



## PROJECT AND RISK MANAGEMENT –

- A CONTRACTOR'S PERSPECTIVE
- A CLIENT PERSPECTIVE

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2020

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## One Perspective of Risk

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“There are known knowns. These are things we know that we know.

There are known unknowns. That is to say, there are things that we know we don't know.

But there are also unknown unknowns. There are things we don't know we don't know.”

Donald Rumsfeld, US Secretary of Defence

(Department of Defence News Conference 2002, discussing the lack of evidence linking Iraqi government with supplying weapons of mass destruction)

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## Outline

- Project Management & Risk
  - Contracts - risk allocation & transfer
  - Key construction risks:
    - Safety
    - Financial (revenues & costs)
    - Time (programme)
    - Design, scope & quality
    - Existing conditions
  - Other risks and ideas:
    - Environmental, reputation, image, people
  - Risk management tools
  - A war story...
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## OH&S Risk

- The primary construction risk
  - First on every agenda
  - Prequalification, certifications, evaluation criterion
  - Leadership, people, approach, systems
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# Project Management Plan

## **1 PROJECT BRIEF**

1.1 Background

1.2 Objectives

1.3 Scope Requirements

1.4 Project Approach

1.5 Critical Success Factors

1.6 Initial Identified Risks

## **2 PROJECT MANAGEMENT PLAN**

2.1 Introduction

2.2 Appendices

2.3 Review Schedule

## **3 PROJECT GOVERNANCE STRUCTURE**

## **4 PROCUREMENT STRATEGY PLAN**

## **5 PROJECT PLANNING**

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## Project Management Plan

6 PROJECT SCOPE MANAGEMENT

7 PROJECT TIME MANAGEMENT

8 PROJECT COST MANAGEMENT

9 PROJECT PROCUREMENT MANAGEMENT

10 PROJECT QUALITY MANAGEMENT

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# Project Management Plan

## 12 PROJECT COMMUNICATIONS MANAGEMENT

## 13 PROJECT RESOURCE MANAGEMENT

## 14 PROJECT ENVIRONMENTAL & SAFETY MANAGEMENT

## 15 PROJECT CLOSURE

### **Appendices**

Appendix A Master Control Programme

Appendix B Risk Register

Appendix C Issue Log

Appendix D The Contact List

Appendix E Stakeholder Communication Matrix

Appendix F Charts of Stakeholders

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# Project Management Plan

## **11 PROJECT RISK MANAGEMENT**

11.1 Purpose

11.2 Roles and Responsibilities

11.2.1 Project Director

11.2.2 Project Manager

11.2.3 Project Governance Group

11.2.4 Project Stakeholders

11.3 Risk Management Plan

11.4 Risk Register

11.5 Issues management

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## Contracts

- Establish the agreement between parties
  - Confirm and control (commercial) relationships
  - Allocate risks to parties
  - Set out how risks are to be managed, and what happens when things go wrong
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## Contracts - time & cost risk

- Time:
    - who is responsible for delays?
    - what are damages for late completion?
  - Cost:
    - how can project costs increase?
    - what unknown costs are there?
    - who bears costs of delay?
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## Scope & Quality

- Is the specification clear?
  - What defines variations?
  - Design risk/opportunity
  - What collateral/third party requirements exist?
  - Are they “passed through” properly?
  - PPR is the most fundamental and underrated (overlooked) contract document
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## Financial risk

### – contractor's perspective

***Many of these apply both upstream and down...***

- “Fixed price” – quantities, scope, exchange rates
  - Solvency
  - Controlling cashflow: revenues & costs, deposits, offsite payments, exchange rates
  - Cascading risk – head and subcontract management
  - Claim and payment procedures
  - Security of Payment
  - Variations
  - Extensions of time
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## Subcontract management (1)

- Assess risks at tender stage
  - Convert tender prices to contract
  - Subs' financial capacity – independent audit; prequalification; experience; bank letter; assessment of project as % of sub's workload
  - Monitoring progress – cost vs time
  - Valuing progress claims
  - Cashflow control
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## Subcontract management (2)

- Fixed price subcontracts vs schedule of rates
  - Managing subcontract variations
  - Managing provisional sums
  - Performance security (cash retention, bank guarantee, performance bonds)
  - Extensions of time; delay damages; liquidated damages
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## Financial risk

### – a client's perspective

- Total cost to complete
  - Completion date
  - Reputation
  - Obligations to third parties:
    - financiers
    - purchasers
    - lessees
    - authorities
    - shareholders
  - What happens if contractor can't complete?
    - Performance security
    - “Step in” rights/novation deeds
    - Tripartite agreements
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## Program risk

➤ Head and subcontract conditions:

- Risk allocations:
  - Qualifying cause of delay
  - Compensable cause
  - LD's
- Notices, cures and remedies:
  - NOD's
  - EOT's

➤ Also – “neutral risks” – *force majeure*

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## Program risk (2)

- Head contract program vs target program
  - Delay allowances
  - Non claimable delays:
    - Weather
    - Site OHS
    - IR
    - Subcontractor performance, insolvency
  - Who owns the float?
    - an event that causes delay to completion
    - vs
    - an event that causes delay to completion by the date for PC
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## **Program risk**

### **– a client's perspective**

- Certainty about completion dates
  - Reactive: recoveries/remedies if not met
  - Reliance either on experience, or trust in reports...
  - Status updates, actual progress
  - Delay allowances
  - Independent programme reviews
  - Cure plans: acceleration
  - Setting realistic, conservative completion dates
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## Design risk

- Novated D&C contracts – transfer risk and control
- Fitness for purpose
  - Against what test?
  - Is the purpose defined?
  - Quality of the brief, design documents
- Discrepancies, buildability clauses
- Definition of Variations
- The brief and PPR are critical
- Pass through obligations:
  - permits & approvals
  - leases
  - contracts of sale

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## Design risk (2)

- Design consultant selection & management
  - Design presentations and reviews
  - Design Change Notice procedures
  - Safety in Design workshops
  - Peer reviews
  - Value Engineering
  - D&C subcontracts — subcontractors' ability to manage design?
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## **Design risk**

### **- client perspective**

- Compliance with third party obligations
  - Safe, secure, high quality, durable, attractive
  - Capex & opex
  - Peer reviews
  - Requirements must be captured in PPR
  - Government design risk management: OVGA
  - Managing design changes time & cost
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## Existing conditions risk

- Contamination
  - Asbestos
  - Rock, geotech
  - Adjacent buildings, structures, features
  - Access
  - Latent conditions vs site conditions
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## Other risks for contractors and clients

- The environment
  - Reputation – within the industry
  - Image, brand – public perceptions
  - Corporate responsibility
  - Employer of choice
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## Risk management tools

- Boards & board committees - risk appetite
  - Policies (statement of commitment)
  - Management systems
  - Plans (approach, responsibilities, systems):
    - OHS Management Plan
    - EMP
    - Emergency Management Plan
    - QMP
  - Procedures: (specific instructions)
  - Contracts, guidelines, standard forms:
    - Consultant agreements
    - Contracts: allocate risks – “pass throughs”
  - Insurance (note similarity with PPE - last resort!)
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## Risk management tools (2)

- Risk workshops
  - Working groups, safety committees, safety walks, toolbox talks
  - Risk registers & reports
  - Audits, reviews
  - Warranties, guarantees
  - Staff selection, training and development
  - Thinking & brainstorming : assess, evaluate, manage
  - Lessons learned reviews
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## The workshop process and worksheets

1. In groups at your table, consider your risk categories
  2. Identify and record stakeholders
  3. Agree and record key risks (at least 5)
  4. Rate them
  5. Record existing controls
  6. Recommend further steps to manage risks
  7. Present to the group
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## Examples

- That costs exceed budgets as a result of design or delivery overruns, delays or poor scope definition
  - That committed dates and planned milestone dates are not met as a result of project delays
  - That future council members, officers or state government representatives change commitment to or direction of the project, or that future councillors will no longer support it
  - That we fail to identify and cater for future community services and their requirements
  - That community members do not support the project
  - That service providers do not support the project
  - That the development damages valuable or sensitive ecological environments
  - That staff resist relocation to other buildings
  - That redevelopment works on site cause injury to public or workers
  - That redevelopment works on site cause damage to existing assets or buildings
  - That redevelopment works cause disruption to traders, commuters &/or public during construction
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## Risk ratings

### **Likelihood** (probability):

- Rare/Very low
- Unlikely/Low
- Possible/Medium
- Likely/High
- Almost certain/Very high

### **Consequence** (impact):

- Very Low
- Low
- Moderate
- High
- Very High

Some organisations use %ages for likelihood:

- e.g. less than 10%; 10-25%; 25-50%; 50-75%; 75%+

**Note: “Risk appetite”**

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# Risk ratings

## LIKELIHOOD

Description	Scenario	Code Letter
Very High	Almost certain to occur	VH
High	More likely to occur than not	H
Medium	Fairly likely to happen	M
Low	Low but not impossible	L
Very Low	Extremely unlikely to happen	VL

## IMPACT

Description	Scenario	Code Letter
Very High	Critical impact on the achievement of objectives and overall performance. Huge impact on costs and/or reputation. Very difficult and possibly long-term to recover.	VH
High	Major impact on costs, objectives. Serious impact on output and/or quality and reputation. Medium to long-term effect and expensive to recover.	H
Medium	Reduces viability significant waste of time and resources and impact on operational efficiency, output, and quality. Medium term effect, which may be expensive to recover.	M
Low	Minor loss, delay, inconvenience or interruption. Short to medium term effect.	L
Very Low	Minimal loss, delay, inconvenience or interruption. Can be easily and quickly remedied.	VL

## RISK MATRIX

Likelihood	VH	Minor	Moderate	Significant		Extreme
	H					
	M					
	L					
	VL					
		VL	L	M	H	VH
		Impact				

### LEGEND:

VH - Very High
H - High
M - Medium
L - Low
VL - Very Low

Extreme
Significant
Moderate
Minor

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## Case study

- Risk transfers under D&C contract:
    - Existing conditions, latent conditions
    - Ongoing trade
    - Reliance on reports
  - What was safe, what was reasonable?
  - Outcome
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## QUESTIONS & DISCUSSION