Nine principles:
Establishing a risk intelligent major capital project
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Why risk intelligence is so important for a major capital project:

**Higher expectation**
Major capital projects can significantly enhance or erode shareholder value based on how well they are executed. Considering their high impact nature, the levels of oversight, governance, risk management and assurance need to be heightened.

**Independent**
Due to the size of these projects, many have independent governance structures, processes and a separate chart of accounts. This often promotes a degree of separation from the direct influence of group wide standards and corporate control, resulting in uncertainty from the corporate owners as to how well these standards and controls are being applied across their project.

**Increased competition**
With almost one trillion dollars of shareholder capital tied up in major capital projects across Australia, the competition to secure adequate skills, machinery, materials, operating licenses, contractor support and associated infrastructure has increased, thereby putting pressure on supply and yielding unique exposures.

**Complex stakeholder relationships**
The typical major capital project is dependent on a broad range of stakeholder groups, both internal and external to the project. Further, ownership may be split between a number of joint venture partners. Such a diverse portfolio of stakeholders normally means a diverse range of expectations need to be managed.

**Greater risk**
The sheer magnitude and complexity of these projects combined with longer construction times increases the risk profile. Some mega projects even have the potential to bankrupt their parent company.

*Greater exposure to risk means a more intelligent approach is required. Such risk intelligence can be achieved through the following principles.*
In a risk intelligent project, the governance structure is clearly defined, with accountability for all necessary risk classes assigned accordingly.

Major capital projects tend to have extremely complex stakeholder structures with multiple relationships in play. These may include joint venture partners, corporate owners, contractors, vendors, operational teams, the engineering project managers and, in some cases, government bodies and community groups.

Such complex stakeholder environments tend to create unique governance challenges whereby multiple groups become jointly responsible for a broad range of deliverables, as well as all the associated risks. Often, when so many are responsible, the necessary accountability, oversight and control of material risk classes becomes fragmented.

This in turn may result in the project becoming exposed to higher levels of risk as well as the uncertainty of whether material risk classes are actually being controlled.

**Risk intelligent project officers ensure governance is enabled through three lines of defence:**

- First line: Accountability for risk is secured through a clearly articulated risk breakdown structure that outlines all necessary risk classes, individual roles and specific responsibilities.
- Second line: Risk oversight and tone setting is provided by a central governing body which receives timely and accurate risk information upon which to make informed decisions.
- Third Line: Independent and objective reviews are conducted to validate risk data and controls.

**Reality check:** If the project were to endure a catastrophic failure, whose name would be in the headlines? It is that stakeholder who has the most to gain from advocating good risk governance.

Who owns the risk?
In a risk intelligent project the appropriate appetite for risk taking is understood and applied

Risk appetite is the amount of risk a project is willing to accept in pursuit of its objectives.

Embedding an appropriate risk appetite into a project environment is about more than simply adopting a value statement or plotting a heat map.

The risk appetite is a project board approved, strategic philosophy that ensures all operational behaviours and strategic decision making are engaged within the realms of approved tolerance criteria.

The stated risk appetite should be applied to and be visible within the project’s:

- Performance indicators
- Values and standards
- Senior stakeholder appointments
- Remuneration and incentives
- Contracts and operating agreements
- Investments and capital allocation
- Reporting and escalation requirements
- Hiring and retention strategies
- Delegations of authority
- Vendor and contractor qualification.

Furthermore, the risk appetite needs to be reviewed by the project board on a regular basis as tolerances and appetite will change as the project evolves through its end-to-end lifecycle.

Reality check: Unwelcome surprises most frequently occur when projects operate outside their appetite.
In a risk intelligent project, governing bodies (board, steering committee, audit committee, etc.) all have appropriate transparency and visibility into the project’s risk management practices

Senior project officers have a duty to ensure that appropriate systems and processes are in place to proactively manage risk as well as provide timely risk information to the project board for review.

**In order to fulfil their responsibilities and to provide value, risk intelligent project officers:**

- Put risk on the daily agenda. Discussing risk at every executive meeting is not too often
- Examine the current risk structure. How are risks managed? Are risk silos being bridged?
- Review risk periodically so as to identify risks that will prevent the project from achieving its objectives
- Discuss risk scenarios. Where do the greatest threats and opportunities lie?
  - Determine how much risk the project is actually taking on and whether it aligns to the stated risk appetite
  - Get ongoing assurance from the project disciplines. How confident are you and why?
  - Get independent assurance. Conduct internal control audits or engage an external consultant to evaluate the effectiveness of the risk management programme
  - Ensure risks remain visible to those beyond the risk owners, the broader stakeholder group needs to be engaged.

**Reality check:** Out of sight means out of mind.
In a risk intelligent project, long term resource strategies exist to ensure that all necessary resources (skills, materials, machinery, vendors) are secured and available when required.

It is well documented that Australia has a talent shortage, but major capital projects are constrained by the shortage of most critical resources, not just those of skills, labour and expertise.

With almost a trillion dollars of major capital projects committed nation wide, the demand (and competition) to secure the critical resources necessary to deliver a project successfully, has increased to the point where timely procurement is uncertain.

In order to mitigate the risks of resource shortages and delayed lead times, risk intelligent project teams develop unique procurement strategies.

**Such strategies may include:**

- Procuring resources offshore
- Optimising existing resources
- Sharing resources with comparable peers
- Specialised human capital strategies
- Training and recapitalisation programs
- Contractor and vendor panel arrangements
- Securing preferential service through premiums and buy outs
- Factoring redundancies and strategic delays into project performance.

**Reality check:** How project officers respond to the resource shortages will determine how the game is to be played and ultimately, who will succeed.
In a risk intelligent project, a common risk language exists that is enabled by a cohesive framework and supported by appropriate standards

Major capital projects face a number of challenges when developing a common and project wide risk management approach, namely:

- Multiple stakeholder groups are at play. Each bring their own risk definitions and requirements to the project creating a fragmented application
- Various risk functions (compliance, H&S, environment, security, BCM, ERM etc.) are brought on line sequentially as the project ramps up, resulting in a disjointed risk framework made up of a number of siloed functions operating at differing levels of maturity
- Many of the early project risk standards and practices are adopted from the parent company’s corporate framework, which is primarily designed to control known business risks and not dynamic project risks. Often this results in misalignment of risk effort
- High staff turnover at the end of key phases results in lost risk capability, understanding and experience. This often impedes the project’s ability to secure a natural rhythm for risk management.

A clearly defined project wide risk management framework, which considers all relevant risk classes and provides a common definition and approach to risk management, will ensure a common language and understanding is secured.

Reality check: in the absence of a common approach – anything goes.

What does risk mean?
In a risk intelligent project, systems have been implemented which proactively identify and control the threats and opportunities that lie within.

Major capital projects operate in environments which are complex, turbulent and continually evolving.

Effective risk identification and control within such a dynamic environment needs to be more than just populating a project risk register or appointing a project risk officer.

**Intelligent risk identification means:**

- Amplifying the known risks so that they are not hidden or ignored
- Demystifying the complex risks into their more manageable sum of parts
- Anticipating the slow emerging risks which have the ability to escalate rapidly.

**Intelligent risk control means:**

- Comprehensive testing and monitoring of key risk classes and controls.
- Timely reporting and escalation of material risk information to relevant risk owners and oversight bodies.

**Reality check:** Catastrophic project failures are more often due to the mismanagement of known risks, not unknown risks.
In a risk intelligent project, there exists an embedded risk culture of greater awareness and accountability

The importance of culture in managing risk cannot be understated.

Culture is the way we do things, it is the looking glass through which we view the world and it is the style in which we operate.

Hence, it goes without saying that the project culture influences the way project stakeholders view and manage risk.

It is not uncommon for projects to fail to meet their objectives due to the lack of cultural collaboration amongst stakeholders.

Within every project there are a number of dynamics that influence the culture. These dynamics need to be designed and performance managed to ensure they promote the right culture.

Influencers of a risk intelligent project culture include:

- Leadership behaviour, focus and visibility
- Values and internal standards
- A common purpose and shared understanding
- Incentives and remuneration
- Risk and safety tolerances
- Transparency of and accessibility to critical information
- Systems and infrastructure
- Communication and internal marketing
- Training and empowerment programs
- Working conditions
- Labour turn.

Reality check: The less supportive and aligned the culture, the more time and effort project officers have to commit to enforcing all the rules.
In a risk intelligent project, stage gate specific project assurance activities are required in order to determine whether the project may proceed.

Top project management teams develop an early view of what risk based activities are required per phase and stage gate in order to provide assurance that the project is ready to proceed through each gate.

Stage gate specific project assurance activities are normally outlined in some form of a plan or program which correlates strongly with the project’s lifecycle.

In essence, the project assurance plan forms a risk based operational excellence program for the entire end-to-end project lifecycle.

**Stage gate specific project assurance activities may include:**

- Discipline specific risk studies (engineering, procurement, finance, labour, etc.)
- Class specific risk studies (political, security, community, regulatory, resources etc.)
- Resource, cost and schedule peer reviews
- Benefits testing and validation
- Contingency analysis
- Operational readiness reviews
- Investment committee studies and reports
- Vendor qualification analyses
- Internal control audits
- Independent project assurance.

**Reality check:** Ineffective stage gate risk assurance and related decision making often results in carry over legacy issues which burden the project for the remainder of its lifecycle.
In a risk intelligent project, material risk classes as well as all associated controls, are independently tested and validated

Independent project assurance is a vital enabler of long term project performance.

In many major capital projects, internal resources are stretched and struggle to consistently deliver the necessary performance and control assessments within plan.

Furthermore, those who operate within the boundaries of a particular paradigm often find it difficult to recognise the inefficiencies that can materialise.

As a result, project officers may fear they are not getting the full story from their project teams and that bad news may not arrive in time to address it.

In order to mitigate these concerns, risk intelligent project officers seek out independent assurance over and above the validation provided by the project teams.

**Independent project assurance offers the following benefits:**

- Timely access to specialised expertise
- Greater integrity and higher quality
- Neutral and un-biased opinion
- Additional resourcing options
- Broader exposure to industry better practice.

**Reality check:** Without independent project assurance, project officers will find themselves in a position where they are relying on those who manage the risks to report on the risks.
Helping our clients maximise their program benefits

What we do
We serve and advise our clients regarding matters related to capital projects across all phases of the project lifecycle, from planning through to execution, management, governance, and optimisation. Our services include analysing and transforming organisational processes, controls and technology, conducting forensic analyses and construction audits, and providing overall project management and oversight of construction projects and programs.

Our global reach
We are able to draw from the deep intellectual capital of the 150,000 professionals within the Deloitte Touche Tohmatsu global network of member firms and affiliates. This enables us to offer a broad range of integrated services in varied professional disciplines that touch upon nearly every aspect of the capital construction process.

Our framework and integrated service offering
We have established a Capital Projects maturity framework based on our extensive industry experience with major capital projects. The framework encompasses all traditional project phases from feasibility and planning through to project close out and operations.

Our multi-disciplinary, value-driven approach enables us to deliver comprehensive solutions to the industry. Known as the ‘Deloitte difference’, this 360-degree strategy provides our clients with skilled expertise.
## Our Capital Project Services

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