

PhD Research Project

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*“Matching Project Risk Profiles to
Delivery Capabilities in Civil
Infrastructure”*



Project Objectives:



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- **To identify, develop and apply a suitable methodology to take into account project risks in the estimating and tender evaluation processes.**

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- To identify, develop and apply a suitable methodology to take into account project risks in the estimating and tender evaluation processes.
- To identify risks from both the owner's and contractor's viewpoint**

Project Objectives (cont.):

- **Formalise the apportionment of specific project risks across the owner and contractor.**

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- Formalise the apportionment of specific project risks across the owner and contractor.
- **Allow it's use for the evaluation of “risk-adjusted” tender prices.**

Project Benefits:



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- **Potential for reduced contract claims as a result of cost over-runs from ineffective risk identification.**



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- **Lead to improvements in tender accuracy.**

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- Potential for reduced contract claims as a result of cost over-runs from ineffective risk identification.
- Leads to improvements in tender accuracy.
- **Increased opportunity cost for contractors to win profitable contracts.**



Project Limitation:



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- **The research project will focus on infrastructure projects relating to the road construction industry in Australia.**

Project Methodology:

Step 1 – Literature Review



Step 1 – Literature Review

- **Project types**



Step 1 – Literature Review

- Project types
- **Contract types for managing risk**



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- Project types
- Contract types for managing risk
- **Prequalification linkages to project risk**

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- Contract types for managing risk
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- **Bid evaluation / contractor selection**

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- Project types
- Contract types for managing risk
- Prequalification linkages to project risk
- Bid evaluation / contractor selection
- **Standards and contract / legal aspects.**

Step 2 – Preliminary Research



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- **In-depth exploratory review of project risk assessment and management practices in the construction industry.**

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- **Identification and research of significant risk assessment techniques.**

Step 3 – Interview Phase



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- **Semi-structured interviews of experienced estimators to evaluate tacit knowledge.**

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(Use to test conclusions from Step 2.)

Step 4 – Questionnaire

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- **Structured interviews/questionnaire**

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**Focus will be with State Road Authorities and contractors
....This is yet to be agreed**



Step 5 – Design



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- **Design of new risk evaluation methodology**

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(Based on Steps 1-4)

Step 6 – Case Studies



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Step 6(a):

- **Conduct case studies of projects using new methodology.**

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Step 6(a):

- Conduct case studies of projects using new methodology.

Step 6(b):

- Data analysis of case studies

Step 7 – Results Presentation



Step 8 – Thesis - Oral Defence



Project Schedule

TASK	COMMENCE DATE	STATUS
PhD Enrolment	10 March 2003	Completed
Stage 2 Application	10 June 2003	Completed
Detailed Literature Review	10 June 2003	Commenced
Preliminary Interviews	22 July 2003	Not Started
Questionnaire	2 September 2003	No started
Methodology development	2 December 2003	Not started
Case studies	17 August 2004	Not started
Project Dissertation	17 August 2004	Not Started

QUESTIONS ?



