



Leading Innovation within Public Organisations

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LEADING INNOVATION WITHIN PUBLIC ORGANISATIONS

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ABSTRACT

The government and non-profit sectors are faced with increasing pressures to adopt commercial orientations and competitive market responses. Managers within such organisations must lead innovation in the creation of new products, services and processes in order to survive. However, innovation is the offspring of creative, entrepreneurial minds with the willingness to take risks and commit to sustained persistent efforts. Managers within government and non-profit organisations are frequently challenged in achieving such innovation by structural impediments and 'sticky' organisational cultures. This paper examines these challenges and identifies pathways to overcoming such barriers with a view to unlocking the potential within organisations.

Key words: public sector organisations, innovation, non-profit organisations.

KEY CHALLENGES FACING PUBLIC SECTOR MANAGERS

Over recent decades there has been a sea change in the managerial environment facing organisations within the government and non-profit sectors. The overall level of complexity associated with the operation of such organisations has increased dramatically, along with greater demands for accountability and responsiveness to community needs. For many government agencies their role as regulators and planners is paramount. This traditional role has led to them becoming bureaucratic, centralized and technically specialised, but frequently obsessed with structure.

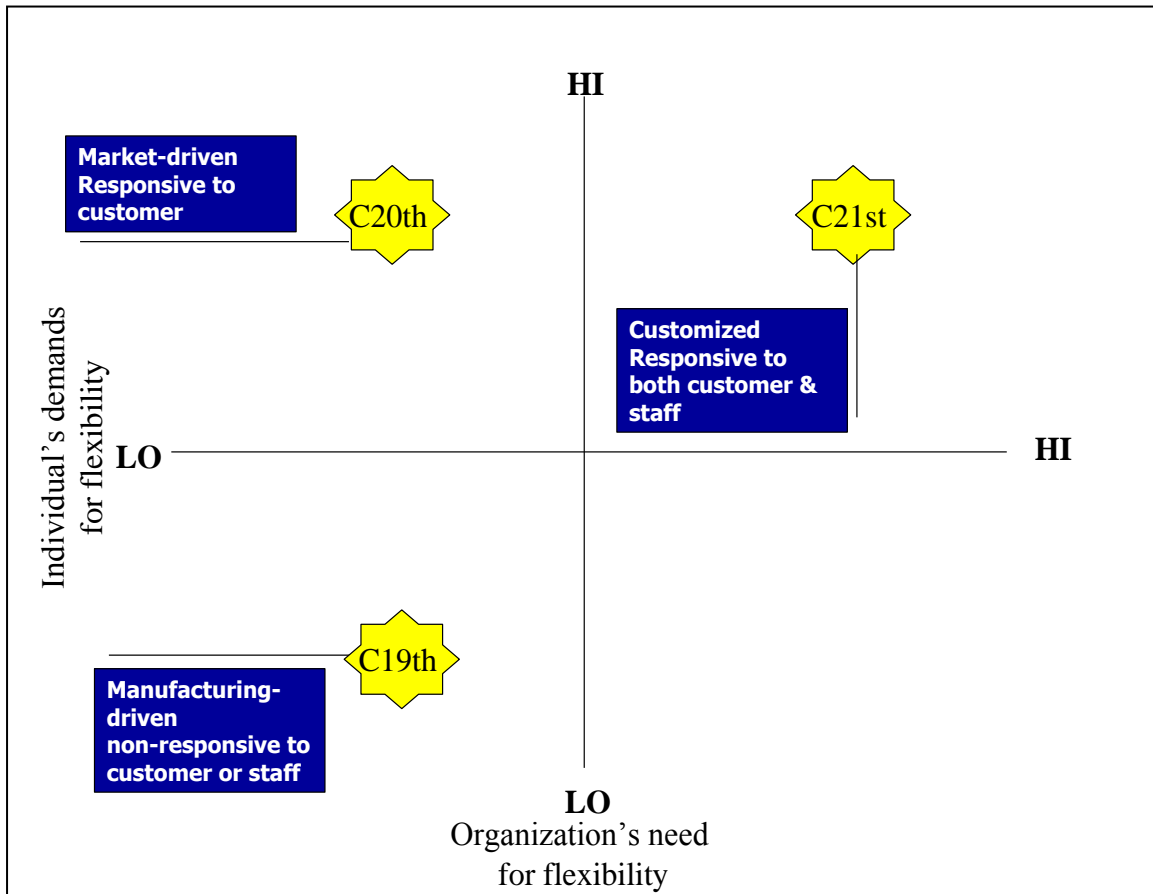
Over the past 20 years the rapid pace of social and technological change has challenging the traditional role of regulator government. Formerly bureaucratic agencies have found themselves facing significant obstacles from environmental lobby groups, community pressure groups, political parties and business. The complexity and cost of government has risen while State and Federal governments have begun to demand greater levels of accountability.

There is a need today for greater managerial skills and a reorganisation of the internal structures within public sector and non-profit agencies to achieve greater economies, better reporting and enhanced performance measurements. Public organisations must become more innovative and flexible, as well as responsive to their community's needs. This requires enhanced mechanisms for researching the needs of the community, as well as developing "customer focused" service provision (Baker 1994).

Managers have been caught within the dual forces of public policy pressures for their organisations to become more commercial, while needing to find increasing resources from tight budgets to offer high quality services to an ever more demanding public. Government and non-for profit organisations must now be led by highly professional management teams with the skills to be innovative and market or client oriented. As many organisations are service providers the demand for innovation and strategic flexibility is even more pronounced. Innovation in service organisations is frequently more intense than other types of business, and requires continuous interaction between the organisation's management and staff and its customers (Sundbo 2001).

MANAGEMENT PARADIGMS OVER THREE CENTURIES

To illustrate the nature of this shift in managerial environments we can examine the model of the three managerial paradigms shown in Figure 1 (Bouchikhi and Kimberly 2000).



Source: Bouchikhi and Kimberly (2000)

FIGURE 1: MANAGEMENT PARADIGMS OVER THREE CENTURIES

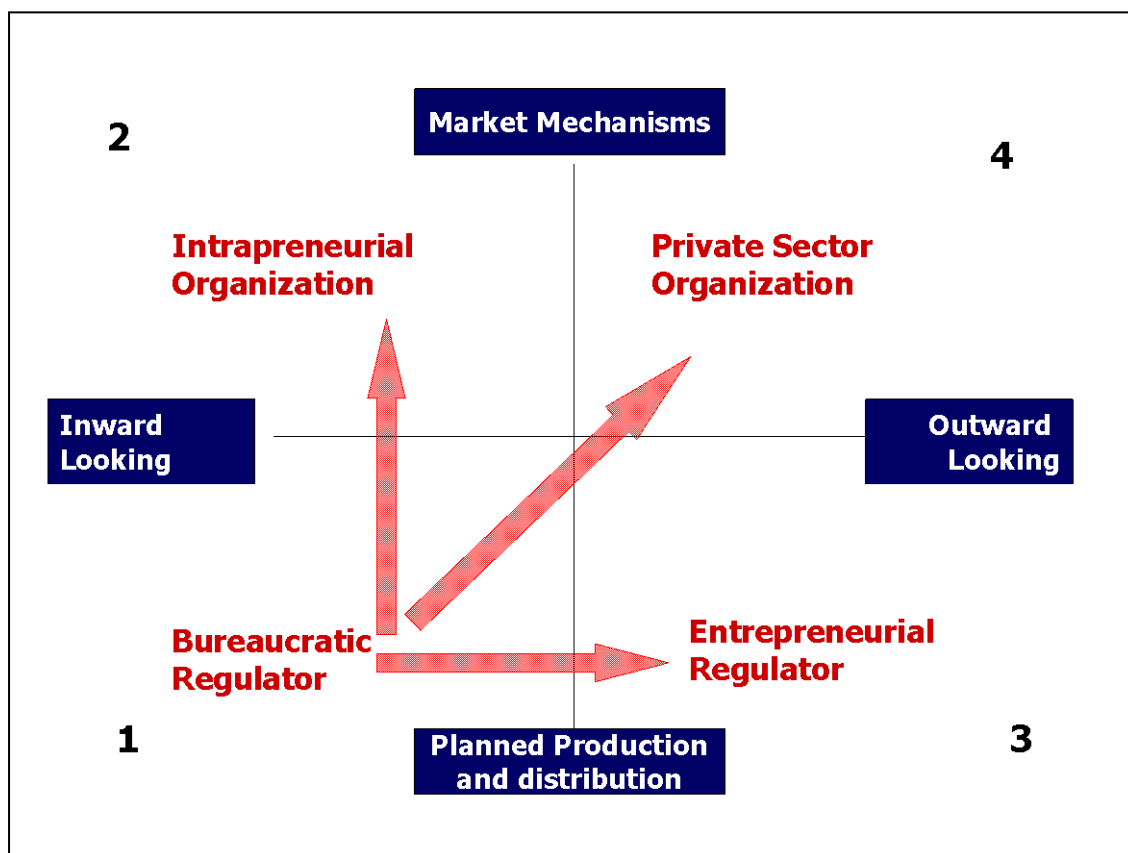
During the nineteenth century the most common management paradigm was that of the manufacturing-driven organisation. Standardization was the holy grail of managers who embraced the factory system and efficiency. Such companies were generally non-responsive either to the customer or their employees. The company needed little flexibility and its employees demanded little flexibility. Managers sought to adhere to the principles of 'Scientific Management' with its emphasis on efficiency (Taylor 1911).

Over the course of the twentieth century the competition within most markets increased and companies needed greater flexibility. Organisations became highly customer focused and market-driven. Competitive positioning within markets was a key management strategy (Porter 1980). This was particularly evidenced in their attempts to capture market share with competitive product offerings (Buzzell and Gale 1987). However, their employees remained less demanding for flexibility, with many content to serve dutifully in the same organisation for their entire careers.

In the twenty-first century not only does the organisation need to be flexible, but also its employees are now demanding greater flexibility (Bouchikhi and Kimberly 2000). There is less tolerance of routine work or desire for a long-term commitment to a single company. Employees demand more flexible work schedules, varied tasks, vacation periods and the ability to develop personally. This requires flexibility on the part of managers to consider not only the customer but also the human resource capital in the organisation. For serviced-based organisations this is a particularly critical consideration as it is the people that deliver the product.

THE ROLE ORIENTATIONS OF PUBLIC AGENCIES

How the twenty-first century public organisation manager responds to these challenges can be addressed via the model illustrated in Figure 2, which suggests that public-sector organisations have four role orientations that they can adopt (Baker 1994).



Source: Baker (1995)

FIGURE 2: ROLE ORIENTATIONS FOR PUBLIC AGENCIES

The first orientation – which is the more traditional role – is that of the Bureaucratic Regulator (Flynn 1998). As shown in “Quadrant 1” this is defined by an inward looking organisation focused on planning and regulated distribution of services. Such agencies are frequently self-absorbed with their bureaucratic systems and internal structures.

The second orientation “Quadrant 2” is more responsive to market forces but remains inwardly focused seeking increasing internal efficiencies rather than benefits to clients. Such an organisation is likely to be intrapreneurial (Pinchot 1987), but may still lack a strong focus on the customer or client’s requirements.

The shift to “Quadrant 4” sees the agency becoming outward looking and market oriented. Such an orientation is more appropriate to a private sector entity. Whatever its merits this position is likely to suffer from problems in dealing effectively with ‘public good’ issues where market forces cannot apply. Finally there is the orientation of “Quadrant 3”. Here they can look outward toward the community but without losing sight of their important role of regulator and planner. They must be responsive to the community while maintaining accountability.

In practice the public organisation will not sit entirely in any particular quadrant, but can shift its focus, as the task requires. In some circumstances there may be a need to move closer to the private sector model; while in other situations may call for a bureaucratic regulator. Of importance is the ability of the organisation to be innovative and flexible.

WHAT IS INNOVATION?


Innovation is a process of seeking market opportunities through identifying the value potential in existing operations and adapting them to generate new business or enhance existing business. Formal research and development (R&D) is not by itself innovation. However, R&D has been found to be a key factor in the success of product-innovative firms (AMC 1995). Successful innovation is frequently simple and understandable. Innovation is not intrinsically difficult and does not have to involve high risk (Baran, Zandan and Vanston, 1986).

A successful innovation is usually a response to a market need identified by the entrepreneurial organisation or individual (Sundbo 1998). Incremental rather than revolutionary change is usually more important (Quinn 1985). Most organisations with good track records in innovation make this a part of their culture (Brunner 2001).

To illustrate the nature of innovation let us examine the model shown in Figure 3. Tushman and Nadler (1986) suggest that there are at least two kinds of innovation: *product* and *process*. The first deals with the design and development of new products and services, or the improvement of existing ones, while the second deals with the way a product is made or a service is provided. Within each of these two categories are three degrees of innovation: *incremental*, *synthetic*, and *discontinuous*.

Most product innovations are incremental with minor changes or enhancements of existing technologies. These are usually made in response to increasing competition or in response to customer feedback. Once a new product is launched and established the process of incremental improvement throughout its life cycle is usually ongoing. In a similar manner, incremental process innovation seeks to continuously improve quality or lower costs via enhanced productivity or reduced cost.

As shown in Figure 3, *synthetic innovation* involves the ability to combine existing ideas or technologies in creative ways to produce new products or processes. In the 1930s the Douglas DC-3 incorporated the existing technologies already available within the aircraft industry, but did so in a combination that was superior to all other transport aircraft at the time. Boeing followed a similar approach in the 1960s with its B-707 airliner and IBM did this during the same period with its 360 family of mainframe computers. Synthetic process innovations usually involve major advances in manufacturing or production e.g. rotary kilns in cement manufacturing (Tushman and Nadler 1986).

	Product	Process	
Incremental	Incremental product change	Learning by doing	Small  Substantial Learning
Synthetic	Dominant designs DC-3, Boeing 707, IBM 360	Major process improvements Rotary kiln in cement manufacturing	
Discontinuous	Vacuum tubes to transistors Piston to jet engines	Individual wafer to planar process in semiconductor Float-glass process	

Source: Tushman & Nadler (1995)

FIGURE 3: TYPES OF INNOVATION

The *discontinuous innovation* category of product or process involves radical new ideas that provide breakthrough technology and advance industries to new levels. The shift from vacuum tubes to transistors, piston to jet engines in product innovation; or individual wafers to planar process in semiconductor manufacture, and continuous grinding and polishing to float glass manufacturing are examples (Tushman and Nadler 1986).

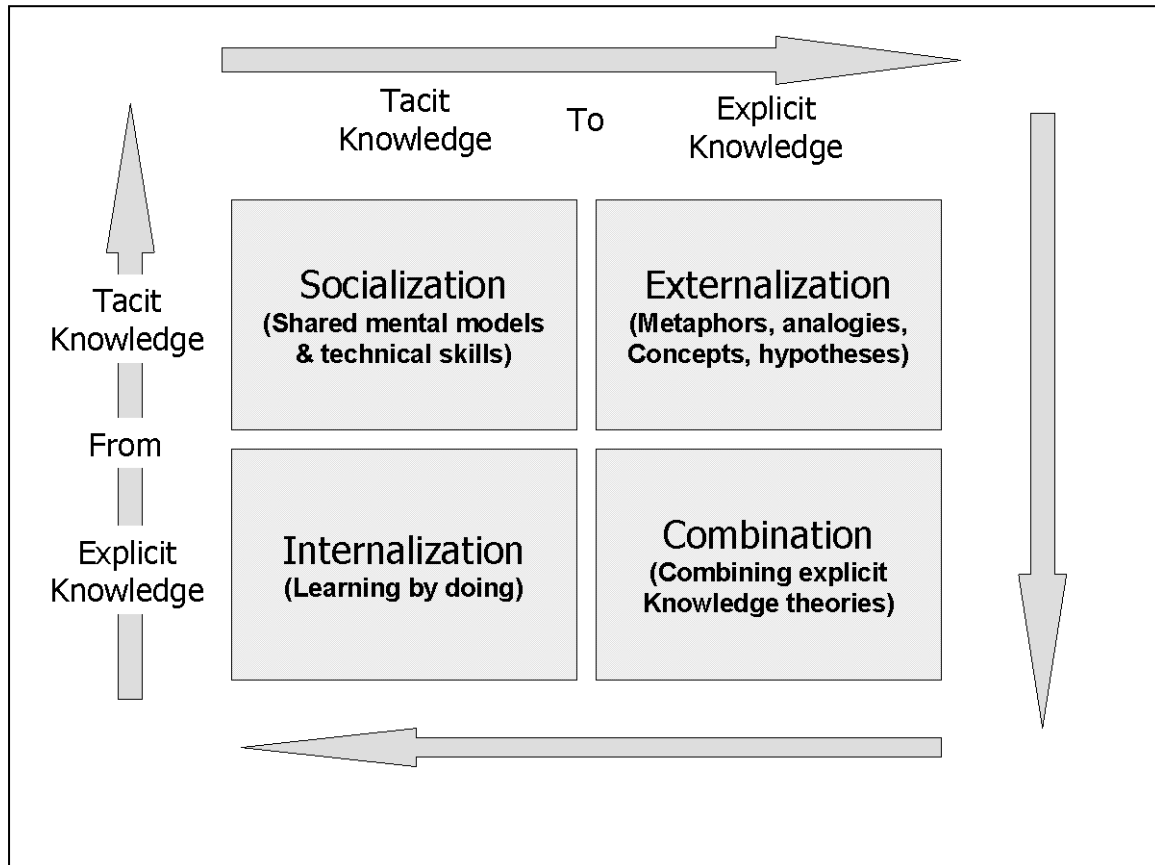
THE KNOWLEDGE TRANSFER PROCESS

A key aspect of innovation is the social interaction between individuals (Coates 2001). This social exchange offers the opportunity for the transfer of ideas and knowledge, particularly valuable tacit knowledge (Senker and Faulkner 1996). Tacit knowledge is that found within people’s minds as thought, insight, intuition and experience. Knowledge workers are engaged primarily in finding ways to create new information and knowledge that can be applied within the company for commercial purposes. The knowledge worker is therefore employed for their tacit knowledge and is skilled in applying it to solving complex tasks (Augier and Vendelo 1999).

Explicit knowledge by contrast is formal and systematic and explicitly recorded. Such knowledge exists within the company in the form of documents (both hard and soft copy). A large organisation will possess literally hundreds of thousands or even millions of documents worldwide. Modern information storage and retrieval

systems combined with information and communications technologies can enable such knowledge to be managed and disseminated efficiently (Civi 2000).

Nonaka and Takeuchi (1995) outlined the *Knowledge Spiral* model in their study of Japanese companies. According to this model there must be a transfer of knowledge from the tacit to the explicit and back again to achieve learning. Figure 4 illustrates this model.



Source: Nonaka and Takeuchi (1995)

FIGURE 4: THE KNOWLEDGE SPIRAL

As shown in Figure 4 there are four levels or categories of learning possible. The first of these is *Socialization* where tacit knowledge from one individual or actor is transferred to another via inter-personal communication and cooperation. For example, multi-functional teams of specialists joining forces to complete a project will share technical skills and mental models. The second type is *Externalisation* in which the tacit knowledge of one actor is revealed and transferred to explicit knowledge (e.g. via publication of findings). The third approach is *Combination* where two or more forms of explicit knowledge are linked together to produce a new level of explicit knowledge outcome. This is common in academic circles where the published theories or models of past researchers are combined together to form new theory. Finally, there is *Internalisation* in which the transfer is from explicit knowledge to tacit knowledge. Most students are familiar with this process whereby reading of books assists understanding and eventual internalisation of the ideas. For managers seeking to generate enhanced knowledge transfer it will be important to encourage social interaction between employees and recognize that learning is likely to take time and require resources.

INNOVATION IN PUBLIC ORGANISATIONS

A study undertaken in the United States with state and local government senior managers focused on the role of innovation and how this might operate in practice (Zegans 1992). When asked to define the concept of innovation for public sector management the following key ideas were identified:

- Innovation is a tool for improving agency performance, not an end in itself.
- Innovation is the process of implementing an idea, or enacting a technology, novel to a given situation.
- Successful innovation depends more on implementation skills and political savvy than on creative thinking.
- Innovation is an intrinsic part of the public manager's job.

The purpose of innovation, according to these managers, was to improve productivity, increase proficiency and advance policy. They drew a distinction between 'policy' and 'innovation'. The former was the responsibility of 'politicians' and involved establishing broad purposes. The latter was more the domain of the public sector manager. This involved developing the means to achieve the purposes identified by the policy makers.

It was acknowledged that high levels of innovation are possible within public sector management. To achieve this there must be 'discretion' granted to managers to adopt new innovations. In 'healthy' public sector agencies, employees innovate as a normal part of their normal practice without 'subverting' routine or regulations. In 'dysfunctional' agencies employees showed little initiative and those who attempted to be innovative were generally isolated and forced to 'go around the system' to see through their ideas.

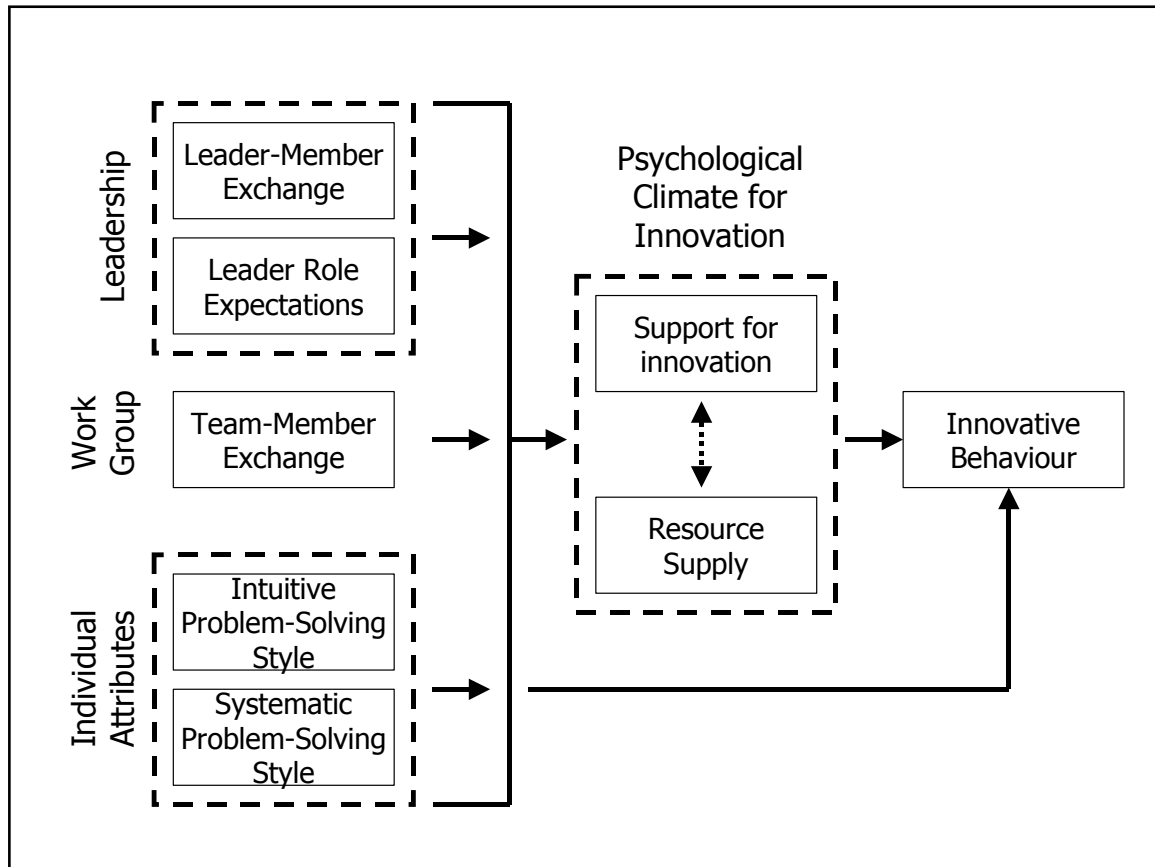
The role of a senior manager in a public sector agency was viewed as critical to the successful encouragement of innovation. To achieve this senior managers need to find ways to create a climate and culture within their organisation where employees feel 'comfortable' in coming forward with new ideas and also pointing out when things go wrong. The key challenges for senior managers appear to be:

1. **Overcoming complacency** – the tendency for public organisations to become complacent must be overcome. To achieve this they must foster problem-solving attitudes among their staff and direct attention outside the organisation to community needs. Employees should also be made accountable for their actions. The organisation should also become more customer or client focused.
2. **Empower employees** – to empower employees the senior manager must first overcome the fear of reprisals that frequently infects public organisation staff who seek to take the initiative. Training and support to new venture or project teams is one avenue.
3. **Communicate** - Opening up the lines of communication to allow good ideas to surface is critical. This involves role modelling for junior staff, and signalling intentions clearly. There should be a full and timely disclosure of relevant information. Employees should do likewise.

THE DETERMINANTS OF INNOVATIVE BEHAVIOUR

Research into the factors likely to influence innovative behaviour among employees highlights the importance of leadership and role modelling by senior managers (Scott and Bruce 1994). The theory suggested that innovative behaviour was likely to be influenced by the level of support for it among senior managers and the availability of resources comprising the 'psychological climate for innovation'.

As shown in Figure 5, the level of support given to innovation and the availability of resources to carry out the innovation potentially determines the psychological climate for innovation within the organisation. The antecedents of this climate of innovation are the leadership within the organisation, the work group dynamics and the attributes of the individual employees. Key factors within the leadership are the leader’s expectations of the role employees will play in the innovation process, and the nature of the interaction that takes place between the leader-manager and the employee. Also important is likely to be the individual employee’s attributes – particularly their problem-solving style – and the level of interaction among employees within the work group (Scott and Bruce 1994).



Source: Scott and Bruce (1994)

FIGURE 5: THE DETERMINANTS OF INNOVATION

The study found that innovative behaviour among employees was positively associated with the level of support for innovation engendered within the organisational culture or climate. This was more important than the availability of resources for undertaking innovative activities. Further, the expectations that managers or supervisors were seen to have toward innovative behaviour was also a significant influence. Where employees understood that managers expected them to behave in an innovative way they were more likely to respond. Supporting this was the overall quality of the relationship between the manager and the employee and how that exchange served to reinforce the manager’s commitment to innovation within the organisation (Scott and Bruce 1994).

What this study highlights is the critical importance of leadership within organisations that are seeking to become more innovative. Only where managers serve as role models and communicate their desire for

innovation and how such innovation may be achieved, will employees respond with strong innovative behaviour.

THE PROBLEMS OF MANAGING INNOVATION

According to (VanDenVen 1986) the key problems associated with the management of innovation are four fold. The first of these is the human problem of managing attention. By nature people tend to focus on maintaining the status quo and harvesting established technologies rather than seeking new solutions. Further, the more successful an organisation is, the more complacent its people can become.

The second problem is related to process, specifically how to get innovative ideas from people's heads and into the marketplace. Here the social and political dynamics of innovation become paramount as managers seek to get the support and financing required take innovations through the product development cycle. In Europe many large service organisations have established innovation departments that seek to capture and evaluate good ideas and assess their feasibility (Sundbo 2001). These are not new product development departments, but knowledge management groups.

A third problem is associated with organisational structure. Here the manager must find a way to integrate a variety of functional responsibilities and intellectual or professional disciplines together to achieve optimal outcomes. This places pressure on the structure and culture within the organisation.

A common characteristic of the innovation process is that multiple functions, resources, and disciplines are needed to transform an innovative idea into a concrete reality – so much so that individuals involved in individual transactions lose sight of the whole innovation effort. How does one put the whole into the parts? (Van Den Ven, 1986).

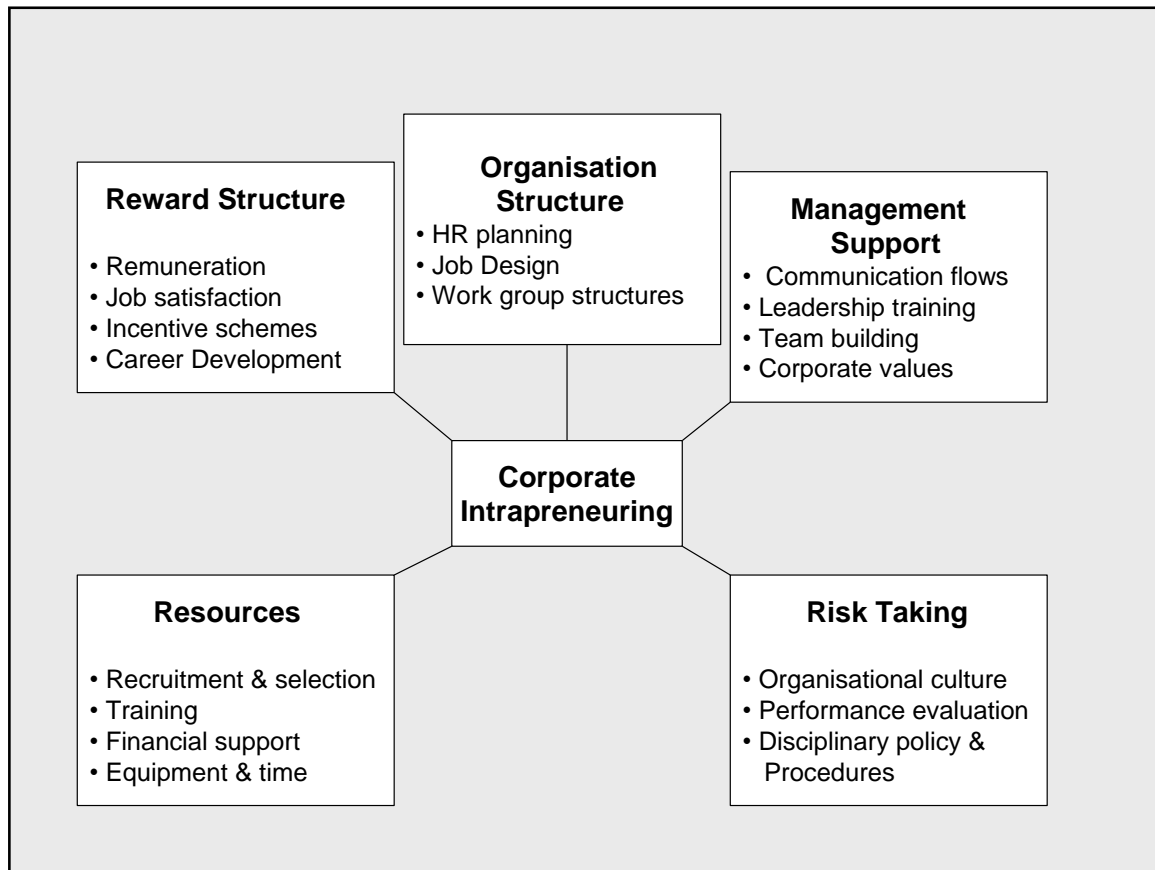
Finally there is the problem of strategy. Innovations lead to dynamic change within the organisation and within industries. Because change is frequently risky and difficult for organisations there must be strong institutional leadership to guide change and find ways to transform the structure and culture. Dealing with these problems and finding successful ways to overcome them are the key focus for managers seeking to effectively manage innovation.

ORGANISING FOR INNOVATION AND CORPORATE INTRAPRENEURING

Savery and Mazzarol (2000) have identified the key elements required within a large organisation to encourage corporate intrapreneuring (see Figure 6). The first of these is an appropriate *reward structure*. Reward systems need to be tailored to encourage innovation and risk taking. To be effective they need to consider such things as – goal setting, feedback, individual responsibility and reward for effort. Adequate reward systems need to reinforce and enhance innovative, creative behaviour. Organisations must be characterized by providing rewards contingent on performance providing challenge, increasing responsibility and making the ideas of innovative people known to others in the organisational hierarchy.

There must also be adequate *management support*. Both middle and senior management needs to be encouraged to accept the challenge of new innovative ideas. Managers and employees must be encouraged to believe that innovation is part of their role within the firm. It is important to have systems in place to quickly adopt new ideas and recognize those who contribute such ideas. Support mechanisms for small experimental projects need to be put in place with appropriate seed capital to help get innovate ideas off the ground. *Resource* allocation within the organisation must also be examined. Allocation of scarce resources to competing projects with different levels of risk and return is a major task of an organisation seeking to encourage

corporate intrapreneuring. Employees must be encouraged to make best use of scarce resources and learn to adapt and improvise. The fostering of new and innovative ideas requires that individuals have time to incubate these ideas. Organisations must moderate the workload of people, avoid putting time constraints on all aspects of a person’s job, and allow people to work with others on long-term problem solving.



Source: Savery and Mazzarol (2000)

FIGURE 6: AN HRM FRAMEWORK FOR CORPORATE INTRAPRENEURING

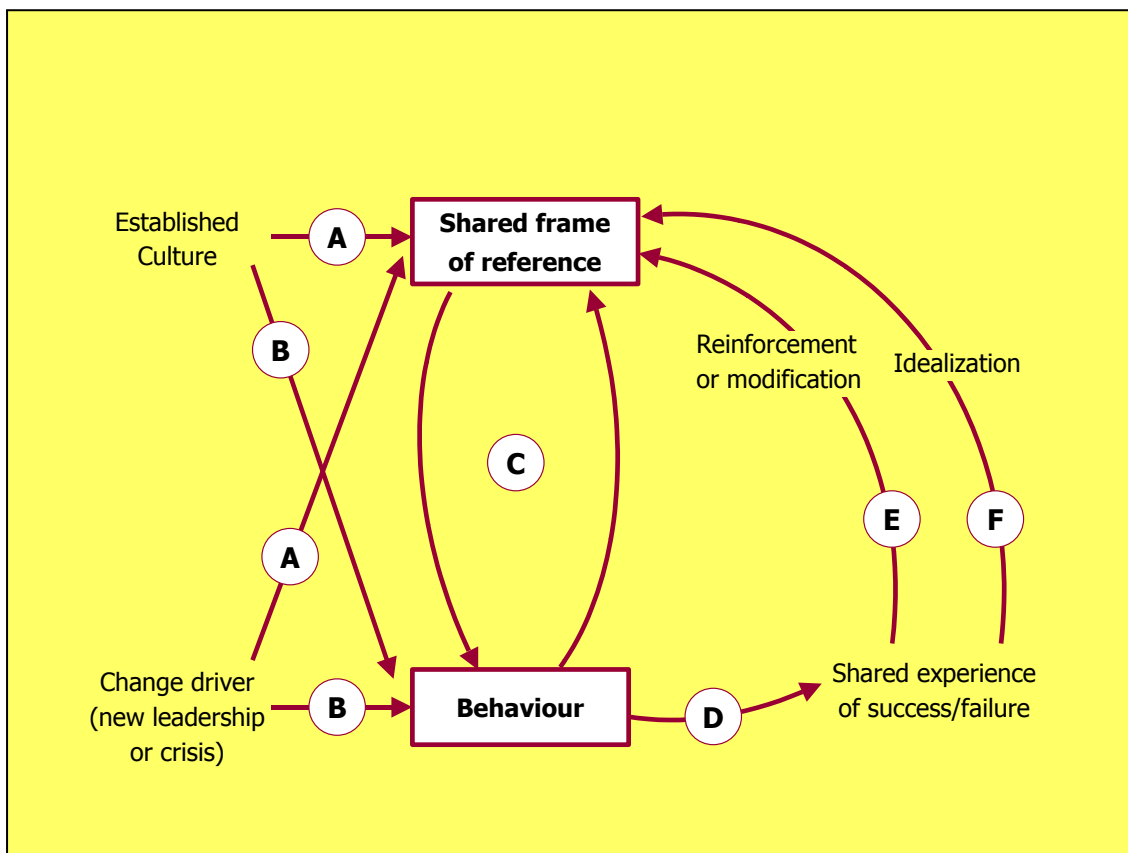
The organisation’s *structure* should seek to reduce bureaucracy and enhance the flow of resources, management support and rewards. Employees should be encouraged to look at problems from outside their own narrow job perspective. Organisations should avoid having standard operating procedures for all major parts of jobs, and should reduce the dependence on narrow job descriptions and rigid standards of performance.

Finally, it is essential for any successful intrapreneuring process to create an environment that encourages risk taking by managers and employees. Achieving a balance between controlled risk taking to achieve innovative success and harmful excessive *risk taking* is a major challenge. The creation of an organisational culture that is tolerant of controlled risk taking is an essential step. This needs to be supported by structures that permit managers to undertake risk taking within prescribed limits.

IMPLEMENTING CHANGE

According to Lewis (1999) the process of implementing change within an organisation involves only two fundamental approaches, despite the numerous theories that have been developed around this issue. The first of these is the ability to change the people within the organisation. While the second is the ability change the frames of reference or perceptions held by people.

Changing the people can involve a range of activities including the recruitment and selection of new personnel or the ‘de-selection’ of unsuitable or incompatible staff. Retrenchment of employees is a common outcome of major turnaround strategies or change programs and therefore has a negative image. However, people can also be reassigned to new roles, or promoted into new more exciting positions.



Source: Lewis (1999)

FIGURE 7: BASIC MECHANISMS AVAILABLE TO DRIVE CHANGE

Perhaps the most difficult aspect of change implementation is the need to *change frames of reference and behaviour* among people in the firm. Lewis (1999) suggests that there are three variables that need to be considered. The first of these is the *interdependence between behaviour and frames of reference*. This relates to the way human behaviour within the firm is co-dependent on individual’s perspectives or frames of reference. Many organisations have unwritten ground rules that determine “how things really work around here”. Such issues lie at the heart of organisational culture and must be considered in order for the manager to fully implement change in the firm. It may be difficult to even fully identify such issues if they are hidden.

The manager also needs to consider the influences of *reinforcement* and *idealization*. The first relates to the ability to shape behaviour and perceptions by positive or negative reinforcement. The second is the embedding of the new ideas or values (frames of reference) into the corporate psyche until it is 'main stream' and becomes a force that cannot easily be removed.

Lewis (1999) offers a model (see Figure 7) for the implementation of change within an organisation. This commences with the need to exert influence upon existing beliefs or perceptions currently imbedded within the organisation. Managers seeking to achieve change must exert pressure on the *shared frame of reference* within the employees [A], but this must compete directly with the existing influences from the *established culture* [A]. In conjunction with this need to shift perceptions is the need to attempt to change behaviour [B]. Once again the established culture will compete with the new forces being applied.

An important process is the interaction between the *shared frame of reference* and the *behaviour* [C]. Communication flow between managers and employees is obviously of significant importance to the way this interaction impacts on the change process. It is via this process that the perceptions of the employees can be shaped and altered, leading in turn to altered behaviour.

The shared experience of success or failure in the change process [D] is likely to determine the ability of the manager to fully implement the change. Points [E] and [F] in the model define the ability of this success/failure experience to both reinforce the changes and become embedded in the organisational psyche (e.g. *idealization*).

LESSONS FROM INNOVATION WITHIN PUBLIC AGENCIES

In conclusion we can make reference to several lessons that this author has learnt from being involved in innovation and change programs within government agencies and non-profit sector organisations over recent years:

LESSON 1 – BE WILLING TO CHANGE

The organisation specifically its leadership and employees must be willing to change and adapt and not resist the new idea or the pressures from outside. Use external change agents if required to assist the process. Innovation is a process of change and continuous innovation requires continuous change. For most people change can be unsettling and constant significant change can lead to *change fatigue* setting in; where employees become resistant to new ideas and initiatives. The change process requires the unfreezing of existing frames of reference and behaviours, the implementation of the change and then the refreezing of the culture (Lewin, 1946).

LESSON 2 – BUILD ON FIRM FOUNDATIONS

Base any future change process on sound research and facts, not opinions and here say. Another strategy is to commission independent studies to identify problems and evaluate options or ideas. The possession of well-supported facts offers the change management team a solid base from which to tackle opposition or resistance. Change programs built on solid theory and good research are more likely to succeed and they can be more readily sold to key stakeholders both within and outside the organisation.

LESSON 3 – HAVE A CLEAR STRATEGIC VISION

The senior leadership of the organisation and their Boards or Ministers must be focused on the same goals and share the same sense of purpose. This is likely to be the most difficult process for many organisations. Shared

vision emerges via a strategic dialogue that takes place between the organisation's senior leadership in which they share perceptions and beliefs about such key issues as the market environment, political forces, competition and internal organisational climate and culture. It is critical for senior managers to 'make their beliefs visible' to each other (Lorsch 1986). Only after such a strategic dialogue has been held can the management team fully understand each other's perspectives and develop a unified vision for the future.

LESSON 4 – SHIFT MINDSETS

Be politically savvy and devote time to winning over employees and key stakeholders by selling the need for change using the foundations of facts gathered in point two. According to Quinn (1980) the manager seeking to achieve strategic change needs to first *create awareness and commitment* for the need to change. This can be achieved by sensing the needs of people or the development of supporting networks of like-minded people willing to assist the change process.

Further, the manager should seek to *amplify understanding and awareness* by communication and consensus building rather than the usual managerial process of 'satisficing' (in which almost nobody is totally happy). Managers also need to take care when introducing new ideas not to 'step on the toes' of those who have been responsible for past strategies. Taking such care can assist in *legitimising new viewpoints*.

In seeking to implement strategic change the manager needs to engage in a trial and error process that is likely to involve *tactical shifts and partial solutions* as they seek to massage the firm towards achieving their visionary goals (Quinn 1980). This may be particularly important if the change has to deal with entrenched cultures that might be resistant. As a change agent, the manager needs to recognize the value of winning support for the change across a wide cross-section of areas with the firm. To achieve this they need to *broaden political support* through committees, task forces and strategic retreats. If faced with opposition (more common in normal or good times than during a crisis) the manager may need to seek out *zones of indifference* where the new ideas will not meet resistance and find *no lose* situations where various stakeholders can engage the change without fear of loss. Managers may also need to create resource 'buffers' or 'slacks' into their planning to ensure that there is flexibility as the change process moves forward. Also key will be the existence of 'activists' who are ready to serve as champions and leaders of change. Patience and willingness to trial new concepts are also important in this process.

LESSON 5 – ENCOURAGE INNOVATION

Finally, encourage, reward and reinforce a commitment to innovation among all employees. As noted earlier in this paper, the likelihood of employees displaying innovative behaviour is contingent on the creation of a climate of innovation within the organisation. While the inherent creativity and enterprise of individual employees is important, the key appears to be the capacity of the managerial leader to communicate their expectation of innovative behaviour among employees, and to reinforce this through ongoing communication. Further, once the senior management of the organisation have made a commitment to innovation they need to support this in tangible ways through the reward and remuneration systems and the organisational structure.

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