

The eight components of Project Risk Intelligence¹

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Is Project Risk Intelligence an important concept for the execution of effective project risk management in the UK and internationally? It is particularly important if executives and directors are not cognizant of the need to amend their organization's current project risk management practices where they are both immature and inefficient. Again, for organizations where the answer to the question "are risk management practices typically implemented as a matter of routine and never challenged", the concept must be relevant. The concept refers to the acquisition of knowledge, continuous learning and improving the maturity of current practices. It is encouraging movement away from the repetition of current practices which are known to have shortcomings and to instigate improvements. As a consequence, it involves having an enquiring mind, a willingness to challenge current practices, to follow the writings of thought leaders, to seek out emerging risk management practices, to keep abreast of developments in the profession and to consider contrasting view-points. Risk intelligence is currently considered to be less about the efficient operation of the risk management function and more about being forward looking, giving greater emphasis to exploiting opportunities, studying movement in the risk landscape and developing a responsive agile approach. However, unless the building blocks for project risk management are in place, see Appendix 1, the possibility of developing enhanced processes will be severely curtailed.

Origin: The origin of the term risk intelligence is not clear and has been attributed to a number of individuals such as Columbia University professor Leo Tilman³ and UK philosopher Dylan Evans⁴. The concept has been described in different ways by different writers. It is not readily discernible if the concept has been applied to the delivery of projects to-date.

Early Definitions: Early definitions of risk intelligence have tended to describe the concept very narrowly. Three examples are the definitions proposed by Apgar, Evans and Funston which are outlined below.

- David Apgar⁵: "an individual's or an organization's ability to weigh risk effectively" which he describes as being accomplished by three primary activities: by (1) classifying,

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³ Leo M Tilman. President and CEO of Tilman & Company, a global strategic advisory firm and a thought leader on strategy and risk intelligence. <https://lmtilman.com/leo-m-tilman/>

⁴ See https://en.wikipedia.org/wiki/Dylan_Evans#cite_ref-6 plus <https://www.mindtherisk.com/literature/71-risk-intelligence-how-to-live-with-uncertainty-by-dylan-evans>

⁵ Apgar, D. (2006) "Risk Intelligence: Learning to Manage What We Don't Know", Harvard Business Press.

characterizing and calculating threats; (2) storing, retrieving and acting upon information; and (3) communicating effectively.

- Dylan Evans⁶: “the ability to estimate probabilities accurately”.
- Frederick Funston⁷: “a dynamic approach to protect and create value amid uncertainty. It is an enterprise-wide process integrating people, processes (systems), and tools to increase information available to decision makers for improved decision making”

To be clear risk intelligence is not the set of processes adopted for the transformation of risk data into a format useful for risk analysis, evaluation, treatment, planning and reporting purposes. Transformation of data, typically with the aid of statistics, it could be argued is ‘business as usual’ and does not necessarily involve the acquisition and application of learning. Likewise, the concept goes beyond selecting those threats to accept and those to transfer.

Broader Definition: Perceptions of risk intelligence have evolved over time and the definition by Tilman below appears to be closer to current thinking.

- Leo Tilman⁸: “the organizational ability to think holistically about risk and uncertainty, speak a common risk language, and effectively use forward-looking risk concepts and tools in making better decisions, alleviating threats, capitalizing on opportunities, and creating lasting value”

A description of risk intelligence promulgated by the large accountancy firms focusses on practices which change the emphasis away from considering solely downside risk and governance compliance to include seeking opportunities and becoming familiar with the changing risk landscape, with the goal of improving business performance. This change in mindset is a stepping stone towards risk intelligent practices.

Proposal: There does not appear to be a universally accepted definition of risk intelligence. It is suggested here it is a combination of a series of behaviours, including: Commitment, Communication, Capital, Capability, Capacity, Culture, Collaboration and Coordination (the eight Cs).

1 Commitment

Setting the tone at the top is vital as risk management cannot be driven from the bottom up. It should not be the Risk Manager’s responsibility to persuade project team members to both participate and participate in a timely manner. Risk management needs to be mandated by the

⁶ Evans, D. (2012) “Risk Intelligence: How to Live with Uncertainty” Atlantic Books

⁷ Funston, F., and Wagner, Stephen (2010) “Surviving and Thriving in Uncertainty: Creating the Risk Intelligent Enterprise”, John Wiley and Sons Ltd.

⁸ Tilman, L. (2013) Risk Intelligence, A Bedrock of Dynamism and Lasting Value Creation, The European Financial Review

project leadership so there is a clear understanding that it is not discretionary or an activity to be fitted in if and when time permits. It is a core project activity. Accountabilities and responsibilities for risk management need to be spelt out ideally in the form of a Chapman PRACI chart, (where 'P' stands for Participate - introduced in a number of industries such as rail, energy and nuclear). A risk management policy can be used as a vehicle to spell out the benefit of risk management, mandate its implementation and describe the accountabilities and responsibilities for those assigned to its delivery. The policy can make reference to adopting a forward-looking approach and a drive to explore opportunities. The project director must ultimately be accountable for risk management and this accountability should not be delegated. Experience has shown there is a reticence to accept accountability.

2 Communication

Communication is part of routine risk management practices such as sharing common terms and their definition, however for intelligent practices, communication needs to be augmented and enhanced. There should be a clear understanding of the goals of project risk management and why project personnel should carry it out. As can be inferred from Leo Tilman, there is a need to go back to first principles and understand that the intended role of risk management is to achieve a project's or an organization's objectives. Clearly risk management needs to reflect and be aligned to the objectives being pursued. The objectives must be crystal clear.

It needs to address how potential and emerging changes in the risk landscape will be addressed and communicated, how complexity may affect uncertainty and how the capture and assessment of opportunities will be approached. In addition, it will need to consider the visualization of the potential changes to risk exposure so that they are readily assimilated. Reporting should include past trends and anticipated trends in terms of both exposure and the potential exploitation of identified opportunities. The achievement of milestones is also important. A project posted on the notice board, in very large numbers, the number of days left to complete a key activity and updated it daily-it was completed on time. Another project held a hog roast each time key milestones were reached. Elsewhere, a common practice is to issue team members with T-shirts to generate a common identity.

3 Capital

Funding of the risk management function is a prerequisite for its delivery. This means funding people, hardware, software and training. Bidding by consultancies for the design of infrastructure projects can be a problematic area and show a distinct lack of risk intelligence, an absence of learning. Was the bid for a project, (including a description of the delivery of risk management), prepared by a different person to the one who compiled the project staff costs as there can be, (and from experience often is), a mismatch. Did the person who compiled the project staff costs for the duration of a project have sufficient knowledge of the discipline of risk management and how it was planned to be implemented, to ensure an adequate provision was made for risk management personnel. Has the Risk Manager been budgeted for, for the length of the project, full time. Has a budget been set aside for more than one Risk Manager, if required. Is a full time Risk Analyst required. If the client is not providing a risk management database what

are the costs of an alternative solution. Experience has shown lessons are not learnt and there is under provision for risk management. This is the converse of intelligent risk management.

4 Capability

Capability could be considered to be multi-faceted. It refers to the risk management personnel, senior management and the organization as a whole. The capability of the risk management personnel can be considered in terms of their knowledge, experience, aptitude, work ethic, confidence, communication skills and whether they are pro-active in their approach. Plus, the capability of senior managers or directors in terms of their own knowledge of risk management, when and how it should be applied and its ability to have a considerable influence on project outcomes. Capability includes the willingness of the organization to use of a maturity model to understand the desired capabilities of the organization, current capabilities and preparing an improvement plan. Risk Intelligence should include a learning loop whereby job descriptions, interview questions, induction processes and objective setting are updated to reflect the experience of staff engagement and management.

5 Capacity

Is the capacity of the risk management function capable of delivering the Risk Management Plan? For instance in terms of facilitating the number of regular meetings to be held, running training sessions, preparing reports and dashboards, the population of a database, carrying out qualitative and quantitative assessments, database entry health checks, responding to audits, correlation of information between different databases, conducting opportunity workshops, assessing efficiencies, preparing option analysis reports, supporting the preparation of business cases and preparing optimism bias calculations. In particular arranging workshops for: understanding the changes in the risk landscape; picking out weak signals of emerging trends, identifying aspects of complexity; and consideration of how new emerging threats may impact each other. Capacity is dependent on attracting experienced team members and retaining them; developing a cohesive team; and focusing the team on objectives and milestones.

6 Culture

The role of executive leadership in setting the organizational culture is critical in building an organization's risk intelligence. What do we mean by the term culture. It is assumed here to be a set of norms, about the way work is organized, how teams are assembled, the degree of autonomy of Risk Managers, the way authority is exercised, how procedures are approved, the steps in the project life cycle, composition of stage gates and how decisions are made.

There needs to be recognition that Risk Managers are primarily facilitators and are not responsible for generating threats and opportunities or assessing them. Project Managers need to drive risk management on their projects in terms of (for example) reviewing the Risk Management Plan, understanding the threats to be managed by the project itself or to be escalated to senior management and the mechanisms for doing so, ensuring risk mitigation

actions are SMART and are implemented, knowing when along the project life cycle, risk management is to be carried out and the specific risk management requirements of stage gate reviews.

Culture can also include the behaviour of being forward-looking and considering how already emerging trends may manifest themselves or combine in currently unanticipated ways and disrupt project delivery. Obvious examples are: climate change (and associated storms, flooding and forest fires); cybercrime; conflicts; espionage; macroeconomics; demographics; and the interruption to supply chains. According to Pepler⁹, risk intelligence also employs “sensemaking” to identify emerging patterns while they are still forming and interpret them before they stabilize. He describes sensemaking as involving collaboration, imagination, and a healthy tolerance for ambiguity”. This description has a striking resemblance to Horizon Scanning¹⁰, a foresight method to systematically detect early signs of potentially important developments combined with managing risks and pursuing opportunities to help build resilience to future shocks and reduce uncertainty. Horizon Scanning involves picking up weak signals of change that warrant examination and Pepler similarly talks about risk intelligence not ‘solving’ these emerging issues but stimulating examination to improve comprehension. Similarly, Deloitte talk about “Predictive Risk Intelligence” abbreviated to PRi, which includes Predictive Risk Monitoring (PRM)¹¹. Deloitte describe PRM as a technique which helps organizations discover potential threats through the application of analytics to internal and external data sources to identify emerging risks with a short cycle to impact.

Certain issues may be right in front of us but not addressed. Michele Wucker¹² has coined the metaphor ‘gray rhinos’ to stimulate fresh attention to what’s highly obvious and highly probable but largely ignored.

7 Collaboration

Project Risk Management does not occur in a vacuum but is part of a collaborative effort between multiple project disciplines such as the Project Sponsor, Project Director, Project Manager, Business Case Developers, Estimator, Planner, Change Manager, Design Manager, Project Controls Manager, Commercial Manager and Subject Matter Experts. For infrastructure projects, these experts may be architects, civil engineers, geotechnical engineers, structural engineers, environmentalists, stakeholder manager and services engineers. So, for instance, assessment of the quantitative impact of the threats and the costing of options and mitigation actions will be dependent on support from the Estimators. Production of a schedule risk analysis will require a programme from the project’s Planner. The assessment of the risk profile of

⁹ Brett Pepler (2021) “What is risk intelligence?”. <https://www.linkedin.com/pulse/what-risk-intelligence-brett-pepler-faipio-maicd/>. A stimulating article.

¹⁰ European Environment Agency, (2023) “Horizon scanning - tips and tricks. A practical guide”. <https://www.eea.europa.eu/publications/horizon-scanning-tips>

¹¹ Deloitte (2017), Seeing the storm ahead, Predictive Risk Intelligence. <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/risk/us-rfa-seeing-the-storm-ahead.pdf>

¹² Michele Wucker (2016) “The Gray Rhino: How to Recognize and Act on the Obvious Dangers We Ignore” April 5, 2016

planned changes will require the involvement of the Change Manager. Risk Intelligence necessitates recognition that risk management requires team collaboration and multiple timely contributions.

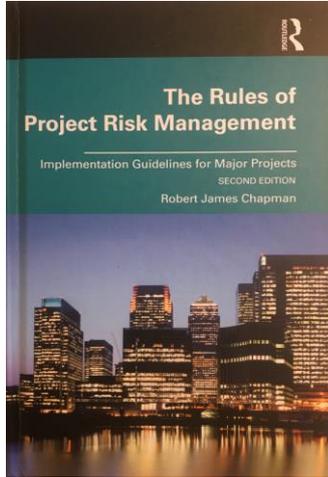
8 Coordination

While it may sound rudimentary, risk management must reflect (as a minimum) a project's objectives, scope, contracting strategy, tendering processes, business case development sequence, estimating practices, project management methodology, context, complexity, supply chain requirements, long lead items, insurance policy conditions, speed of delivery, option analysis, team composition, approval processes, decision making, supply chain constraints, weather windows, anticipated biases and reporting requirements. Risk Intelligence entails being aware of these likely requirements from the outset and building the risk management approach to reflect them. The approach should reflect the lessons learned from completed projects so that sub-optimum practices are not repeated. So, an approach may need to change reflecting experience arising from say risk retention and transfer, risk requirements included in tenders, tender evaluation, sub-contractor risk ownership, effectiveness of risk reporting, size of risk allowance and risk drawdown processes.

Summary

What constitutes Project Risk Intelligence now appears to be emerging and is described in terms of the acquisition of knowledge, the application of learning, re-appraising current risk management practices, being forward thinking, looking for emerging threats and significantly increasing the focus on opportunities. It includes the adoption of lessons learned and building on a firm foundation. This short commentary has proposed what have been termed the Eight Cs of Project Risk Intelligence. They are recommended as the focus areas to explore and develop Risk Intelligence for projects. They need to be considered together as they are interdependent.

Appendix 1: The Rules of project Risk Management, 2nd Edition



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Book Description

The Rules of Project Risk Management, 2nd Edition, provides practical experience-based guidance to support the delivery of effective project risk management. While the discipline is recognised as a major contributor to the successful outcome of projects, its implementation is far from straightforward. Successful delivery requires an in-depth understanding of the "ingredients" of effective risk management practices which impact project performance. The book's value is derived from the description of these ingredients in a manner which will support their practical implementation.

The author describes a series of guidelines (labelled "rules") to support the practical application of project risk management to positively influence project outcomes. The rules are supported by mini case studies of both successful and unsuccessful projects to bring to life the ramifications of effective and poor risk management respectively, and are assembled under seven headings of environment, external stakeholders, organisation and culture, leadership and governance, internal stakeholders, risk resources and system. This second edition contains a new glossary of terms and an overview of the risk management process to enable those new to the subject to understand the core risk management activities. It also contains six more individual guidelines and ten more case studies to support practitioners, researchers and academics alike to gain an even greater appreciation of the drivers of successful project risk management.

About the Author



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Dr Robert J Chapman is an international risk management specialist. He has provided risk management services in the UK, the Republic of Ireland, Holland, UAE, South Africa, Malaysia and Qatar on multi-billion programmes and projects across 14 different industries. He is author of the texts: 'The SME business guide to fraud risk management' published by Routledge, 'Simple tools and techniques for enterprise risk management' 2nd edition, published by John Wiley and Sons Limited, 'The Rules of Project Risk Management, implementation guidelines for major projects' 2nd edition published by Routledge Publishing and 'Retaining design team members, a risk management approach' published by RIBA Enterprises. He holds a PhD in risk management from Reading University and has been elected a fellow of the IRM, CIHT, APM and ICM and is a former member of the RIBA. Robert has passed the M_o_R, APM and PMI risk examinations. In addition, he has provided project and risk management training in Scotland, England, Singapore and Malaysia. Robert has been an external PhD examiner.

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