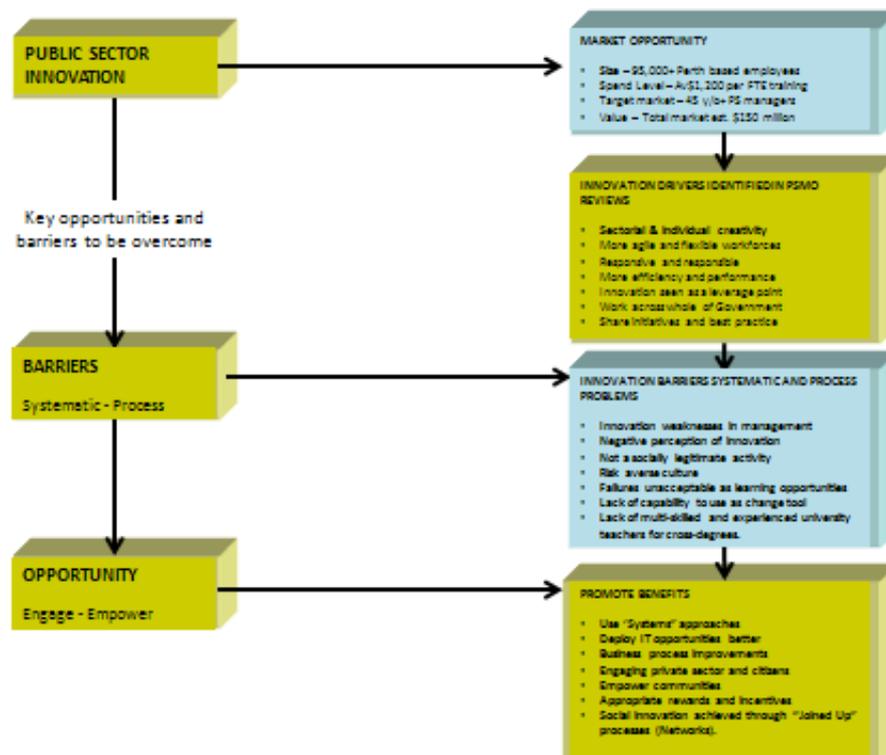


FIGURE 2: WA PUBLIC SECTOR INNOVATION OPPORTUNITIES

REFERENCES

- Altschuler, A, 1997 "Public Innovation and political incentives," Occasional paper 1-97. Harvard. Retrieved 23 March 2007, from Harvard University
<http://www.innovations.harvard.edu/research/papers/altschuler.pdf>.
- Australian Public Service Commission 2006, APS Statistical Bulletin, Section 3: Ongoing Staff. APSC, Canberra. Retrieved March 13, 2007, from APSC database
<http://www.apsc.gov.au/stateoftheservice/0506/statistics/table20.htm>
- Borins, S 2001 The challenge of Innovating in Government. PricewaterhouseCoopers Endowment for The Business of Government. PWC 2001. Retrieved March 13, 2007, from Commonwealth Association for Public Administration and Management. <http://www.capam.comnet.mt>.

- Creativity and Innovation .Universities Leading Australia. Policy issues and initiatives .Federal election 2001.2001,Group of Eight Australia's Leading Universities. Australia
- Department for Communities and Local Government UK 2006, Innovation and its contribution to improvement, Product Code 06 LGFG 03884/b. Retrieved from DCLG database. <http://www.communities.gov.uk>.
- Department of Premier and Cabinet 2004 People making a Difference. The public sector strategic directions.2004.ISBN: 0 7307 0147 6.Retrieved March 13, 2007 from Department of Premier and Cabinet database.
- Department of Premier and Cabinet 2006 Profile of the Western Australian State Government Workforce". June 2005.ISSN 1323-2452.Retrieved March 13,2007 from Department of Premier and Cabinet database.<http://www.psnd@dpc.wa.gov.au>
- Department of Premier and Cabinet 2006 Better Planning: Better Futures a framework for the strategic management of the Western Australian public sector. Retrieved March 13, 2007 from Department of Premier and Cabinet database.
- Department of Employment Science and Technology 2003, Mapping Australian Science and Innovation. Summary Report. Weaknesses and Gaps. ISBN 0642 77396 3 (On line). Retrieved March 14, 2007.
- Dunleavy, P; Margetts, H, Bastow, S, Tinkler, J 2005. New public management is dead: long live digital era governance" .London School of Economics and Political Science. EDS Innovation Research Programme.
- Fang, Z 2002 'E-Government in Digital Era: concept, practice, and development'. International Journal of the Computer, the Internet and Management, Vol. 10, No2, pp1-22
- Freeman, C 1994, Critical survey: the economics of technical change. Cambridge Journal of economics .Oxford. October 1994.Vol 18,pp.463-514
- Hall, P, 1993, 'Policy paradigms, social learning and the State: The case of economic policy making in Britain', Comparative Politics, Vol. 25, 3, pp.275-297
- Hartley J 2005 'Innovation in Governance and Public Services: Past and Present', Public Money and Management Journal, pp27-34
- Haunes, J 2003, 'Some thoughts about innovation in the public and private sector compared'. Publin Report, No D9, pp44-56.Retrieved March 16, 2007 from Publin database <http://www.step.no/publin/>.
- IBM Public Sector,2006 'Under the tyranny of best practice'. Guardian Magazine. December.
- IBM Global Business Services, 2006 'Expanding the Innovation Horizon'. The Global CEO Study 2006.Retrieved 24 March 2007, from <http://ibm.com/services/uk/bcs/pdf/g510-6259-01-the-global-ceo-study-2006pdf>.
- IDEA Knowledge, 2005. 'Innovation in public services' Literature review. Retrieved March 16,2007 from <http://www.IdeAKnowledge.com>.
- International ProACT Conference, 2006 'Innovation Pressure. Book of abstracts'. Retrieved March 16,2007.http://www.proact2006.fi/chapter_images/273_bookof abstracts_09.pdf
- Koch, P 2006 'Innovation in the public sector in Nordic countries'. Nordic Innovation Centre. Interact research project.NIFU STEP. Retrieved March 16, 2007 from Interact website.<http://wwwstep.no/interact>.
- Koch, P 2005 'The difference between the public and private sectors'. The Publin Post Newsletter, No 7, pp1-3

- WALGA, 2006 Local Government Systemic sustainability study. Capability Development' pp61-65. Retrieved March 13, 2007 from WALGA database: <http://www.walgasystemicsustainabilitystudy.com.au>
- Marsh, I, Edwards, L 2006 'The development of Australia's innovation strategy; can the public sector assess new policy frameworks? Retrieved March 16, 2007 from http://www.govnetconference2006.anu.edu.au/papers_etc/marshedwards.pdf
- Mazzarol, T 2004. 'Leading Innovation within Public Organisations Discussion paper 0304, University of Western Australia, The Graduate School of Management, Perth
- Mazzarol, T & McFarlane, R 2007 'Office of State Revenue. Innovation and Strategy Workshop-outcomes'. University of Western Australia, The Graduate School of Management, Perth
- Melville, M 2005 'Rethinking new public management: Community development jobs and practices in Australia', AIRAANZ Reworking Work Conference. February 2005. Retrieved March 17, 2007. http://airaanz.econ.usyd.edu.au/papers/non_refereed.pdf -
- NZ Institute of Economic Research (Inc) 2002, 'New Zealand Public Sector Innovation'. New Zealand Treasury Report, Treasury: 470797V1
- NZ State Services Commission 2006, 'Enabling Transformation. A strategy for e-government'. State Services Commission. ISBN 978-0-478-30302-5. Retrieved 13th April, 2006 from <http://www.egovt.nz>.
- Osimo, D, Nyiri, L, Bianchi, B, Centeno, C 2005 'The public sector as an active partner in the innovation system'. Institute for Perspective Technological Studies. European Commission, Spain. Retrieved March 13, 2007 from <http://fiste.jrc.es/pages/documentse-publicsectorinnovation.pdf>
- Paulsen, P 2006 'New Public Management, Innovation, and the non-profit domain: New forms of organizing and professional identity' pp 15-28. Organising Innovation: New approaches to cultural change and intervention in public sector organisations IOS Press Amsterdam 2006.
- Pekkarinen, S; Tura, T, Hennala, L, Harmaakorpi, V 2006, 'Innovativeness as a challenge and an opportunity for the public sector' Proceedings from the International ProACT Conference .Finland. Retrieved on March 13, 2007, from International ProAct Conference papers database <http://www.proact.fi/>.
- Public Sector Management Division 2003, The wealth within'. Public Sector Management Division, Department of Premier and Cabinet, ISBN 0730 710 344
- Public Sector Management Division 2001, New Century, New Workforce. Retrieved from Ministry of Premier & Cabinet website March 13, 2007, <http://www.mpc.wa.gov.au/psmd>.
- Public Sector Management Division 2005, Profile of the Western Australian State Government Workforce June 2005. Retrieved from Ministry of Premier & Cabinet website March 13, 2007. <http://www.mpc.wa.gov.au/psmd>
- Publin 2006 Innovation in the Public Sector. Summary and policy recommendations, Report No D24, NIFU STEP OSLO 2006. Retrieved from Publin Website March 13, 2007. <http://www.step.no/publin/>
- Publin 2005 Studies of innovation in the public sector, a theoretical framework, Report No D16, NIFU STEP OSLO 2006. Retrieved from Publin Website March 13, 2007. <http://www.step.no/publin/>
- Publin 2005 on the differences between private and public sector innovation, Report No D9, NIFU STEP OSLO 2006. Retrieved from Publin Website March 13, 2007. <http://www.step.no/publin/>
- Ramsey, T. 2006 'Creating an Innovation-driven Government for Growth'. Powerpoint presentation from the Seminar Innovative Government Insights - An Innovation-Driven Government for Growth, Ministry of

Science, Technology and Innovation (MOSTI).Malaysia. Retrieved March 13,2007.http://www.hasansaidin.typepad.com/openmalaysia/todd_ramsey.pdf.

Roste, R, Miles, I 2005 'Differences between public and private sector innovation' Retrieved from Publin Website March 13, 2007. <http://www.step.no/publin/>

Saidin, H 2006 'Innovation and open collaboration in ICT-the way forward'. PowerPoint presentation from International conference on business IT. Malaysia. Retrieved March 13,2007.http://www.hasansaidin.typepad.com/openmalaysia/innovation_and_open_collaboration_inICT_-_Aug_2006.pdf.

Transport, 2006 'South West Metropolitan Railway Master plan'. Table 2.2.2.p6.Employment growth in different sectors of metropolitan regions' Retrieved March 15, 2007. <http://www.newmetrorail.wa.gov.au/NMR/Documents/Plans/masterPlan/>.

United Nations, 2007 'Innovations in Governance in the Middle East, North Africa and Western Balkans. Making Governments work better in the Mediterranean region', Part One. Department of Economic and Social Affairs, ISBN 978-92-1-104565-9.Retrieved March 13, 2007 from <http://www.unpan/un.org/intradoc/groups/public/documents/UN/UNPAN025283.pdf>

