Innovation and Risks
Consortium Study

Initial Insights Report

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1 Executive summary

This report represents the first major output from the Innovation and Risk Consortium study. The study has been sponsored by nine public sector organisations, as the group seeks to improve the performance of their individual organisations.

The study commenced in January 2005 when the group confirmed the aim, scope and objectives of the study. A literature review has been conducted into the areas of innovation and risk management, and this review has called on a number of sources including academic literature, business literature and Government publications. The review led to the identification of a draft framework for the study, which was subsequently modified at the Initial Insights meeting to give five elements:

- Organisation and governance
- Innovation and risk culture
- Innovation and risk processes
- Learning and improvement
- Delivery

On reviewing the insights that were identified through the literature review, the group populated the framework, identifying a number of critical success factors for each element. The output from the meeting has been included in this report.

The next stage will be to move into the 'Execution' data collection phase, which will commence with a screening survey to identify potential good practice organisations. The next meeting of the group will be the 'Site Visit Selection' meeting, where between four and six organisations will be identified for teams to visit to observe and document good practices.

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2 Introduction

2.1 Purpose of the document

The purpose of the report is to share the initial insights that have been identified so far from the literature review. A framework for the benchmarking part of the '*Management of Risks to Support Innovation'* study is proposed based on our analysis of the literature. This framework consists of five elements: organisation and governance, risk culture, risk process, learning and improvement, and implementation.

The Achieving Extraordinary Performance through Innovation and Risk Management framework and initial insights will be used as a guide throughout the remainder of the study. They will form the basis of the questionnaire and be used as a discovery tool during the site visits and a reference point during the analysis.

Although the structure of the framework, once agreed, will not change, the content of the framework once developed will be under constant review. The content will be built from the insights following the final issue of this report. These insights and the detail of the framework will evolve as the study progresses.

2.2 Aim and scope of the study

Following the kick-off meeting held in London on the 24 January 2005, the aim of the study was confirmed and the scope and research questions refined. The aim of the study is:

> *To research, identify and promote outstanding practice in achieving extraordinary performance through innovation and effective risk management.*

The scope was modified to reflect the focus on risk within the context of innovation and from the perspective of the subject studied is now as follows

- Investigating and understanding the drivers of innovation and risk management that lead to extraordinary performance in both private and (wider) public sector organisations
- The management of risks to enable performance through innovation (including relationship between risk management and audit functions)
- The management of the implementation of innovation through to implementation
- Product, service and performance innovations, with and without a technology element
- Management of stakeholder expectations in relationship to risk management
- Communication of risks
- Assessment of an organisation's appetite for risk

The study seeks to find answers to a number of questions within its defined scope. This insights report makes some progress towards addressing these questions, but they will not be fully answered until we complete the study. These questions were:

1. How do organisations create the understanding, expectation and desire to innovate and take risks in order to achieve extraordinary performance?
2. How do organisations manage opportunity and associated risk to maximise performance gains effectively?
3. How do organisations actively promote creativity, innovation and risk management to encourage a radical approach to improvement?
4. How do organisations manage transformation projects to achieve step change in performance?
5. How do organisations create an environment/culture that supports and encourages considered risk taking?
6. How do organisations embed the approaches into the day-to-day activities for everyone?
7. What are the key enabling processes that support effective innovation?

2.3 How we went about the task

This insight report draws from a wide array of literature from a number of sources including company case studies and articles, academic viewpoints, business practitioner viewpoints and government publications. The search criteria included risk management and innovation management, and an overwhelming amount of literature was discovered. As with any research there may have been some sources that were not included in our search, but as these become available they will be added to our growing body of knowledge.

The literature identified was summarised to extract the relevant information in the context of the study. Based on this information, a further in-depth analysis was conducted to draw out the main learning points. This included categorising the themes within the literature to form the proposed study framework. The analysis also led to the identification of a number of insights, which will be used to populate the framework in preparation for the benchmarking aspect of the study.

The study framework developed from the literature review will be refined and agreed with the study group at the insights meeting on 1 April. It is expected that the information will undergo further refinement at this meeting. The final framework, once agreed, will form the guiding model for the benchmarking study and be the basis for the questionnaire and site visits.

The insights in Section 5 provide example practices and their value to managing innovation. In addition, details are given from which source the supporting evidence came from:

Co = Company case study/ article

Av = Academic viewpoint

BP = Business practitioner viewpoint

GP = Government publication

2.4 Structure of the report

Following this introduction, which sets out the purpose, context, scope of the document and explains how the insights report has been compiled, Section 3 details the Achieving Extraordinary Performance through Innovation and Risk Management framework and Section 4 an overview of the insights identified through the work. The final section, section 5, provides the insights, example practices and their value to managing innovation. This section has been structured in line with the proposed framework.

In a further document - the Body of Knowledge - we have compiled the extracts from the literature upon which this insights report has been based. The document will be available separately on CD and provides details on each of the insights. The document is also structured according to the five elements of the Achieving Extraordinary Performance through Innovation and Risk Management framework.

2.5 List of definitions

One of the early issues identified was the lack of consensus on the terms in the literature. As a consequence Table 1 lists the terms we adopted for the study.

Table 1: Glossary of Terms

Term	Definition
Innovation	Innovation is the successful exploitation of new ideas. It's about turning novel ideas and knowledge into the new, high value-added products, processes and services that will give UK businesses a competitive advantage in a world of constantly changing consumer demand and technological development
Issue	A problem, query, concern or change request that affects the programme (or project) and requires management intervention and action to resolve
Risk	Uncertainty of outcome, whether positive opportunity or negative threat, of actions and events. It is the combination of likelihood and impact, including perceived importance.
Risk Management	Maximising the expected outcome; avoiding catastrophe; and dismissing extremely remote or unrealistic probabilities
Stakeholder	An individual, group or organisation having a vested interest in, or influence on the business outcome of the activity.

3 Achieving Extraordinary Performance through Innovation and Risk Management framework

3.1 Introduction to the framework

The analysis and synthesis of the literature revealed five critical factors that enable innovation through robust risk handling in organisations. These factors were used to generate a framework for the study, which was shared at the Initial Insights meeting.

The main conclusion from the Initial Insights meeting debate was that the original framework lacked the required focus on innovation, being too focused on managing risks. The participants initially viewed Innovation and Risk management to be explained by two complimentary models, but at the end of the discussion it was agreed that a single framework could be used to incorporate both viewpoints for the purposes of the study. The changes between the original framework and the agreed framework were as follows:

- Risk culture changed to Innovation and risk culture
- Risk processes changed to Innovation and risk processes
- The 'General' category and 'Implementation' combined to form a new category 'Delivery'.

In addition to the main factors for the framework, prior to the Initial Insights meeting the project team had analysed the literature to generate a number of insights. These were initially structured around the original framework, but in Section 4 and Section 5 these have been reworked into the new framework structure. Clearly there was a certain amount of overlap, although this was to be expected given that any improvement actions undertaken would need to take a holistic approach.

The main output from the Initial Insights meeting was to generate the detail that supports the framework. This will be used throughout the study and will form the focal point of the screening questionnaire, which will be the next stage in the study approach. The following sections capture the output, but before we cover this output, the elements of the framework have been defined:

> The *Organisation and Governance* dimension is concerned with how the organisation sets strategic direction, how it is organised and structured and about the functions and responsibilities required to facilitate extraordinary performance through innovation and risk management. In addition it looks at issues regarding controls, risk appetite and organisation-wide integration.

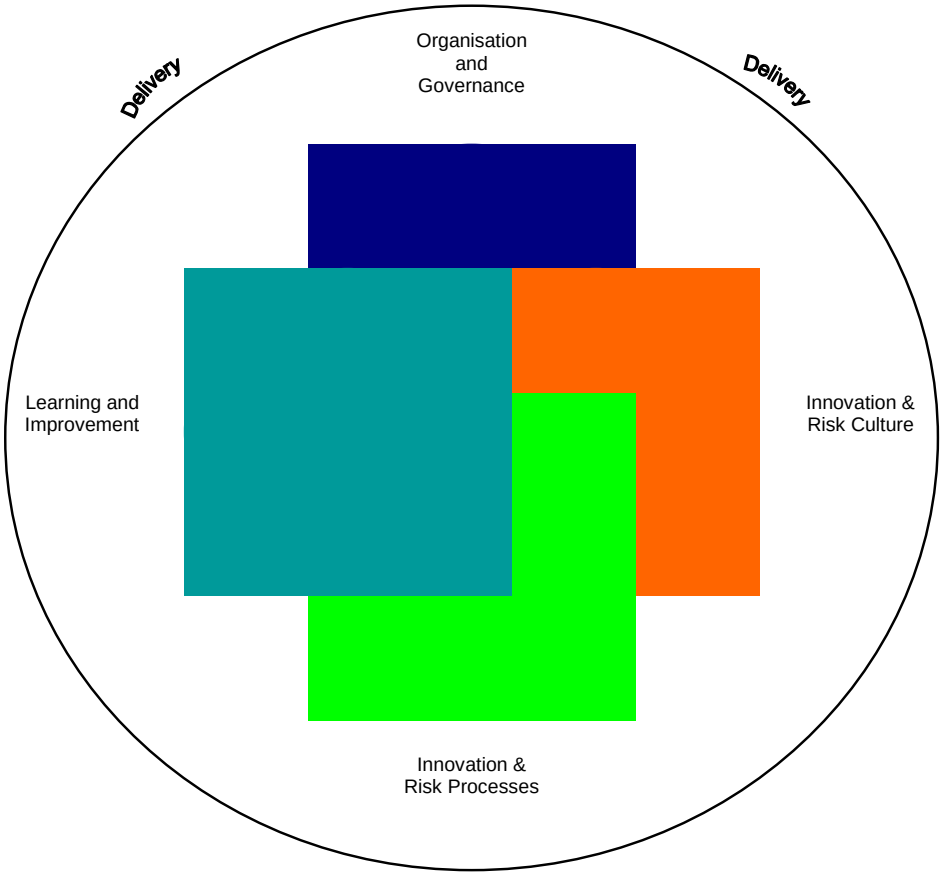

Figure 1: Achieving Extraordinary Performance through Innovation and Risk Management framework

Innovation and Risk Culture deals with aspects about how things are done in organisations. It is a way of making sense of what you are doing and why you are doing it and addresses attitudes, behaviour, personal qualities and general people issues. Characteristics of culture are that it is patterned (i.e. repeated), shared, learned and is cumulative within a social structure. Culture may be determined through a number of factors, such as the organisational and power structures, symbols, stories, rituals and routines, and control mechanisms.

The *Innovation and Risk Process* element of the framework provides details on approaches, techniques and systems that can be employed for managing risk to support innovation and how innovation informs risk management processes. Features such as planning, assessing, controlling and improving are covered here.

Learning and Improvement is about how individuals, teams and the organisation as a whole learn from others and from past experience. Although included to some extent under *Innovation and Risk Processes,* this element has been kept separately as it was felt to be an important ingredient of successful innovation and risk management processes.

Insights into *Delivery* include practices that help with the adoption of good risk management and innovation, and applying it into the organisation's processes and decision-making structures to ensure delivery of outstanding performance through an appropriate balance of innovation, opportunity and risk.

3.2 Framework detail

The following outputs were captured in response the question '*What are the critical success factors under each element of the framework*?' The output has been captured by the elements of the framework.

3.2.1 Organisation and governance

- Clarity of organisational purpose and strategic direction/ objectives at board level;
- First class leadership;
- Agreed and embraced organisational values and principles;
- An organisational structure aligned to objectives that encourages innovation;
- Well defined accountabilities for delivery and risk;
- A clear and transparent decision making process;
- Effective Stakeholder engagement that recognises different needs of customers/partners'
- Well defined and supportive assurance mechanisms;
- Appropriate and aligned processes and well-defined control framework that;
    - Are understood and the benefits are appreciated;
    - Ensure performance measurement is linked to organisational objectives;
    - Support prioritisation for desired outcomes;
    - Facilitates innovation;
    - Align innovation and risks with strategic objectives;
    - Include risk and innovation maturity assessment supplied with appropriate performance metrics;
    - Has a senior champion with necessary attributes to secure implementation;
- Alignment of HR strategy and policies to support achievement covering such areas as competency requirements, pay and reward, recognition, career and succession planning.

3.2.2 Innovation and risk culture

- Values communicated across the organisation
- Leaders who lead by example
- Reward system consistent with values
- The ability to recognise and manage different cultures within the organisation
- The wisdom of knowing when to stop innovation
- The ability to learn from mistakes
- A culture that avoids blame
- An environment that encourages considered risk identification
- Personal accountability linked to organisational objectives
- Personal ownership of own behaviour
- Implementation of appropriate HR system (training recruitment, objectives etc)
- Awareness of token of contribution, paying lip service

3.2.3 Innovation and risk processes

- An understanding of how innovation informs risk management
- Need to identify risks (how, where etc)
- Risk management embedded in core processes
- Cost effective controls
- Effective challenge as part of process
- A measure of capacity, capability and timing
- A strategy for countering innovation fatigue
- A review of the effectiveness of mitigation
- Documented risks
- Awareness of how organisations use software to support decision making
- Integration of performance and risk management
- Integration of innovation and risk management at different levels
- A process for capturing ideas for future use
- Awareness of the need to challenge assumptions
- Translating ideas, opportunities, innovation
- Visibility of risk management process
- Toolkits for managing risks

3.2.4 Learning and improvement

- Sharing not imposing good practice from internal and external sources
- Learning from bad practice
- Understanding of success factors
- Networks and risks champions
- Learning from near misses
- Clarity of what risk and innovation mean
- Training on and off the job
- Horizon scanning, what goes wrong
- Understanding of end to end processes and RACI, good and bad practice
- Understanding of own maturity in applying process
- Learning built in to projects and processes
- Knowledge and learning available cross -functional, - team, - project
- Awareness of different needs for different processes, generalist, specialist
- Managing volume and pace of innovation

3.2.5 Delivery

- The ability to sell the benefits of risks
- Identification of quick wins - and winning
- Established performance metrics
- The ability to determine benefits/ organisational outcomes of innovation and risk management
- Institutionalised innovation and risk management - making it part of everyone's day to day activities (Enterprise Risk management)
- Understanding of the critical success factors for specific organisations
- Integrated risk management at all levels: strategic, programme and operational level
- Risk management as part of decision making
- Risk management as part of strategy
- Processes to consider risk Vs rewards/benefits
- An approach to prioritising innovation
- Managing innovation, portfolio, choices, use of tools

4 Overview of the insights identified so far

This section provides an overview of the insights detailed in Section 5. As indicated earlier, the Achieving Extraordinary Performance through Innovation and Risk Management framework shows a certain degree of overlap between the various elements. We have found that, for example, communication, continuous practices such as monitoring, integration of approaches and holistic models are frequently recommended aspects that appear across the framework.

Organisation and Governance

Organisation

Building cross-functional teams to foster buy-in from everyone who is affected by or involved in the technology ensures necessary commitment from stakeholders and aids identifying possible difficulties. Research shows that a number of personal qualities of people such as thoroughness, persistence, discretion, persuasiveness, and comfort with change facilitate the creation of innovative activities. It is frequently suggested to have a dedicated role of a Chief Risk Officer who is responsible for risk management. This will ensure a single point of contact at senior level within the organisation. A good way of increasing knowledge of risk management in the organization and to share good practices is by forming a community of practice.

Using Enterprise Risk Management (ERM), as a systematic, holistic approach to managing risk at a business-wide level has been shown to improve operational efficiency, the management of working capital, and reduce or stabilise a company's overall cost of capital. It also helps to develop more effective working relationships with risk management partners

Governance

The Board should understand and oversee major risks and ensure robust risk-management capability is in place addressing Board structures, Board risk reporting, Board education and expertise (about risk) and Board processes. Ensuring there is consistency across business units in the way that risks are identified, measured and assessed needs to be part of the strategy and this prevents problems. Similarly, enterprise risk management provides the opportunity to make better-informed decisions in relation to strategic objectives.

Innovation and Risk culture

The research indicates that culture is an essential foundation to building an environment for supporting risk management and innovation. Risk culture is the degree to which management recognizes the need for risk management competency and capability within the organization and comprises a number of key attributes including leadership and strategy, accountability and reinforcement, people and communications and risk management and infrastructure. An organization with a strong risk culture is committed to the establishment of standards and protocols for identifying, assessing and managing risks. Moreover, the literature indicates that innovation is the outcome of management that is strategic and leadership that is

visionary and a contributing factor of innovation is the communication of when the organisation can “take” or “seek” risks. A number of tools were identified that enable the assessment of the risk culture.

Innovation and Risk process

The qualitative assessment of risks using a simple classification system is a common approach. This can ease decision-making and is likely to be less time consuming than a complex quantitative approach. Continuous monitoring is a common process step whereby successful risk management is linked to the achievement of organisations’ objectives. In addition, establishing a communication strategy is a key activity that ensures the implementation of actions.

There is a debate as to whether managing risk and managing issues should be treated separately or part of an integrated system. Risk management may also be applied in different stages of the project life cycle making it a dynamic technique. It helps continuous identification of risks.

One of the major outputs from this area is a proposed process architecture for managing risks. The high-level process is given in Figure 2. The decomposition of the processes is given in Section 7

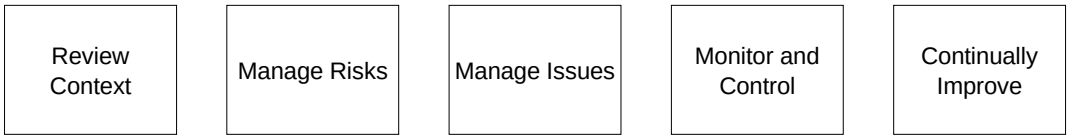

Figure 2: High-level process for managing risk

Learning and improvement

The literature points out that learning from experience is valued in a culture of innovation and risk management. Organisations can use tools such as project evaluations and fault tree analysis and use their results to change strategies and processes.

Delivery

Important success factors for a successful implementation include leveraging information resources, obtaining support from other areas, encouraging success through failure, and achieving management and employee buy-in. These factors play an important role in the rapid deployment, acceptance by people and use of new equipment and methods. Institutionalizing innovation can foster long-term success of the implementation. Integrating innovation management and business excellence through a two-loop planning process creates excellent leadership and an excellent strategy for innovation management in creative and learning organizations.

On a more general note, there are a number of key issues such as integration of the management of risk at the strategic, programme and operational levels. There is also the design of a risk management strategy and alignment of this strategy with the overall strategy. This supports the positioning of risk management throughout the organisation at all levels and the aim to integrate it into daily work routines. Training of managers at each level and support staff with appropriate skills will ensure confidence of people managing risks. The management of technological risks by ranking their possible effects on the organisation helps to detect possible problems at an early stage.

5 Key Insights element by element of the framework

This section provides details about the key insights derived from the research, together with example practices and their value to managing innovation. We felt it important to identify the type of literature that provided support for the insight, so as to see if particular insights were originating from specific fields. For example, did the insight originate only from a Government Publication perspective or was there support from say from academia.

The key to the type of references shown in the supporting evidence is as follows:

Co = Company case study/ article

Av = Academic viewpoint

BP = Business practitioner viewpoint

GP = Government publication

5.1 Organisation and Governance

Organisation

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Build cross-functional teams to foster buy-in from everyone.	Include on the selection and implementation teams individuals from groups that will affect or will be affected by the technology.	Bringing all stakeholders together at the outset will reveal the various constraints and conflicting goals as well as build commitment for the technology and might reduce the "not invented here" syndrome.		✕		
Awareness of personal qualities of people within the organisation.	Personal qualities are thoroughness, persistence, discretion, persuasiveness, and comfort with change. Also work through existing networks to uncover opportunities, build coalitions, and make change happen.	Creating innovative, growth-oriented accomplishments.		✕		
Establishing the role of a Chief Risk Officer (CRO) providing accountability at senior level.	Acting below CEO who is responsible for strategic risk management in charge for managing risks such as market, hazard and operational risks.	Dedicated role and responsibility owned by a single contact within the organisation.		✕		
Initiation of an ERM community of practice to increase knowledge of risk management in the organization as a whole.	Set their own discussion agenda, compare notes and learn from one another. In several plenary sessions and through exchanges on a collaboration website, issues such as service plan requirements, freedom of information concerns and software implementation plans have been covered.	Sharing best practice in risk management across the organisation.	✕			

Governance

Insight	Example practice	Value to managing innovation	Supporting evidence			
			Co	Av	BP	GP
Investment bank created series of controls to enable more risk with more entrepreneurialism and in the end make more profit.	Board should understand & oversee major risks and ensure robust risk-management capability is in place addressing: Board structures; Board risk reporting; Board education & expertise (about risk), Board processes.	Lack of risk taking meant bank was unable to innovate.	✕		✕	
High concentrations of risk aren't necessarily bad. It depends on the company's appetite for it – but many companies don't articulate a risk strategy.	A good risk strategy makes clear types of risk the company can assume; describes the magnitude of the risks it can bear; and defines the returns it demands in bearing them.	Defining these elements provides clarity for managers trying to exploit opportunities but stay within the corporate governance strategy.	✕		✕	
Ensuring there is consistency across business units in the way that risks are identified, measured and assessed needs to be part of the strategy.	Core principles of risk management organizational structure: Top notch talent – top managers need to be expert risk managers; Segregation of duties – risk takers, e.g., salespeople should not set risk policy or risk appetite; risk ownership; clear individual responsibilities.	Clarifying the controls & boundaries provides a clearer mandate for innovators but prevents unwelcome surprises.	✕		✕	
ERM provides opportunity to make better informed decisions re strategic objectives.	Research in US found: ERM is here to stay; Companies are implementing ERM for a number of reasons (inc governance); even at an early stage of implementation companies are receiving benefits from ERM.	ERM an integral part of corporate strategy & governance because it maximizes expected outcomes and avoids catastrophe.	✕		✕	

5.2 Innovation and Risk culture

Insight	Example practice	Value to managing innovation	Supporting evidence			
			Co	Av	BP	GP
Culture is an essential foundation to build an environment for supporting risk management & innovation.	Use of web-based questionnaires can pinpoint areas that do not share the same culture – the results can then inform a change programme.	A strong culture helps the organization to achieve its goals and outcomes.		✕		
Risk culture is the degree to which management recognizes the need for risk management competency and capability within the organization and comprises a number of key attributes.	Key attributes: • Leadership & strategy; • Accountability & reinforcement; • People & communications; • Risk management & infrastructure.	Feelings, attitudes and perceptions about risk will influence how it is managed.		✕		
Risk culture encompasses an organisation's appetite & tolerance for risk in daily decision-making.	Risk appetite is the desire or tendency to take on risk and ranges from risk-averse, risk-neutral, risk-taker to risk-seeker. Risk tolerance is the maximum amount of risk that the enterprise considers acceptable	Communicating the circumstances when the organization & individuals can "take" or "seek" risks – will enable innovation.		✕		
An organization with a strong risk culture is committed to the establishment of standards and protocols for identifying, assessing and managing risks.	A weak culture leaves the organization open to risk occurrences, near misses and lost opportunities.	Addressing the cultural issues is a pre-requisite for embedding and integrating risk management.		✕		

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
There are two dimensions affecting risk handling capability in an organisation: "Attitude & behaviour" and the "external & internal environment".	Use of a Boston Square to identify 4 cultural challenges: Understanding stakeholder view of our risks; understanding risks posed by our structure & processes; consistency of organization & staff appetite for risk; risk handling capability of staff.	Even though our stakeholders and management team have the appetite to innovate, staff must also subscribe to the same values and have the skills & expertise to manage risk.		✕		
Organisations can reduce the risk of reputational damage by improving the quality of dialogue with key stakeholders.	Doing a stakeholder audit to become more aware of their concerns and create an early warning system.	Stakeholder support is a significant factor in successful implementation of an innovative scheme. Also applicable to partnerships.		✕		✕
Innovation is the outcome of management that is strategic and leadership that is visionary.	An extended PDSA loop can be used to formulate & communicate the strategy & vision of the innovative organization and to subsequently build the culture as per the blueprint.	Provides a tool for building an innovative organisation.		✕		
Managers who foster innovative accomplishments share a set of personal qualities.	Personal qualities are: Thoroughness; persistence; discretion; persuasiveness; & comfort with change.	Relevant to core competencies.	✕	✕	✕	

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
People's perception of what constitutes danger or a risk varies according to the way their social relations are organized.	Use of Boston Square to identify four typical cultural types within industrial societies: Fatalists; Bureaucrats; Entrepreneurs; and Egalitarians	Build into change programme to support innovation to reflect common values & beliefs and inform communications strategy.		✕		
Decision-making is affected by a person's risk attitude, that is, whether they are inclined to take or avoid risks in certain situations.	Use of questionnaire to assess risk attitude and influence of motivation factors. • Risk propensity is attitude towards taking risks; • Risk aversion is attitude towards avoiding risks.	Clarification of organisation's values in respect of risk appetite and tolerance and identifying relevant motivational factors can reinforce the desired risk attitude and therefore readiness to innovate.		✕		
Risk-based decision-making is a scientific/technical AND a social activity and as such is concerned with the production of knowledge and a shared understanding of reality that is relevant to the specific organization and its situation.	Fast track benchmarking project conducted by EFQM.	Need to focus on soft (culture & people) and hard (process & techniques) issues.			✕	
People must know they are paid to accept a level of legitimate risk – bad luck can be accepted as OK but acceptance of bad management is not OK.	Fast track benchmarking project conducted by EFQM.	Build into organizational values.			✕	

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Commitment and involvement of leaders in risk management is paramount for success.	Fast track benchmarking project conducted by EFQM.	Leaders should act as champions and role models, fund the necessary resources, recognize and reward desired behaviours and constantly reiterate the importance of risk management.			✕	
Technical expertise is not enough for effective risk management.	Cultural aspects include: Situation awareness; mindfulness (alertness); risk-based decision making strategies; and organizational mindsets.	Good risk management needs a mindset of continuing alertness, effective communicating and the ability to recognize changing risks.	✕	✕	✕	✕
Aspects of risk management culture inherent in high reliability organizations are applicable to the public sector.	3 aspects of organisational risk management: Identification of risks; organizational mindset; responding to changing risks.	This culture is very supportive for innovation as it allows risk taking but can quickly identify negative factors.	✕	✕	✕	✕
Situation awareness is relevant to risk management, particularly in respect of decision-making.	Techniques used in high reliability organizations. Situation awareness is the perception of bits of information from the environment (*what?*); the comprehension of their meaning (*so what?*); and the projection of their status in the near future (*now what?*).	Technique is relevant to selecting a course of action (particularly when under pressure).	✕	✕	✕	✕

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Cultural influences in government departments may foster inappropriate styles of decision-making.	Four decision making strategies: Recognition primed or intuitive; Rule based; Analytical decision making; creative decision making.	Technique is relevant to selecting a course of action.	✕	✕	✕	✕
Managers at each level need to be trained with appropriate skills and provision of training to support staff in risk management should be available.	In order for supervisors and users to accept ownership of the technology, they must understand the technology and how to operate and service it properly.	For managers and staff to be able to manage risk effectively and improve confidence of working with it.				✕
Intrinsic motivation has a positive effect on the climate for creativity, but extrinsic motivation does not. Other research suggests that incentives are used as a way of providing support	In a research study of 100 managers only the intrinsic reward variable has a positive significant relationship with the climate for creativity. The extrinsic relationship was low and non-significant	Only intrinsic rewards have a positive effect on the culture although incentives are perceived to support innovation		✕		

5.3 Innovation and Risk processes

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
A risk register can form the central control of the risk system, but it is still just part of the process.	A formal process that identifies, quantifies and categorizes risks and develops cost-effective methods to control them. Also found reference to risk assessment reports.	Use of a mechanism for recording risks and actions would improve the effectiveness of the risk management process.	✕			
Qualitative assessment of risks where a simple classification system is used is most common.	Impact and probability is the most common classification system.	Consider simple risk assessment systems as a support mechanism for decision-making. This is opposed to the more complex quantitative approaches.	✕		✕	
Continuous monitoring is a common process step.	Management teams reviewing the potential for the risks on a regular basis. In addition, linking successful risk management to the achievement of organisations' objectives.	Feed insight into Organisation category.	✕		✕	✕
Establishing a communication strategy is a key activity.	Integrate risk communication & risk regulation, listen to stakeholders, tailor the messages, and manage the communication process.	Ensure that a communication mechanism is built into the approach to support communication and implementation of actions.	✕			✕
There are parallels between risk management and continuous improvement.	Use of a self-assessment approach to identify gaps in performance and as the basis for action.	Use a self-assessment tool to improve the approach to risk management.		✕		

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Consideration of the external environment is given in several approaches.	Setting policies that are flexible to external changes. Monitoring external events to predict issues.	Build into risk management approach as this has particular relevance to managing stakeholders.			✕	✕
The risk culture is rarely considered as part of the risk process.	Assess risk appetite before considering how to address risks.	Build into process as this could have a impact on managing risk in different contexts.				✕
Establishing a budget for the management of risk is uncommon.	Have well-established and clear arrangements for financing risk.	May improve an organization's response when risks occur.				✕
There are several types of risk that need to be considered.	These risks may relate to: • The achievement of the plan (timing) • Decision risks (that will affect progress) • Resource requirements • Technical risks (feasibility)	Build into risk assessment step as this has particular consequences for innovation.			✕	
Software may be used to manage risks, but this does not appear to be common practice.	Various pages are available, such as: Riskmaster, Pertmaster professional +, @RISK and @RISK for Microsoft project, Crystal Ball, Monte Carlo Predict! Risk Analyser and Predict Risk Controller, RANK-IT, REMIS, Risk+, Q2Risk.	Software may improve the management of the risk process.		✕		

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Project management approaches to risk management include both qualitative and quantitative techniques.	Categorise risks through qualitative analysis. Quantify risks by collecting data and performing analysis such as probability analysis.	Look for this is practice, although it may be more appropriate to stay with simple qualitative techniques.			✕	
Decision-making is a key aspect of the risk management process.	Perceive problem, gather data, define the problem, generate solutions, evaluate solutions, and select solution.	Build decision-making into the risk management process as this may provide additional clarity.			✕	
Risk management/ uncertainty is a key aspect of decision making in the innovation process	An integral part of any innovation process is the decision gates and risks should be considered as part of the gate criteria.	Build risk management into the decision gates.			✕	
Risk management may be applied in different stages of the project life cycle so it is a dynamic technique.	Look at risks at each stage of the cycle: Conceive design, plan, allocate, execute, deliver, review and support.	Risk management is a dynamic process that needs to be applied throughout the innovation process so that risks are continuously identified.			✕	
Risk management and issues management are closely related but the focus tends to be on one or the other.	Risks are what could happen in the future. Issues are what is happening now.	Need to decide whether it is better to have an integrated process or two separate processes.	✕	✕	✕	✕
Risk management process rarely takes into account the context of the organisation.	Observation	Build into process as this could have a impact on managing risk in different contexts			✕	
Risk assessment is triggered by different events and so should be integrated within the relevant business processes.	Risk assessment is essential when: • A new risk emerges • The degree of existing risk changes • A new perception of risk occurs	Risk management is a dynamic process that needs to be applied throughout the innovation process so that risks are continuously identified.			✕	

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Issues may be classified as to their current status with respect to activity and timing.	There can be potential issues, emerging issues, current issues, crisis issues and dormant issues.	Risk management is a dynamic process that needs to be applied throughout the innovation process so that risks are continuously identified.			✕	
Scenario planning is not a common practice in risk assessment.	Scenario planning could: • Create wide awareness of the environmental imperative requiring change (the jolt) • Guide the formation of operational plans • Enlist the people in the organisation with the power to act • Create coherence in management action through development of a shared view • Used to help managing stakeholder	Consider the use of scenario planning with respect to the management of stakeholders.			✕	

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Innovation can add to the value for money proposition in public procurements	There should be consistent application of best practice, including: use of cross-functional teams to ensure policy, project and procurement teams work together in fostering supplier innovation; effective risk management as innovation and risk often go hand in hand; deployment of skilled personnel in key roles concerned with capturing innovation; an organised approach to learning from experience	Capturing ideas by nurturing suppliers' ideas in the public sector.			✕	✕
Innovation process follow a similar pattern, which includes ideas generation, screening, feasibility, launch and finally review. The use of gates is common to manage the process.	Process from Exxon chemicals has: • Initial screen • Preliminary assessment • Detailed assessment • Development • Validation • Commercial launch • Review	The innovation approach will have similar distinct stages and decision points		✕	✕	
Innovation process tend to adopt a funnel concept where ideas are removed as they progress	Unilever has a clear funnel approach	Not all improvement ideas will be taken through to completion		✕		

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
The analysis of the probability of success of an innovation idea varies from a detailed analytical approach to a subjective approach	Exxon uses a probability assessment as well as a financial assessment	The marriage of risk assessment with innovation has not been fully developed in some of the processes examined		✕		
The estimation of uncertainty is difficult.	Research has shown that people can forecast potential savings much easier than they can predict growth, such as sales growth. Estimates are also often overcooked to get projects approved.	Recognise that estimation of likely outcomes is approximate			✕	
Scanning and reacting to changes in the external environment is an important step of the innovation process	Innovation is triggered by the recognition of external threats or opportunities	Innovation is triggered by external and internal events			✕	
Very little literature has been found specifically addressing risk management in the context of managing innovation.	Statement	For the current study we will have to base our framework on the practices in closely related fields.				

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5.4 Learning and improvement

Insight	Example practices	Value to managing innovation	Supporting evidence			
Learning from experience is valued in a culture of innovation and risk management.	Post project evaluations and fault tree analysis.	There are mechanisms for changing processes and strategy & policies to take account of lessons learned.			✕	
Companies that make a serious effort to formally chronicle past project histories are usually better to anticipate future problems.	Feed-forward control is based on a collective database of past project problems.	Future projects can be compared against previous examples to look for likely trouble areas.		✕	✕	

5.5 Delivery

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Institutionalising Innovation (also called making it part of day-to-day work earlier)	1. Involving as many people as possible as early as possible. 2. Transferring program needs from a department or area to the entire organization. 3. Giving time for institutionalization to occur. (Even after old methods are no longer in use, an innovation is not necessarily adopted.) 4. Allowing the meaning of a successful program to evolve over time as the understanding of the potential and expectations for the innovation or program change. 5. Documenting information in writing or disseminating it to many people in the organization (thereby developing an organizational memory). (If only a few people understand a technology and they leave, the technology may cease to function and be prematurely abandoned.)	Institutionalization of an innovation (making it part of an organization's routine) is important to insure it has a lasting effect on the organization.	✕			

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Success factors addressed include: leveraging information resources, obtaining support from other areas, encouraging success through failure, and achieving management and employee buy-in.	The "harnessing of innovation" allowed for rapid deployment, acceptance, and use of new equipment and methods.	Managerial and administrative innovations that can be used in any organization to encourage and assist the transfer of innovative process technology are identified and described.	✕	✕		
Initiating Innovation	Innovations require time and nurturing to become useful and successful. Keep options open and if at first you don't succeed, try, try again. Do not, however, assume that one technology will eventually work. The more fallback plans and options available, the better. Wait patiently for success to arrive, but be prepared for failure.	Eases introducing an innovation initiative.	✕			

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Integrating innovation management and quality management / business excellence through a two-loop planning process	First loop: The strategy loop. Involves leaders formulating the plans, communicating the plans, deploying the plans and monitoring progress. Second loop: The culture loop. Includes the identification of the necessary disciplines and principles for learning and creativity to be improved, training and educating employees, communicating improvements, and motivating employees.	Creates excellent leadership and excellent strategy for innovation management in creative and learning organizations. Important point are: • Active promotion by senior managers • Effective communication of organizational requirements		✕		
Integrated risk management framework, implementation.	Elements: • Developing the Corporate Risk Profile • Establishing an Integrated Risk Management Function • Practising Integrated Risk Management • Ensuring Continuous Risk Management Learning	Improves understanding of the nature of risk, and to manage it more systematically				✕

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Critical Success Factors identified from case studies for successful public sector innovation.	• Define and understand the problem. • Know and have experience with the subject including its goals and objectives. • Think creatively by applying learning from diverse views. • Pursue a range of paths and solutions along the way. • Monitor and evaluate to identify problems, trigger ideas and assess success. • Create a vision for the innovation. • Align the innovation with government objectives and outcomes. • Develop diverse and diffuse invisible colleges, partnerships and collaborations across agencies, individuals and organisations. • Exploit opportunities by consistent forward planning and	Our study framework should cover all these success factors.		✕		

	engagement with stakeholders. • Ensure senior management support, mandate, commitment, faith, and trust. • Create, support and reward can-do project teams. • Provide sufficient resources to support innovation. • Manage diverse stakeholder interests, concerns and their tolerance for risk at appropriate times during stages of innovation. • Manage project and risks tirelessly for each stage of innovation.					
Integration of the management of risk at strategic, programme and operational levels.	Consideration of external and internal organizational context including stakeholder needs.	To mutually support all levels of activity.				✕
Design of a risk management strategy and alignment with overall strategy.	Implementation of risk strategy into the organizations systems and processes.	Making risk management part of day-to-day work.				✕

Insight	Example practices	Value to managing innovation	Supporting evidence			
			Co	AV	BP	GP
Using Enterprise Risk Management (ERM), as a systematic, holistic approach to managing risk at a business-wide level.	Identify and assess the risks facing the organization. Analyse and prioritise the risks. Quantify magnitude and financial impact of these risks. Design and implement one or more mitigation strategies. Monitor and enhance the enterprise-wide risk management strategy.	Improve operational efficiency and the management of working capital, and reduce or stabilize a company's overall cost of capital. Helps to develop more effective working relationships with risk management partners, including banks, insurance companies, consultants and even regulators Will allow a company to develop insurance coverage tailored to its specific needs and to produce risk-adjusted performance comparisons to demonstrate shareholder value			✕	
Manage technological risk by ranking their possible effects on the organisation.	Technology ranking of products and processes compared to competitors others call that audit of likely organisational impacts	Links risk management with successful implementation of innovation. To select a new technology and identify key issues regarding the implementation		✕		
Innovation is triggered by uncertainty and change	Scanning the environment is an important part of the innovation process. Research also supports this insight.	Consider what triggers the need for innovation		✕	✕	
The ability to build relationships is critical to the success of innovation	It has been observed that the involvement of external stakeholders is important, as is deciding who to involve.	Examine the scope of the approach to innovation		✕		

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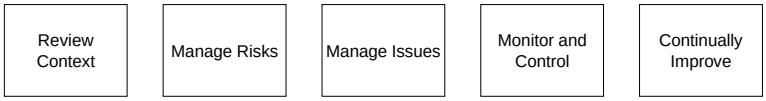
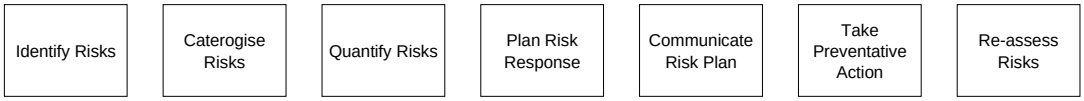
7 Proposed risk process architecture

Suggested process - level 1el

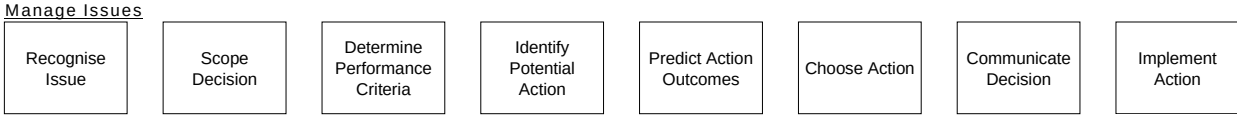


Review Context

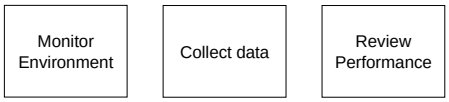
Manage Risks



Manage Issues



Monitor and Control



Continually Improvee