


Construction Risk 1.01

Vertical Construction
Leaders Group
Construction Risk
Management Workshop

CONSTRUCTION
SECTOR ACCORD

New Zealand Government



Rick Herd

10 Years – Ministry of Works

15 Years – Mainzeal Construction

2 Years – CEO N&B Group (Marine Contract Engineering)

5 Years – Gen. Manager LVL – Nelson Pine Industries Limited

8 Years – CEO Brightwater Engineers (Industrial Mech. Contract Engineering)

7 Years – CEO Naylor Love Construction



Goals of the Webinar

- 1. Illustrate how a Contractor should manage risk.*
- 2. Prompt ongoing debate on what this process should look like for:*
 - Specialist Subtrades*
 - Client Organisations (Procurement Teams)*
 - Horizontal Infrastructure Contractors*
 - Residential Builders*
 - Construction Consultants*
- 3. Prompt debate on who is best to develop and lead risk training and change management in these components of our sector*

1. The underlying problem is not unfair allocation of risks ...
2. It is more often the parties don't recognise or understand the risks
3. Risks must be recognised & understood to be allocated and managed
 - *Construction Management is Risk Management!*
 - *Building stuff is one part of a construction business....*
 - *Risk Management is the other!*

3 Essential Rules of Contracting - Do Not;

1. Make an offer unless you have the right people to review & analyse the project's technical and contract risks
2. Make an offer unless you have available the key members of a team capable of delivering the Project
3. Make an offer where you have not thoroughly assessed the technical and commercial risks and have effective mitigating strategies.

8 Must Haves of Construction (Risk) Management

1. Delegations of Authority Policy
2. Effective processes & regular process validation (audit)
3. One Person accountable for the delivery of the Bid
4. A robust detailed construction programme
5. Thorough handover of all tender detail to delivery team
6. One Person accountable for the successful delivery of the Project
7. Monthly (Regular) Project Progress, Financial and Performance Interrogations
8. A Plan to Complete

Delegations of Authority Policy

	Project Management	Regional Management	Executive Management	Board of Directors
May we Pursue Project (EOI)	No Authority	Up to \$?	Up to \$?	Over \$?
May we prepare Bid	No Authority	Up to \$?	Up to \$?	Over \$?
Approval to Bid	No Authority	Up to \$?	Up to \$?	Over \$?
Precontract Negotiations	No Authority	Up to \$?	Up to \$?	Over \$?
Handover Attendance	No Authority	Up to \$?	Up to \$?	Over \$?
Subcontractor Engagement	Up to \$?	Up to \$?	Up to \$?	Over \$?
Who attends monthly reviews	No Authority	Up to \$?	Up to \$?	Over \$?
Who is notified/manages Issues	No Authority	Up to \$?	Up to \$?	Over \$?

The values assigned will reflect the capacity of the organisation and skills & experiences of their people & teams.

Effective Processes, a.k.a. Procedures, Systems

Must Cover the 3 Primary Components of a Project

1. Opportunity Identification and Tender Offer (Preconstruction)
2. Project Hand Over & Delivery (Construction)
3. Project Completion (Post-Construction)

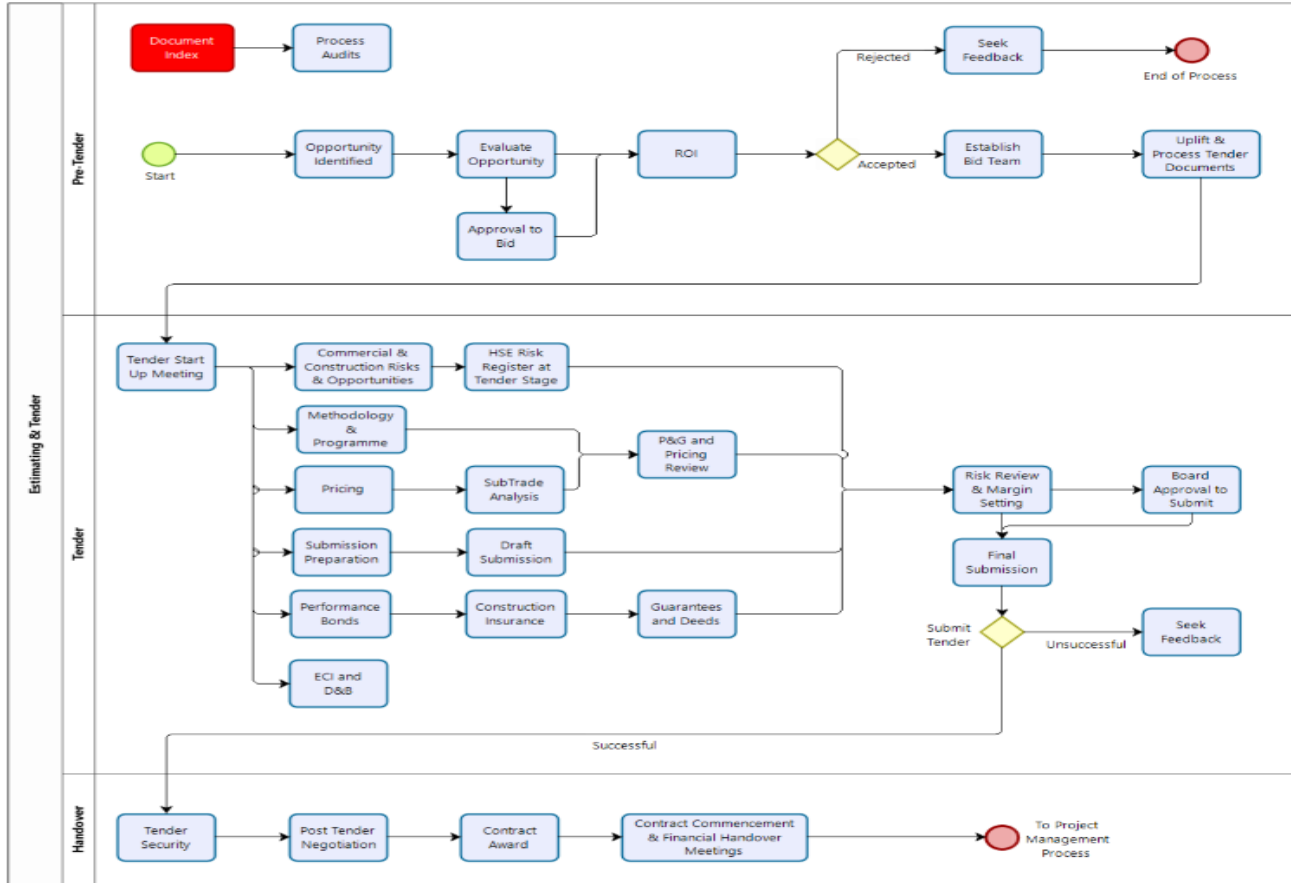
Who Develops the Process?

1. The People that use them!!! – otherwise no ownership
2. Must have continuous improvement opportunity

Must Validate Adherence to Process

1. Regular Operational Audits (internal & external?)

Process Example (Preconstruction)



Tender (Bid) Process

The Bid Start Up Meeting – *Assign Essential Tender Task Accountabilities*
Essential Tasks Include;

1. Is there enough time to undertake the following: is an extension needed?
2. Construction Methodology
3. Construction Programme
4. P&G Assessment
5. Estimating
6. Risks and Opportunities – *Register*
7. Subcontractor bid reviews
8. Contingency Assessment
9. Margin Strategy
10. The Tender Review (Interrogation)
11. Bid Writing
12. Pre-contract negotiation
13. The Handover Meeting – Bid team to Project Team

One Person Accountable for the Bid Process

- I use the title “Bid Team Leader”
- The Project Manager of the bid
- **Accountable for all aspects of the bid (must be given appropriate resource)**
 - Construction Report, Methodology, Programme
 - P&G Assessment
 - Estimating
 - Subtrade tender assessments
 - Risk & Opportunities Register and Analysis
 - Etc etc
- **If they are not given the resources (people) and support to reliably deliver the bid they have the authority to withdraw.**

Estimating

Ask your estimator;

“What is the core responsibility of your role?”.

They will probably answer.... *“To win the tenders” is this right?*

The estimator's role, is to provide an assessment of the cost to deliver the job based on the methodology and programme developed and subject to the variability imposed by the risks & opportunities identified

An estimator should not be manipulating rates to reduce the cost. If they see a risk or an opportunity – register it and analyse these separately and in the context of margin strategy.

Risk Analysis Template

Risk Analysis

PROJECT NAME - edit me (the project name will automatically carry over to the Opportunities Register)

Tender Number - edit me (the tender number will automatically carry over to the Opportunities Register)

Person Responsible	Ref No	Risk Description	Impact Comments	Risk Level (High, Medium, Low)	Actions/Strategy/Proposed Tag Wording	Closed out? (Yes/No)
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					

Monte Carlo Analysis

- Moderates probability and consequence
- Requires experienced implementation

You cannot beat timely consideration and debate by an experienced team

Examples of Common Risks;

- Unforeseen ground conditions
- Design development costs
- Poor/uncoordinated design documentation
- Subcontractor performance & solvency
- Cost escalation
- Foreign exchange fluctuation
- “Fit for Purpose” clauses
- “Joint & Several Liability” clauses
- Unproven building products
- Unproven project staff
- Time constraints
- Uncapped liability
- On Demand Bonds
- No Guarantee of Payment

Margin vs Contingency:

Margin is gross profit it needs to cover overhead outside the project to provide net profit and sustain the business

Contingency is an assessment of the cost of a risk and should therefore be treated as a cost.

In a FPLS contract, if contingency is not spent it adds to margin, just as any labour or materials costs that were estimated as needed by not required.

Don't let anyone tell you margin is to cover risk!

The Bid Review (Interrogation)

- Who attends is governed by the delegations of authority policy
- The more experienced people (from outside the bid team) the better to consider the risks
- Should be held 2-3 days before bid close
- The estimate of costs does not have to be complete
- Risk & Opportunities should be reviewed, mitigation strategies or contingencies established
- The Bid Team Leader presents, the Review Group interrogates
- The Review Group should satisfy themselves that;
 - The recognised tender processes have been adhered to
 - Methodology & Programme are appropriate
 - P&G is appropriate
 - Risks and Opportunities have been thoroughly assessed.
 - Margin Strategy is appropriate
 - That subcontract offers are being fully assessed
- ❖ **The outcome should be approval to bid under defined conditions.**

Pre-contract Negotiation:

- If the bid (offer) is attractive to the client there will be a negotiation that may require compromise to the conditions authorised at the bid review.
- The delegations of authority will define who has authority to change the conditions of bid (offer).
- The negotiator must come back for that authority to change the terms of the bid (offer).
- This may require reassembly of the Bid Review team, depending on the complexity of the offer.

The Handover:

- The work done to date will be wasted unless there is a thorough hand over from the bid team, to the delivery team
- Attendance Bid Leader & Team, Project Manager & Team
- All the elements of the preconstruction bid must be imparted to the project delivery team, particularly the risks and opportunities and the mitigation strategies
- On a large complex project the handover may take 2-3 days.

The Project Delivery

- Successful delivery = profit for contractor + satisfied client + happy subcontractors + fit and health workforce + zero impact on environment
- The delivery team must be led by a single person fully accountable for the successful delivery, typically the Project Manager.
- The Delegations of Authority Policy dictates who must attend monthly contract reviews. Review
 - **Forecast cost to complete, hence margin**
 - **Risk register, risk status and impact on cost to complete**
 - **Programme**
 - **Subcontractor performance**
 - **Client/Consultant relations and performance**

Variation & Delay Management

- Keep thorough records of:
 - Daily activities, delays hold ups, critical information
 - Requests for information
 - Issues impact programme
 - Client instructions and the impact thereof
- Do not be apologetic for claiming your rights
- No client surprises, be consistent, open, honest, transparent and timely

Delay Management

- Claims must be specific on the entitlement under the contract.
- Pursue each claim on its merits, do not wait and see how things work out at the end.
- Don't be afraid to seek professional help if you are getting unreasonable pushback.

Contact us

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