Generally the right people were in the room to answer queries.
5-year comprehensive CoT study

- **RA Member survey** (114 respondents) - May 2013
- **Interstate workshops with road agencies** (Over 400 participants) - April - August 2014
- **RA Member survey** (125 respondents) - September 2014
- **Quantitative survey** (4 international & 36 domestic respondents) - February 2017
- **RA Member survey** (132 respondents) - September 2015
- **Face-to-face interviews 16 RA Members (including Board Members)** - August - November 2016
- **Industry roundtable 17 construction engineering leaders** - May 2016

**Next steps = cross-collaboration**
Common themes throughout study

FORWARD PIPELINE PLANNING
Publish an all infrastructure sector project pipeline, plan and spread industry demand.

CONTROLLABILITY OF RISK
Allocate risk fairly with party best positioned to manage risk. Standardise risk definitions for key contractual items.

BUILD ON GOOD PARTNERSHIPS BETWEEN GOVERNMENT AND INDUSTRY
High level of early interaction between project owner and respondent.

SIMPLIFY PROCUREMENT PROCESS

DRIVE SENSE OF URGENCY
Set and keep project timelines. Encourage alignment across departments and agencies. Effective and timely communication.
Interconnectedness of study findings

Volatility of pipeline + Clarity of scope + Risk sharing + Level of stakeholder collaboration = Project cost
What did we examine in 2017?

Focus on *domestic versus international tender costs*

52% of infrastructure projects examined were tendered under a *design & construct* model.
Key findings from 2017 survey

Domestic and international projects included

- 87% of infrastructure projects examined reported bids costs between 0-2% of total tender price (with great variability in delivery model and value)
- No international project reported bid costs higher than 2% of tender price
- 47% of projects ranked external costs over 40% of the total bid cost
- Victoria and NSW reported the least bid cost as a percentage of tender price
- 4 out of 38 projects reported being reimbursed for bid costs. Of those reimbursed, 50% of reimbursements covered external costs.

- International projects reported design costs were less than the average,
- Good performing projects report lower bid costs as a percentage of tender price
- Poor performing projects report high red percentage of tender price allocated to risk
- Where the risk allocation is fair, the majority of projects perform well
Bid cost as percentage of tender price

*Domestic versus international*

87% of infrastructure project bids cost between 0-2% of total tender price.

Great variability in delivery model and project value for projects reporting <1% - 2% bid costs as percentage of tender price.
Bid cost as percentage of tender price

Domestic versus international

In any case, what is the ideal target?

No international projects reported bid costs higher than 2%

- 2-3% bid cost to tender price
- 12% domestic projects
- 0% international projects

Domestic versus international projects

In any case, what is the ideal target?
Bid cost as percentage of tender price

Overall for both domestic and international projects examined via the survey

38 projects examined reported total bid cost as a percentage of tender price.

Majority reported 1-2%
Bid cost as percentage of tender price

*East coast comparison – QLD, NSW and VIC*

Victoria and NSW reported the least bid cost as a percentage of tender price.

<table>
<thead>
<tr>
<th>State</th>
<th>&lt;1%</th>
<th>1-2%</th>
<th>2-3%</th>
<th>&gt;3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>QLD</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>VIC</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

No. of projects examined in survey per state

NSW = 10
QLD = 6
VIC = 12
Externals costs as portion of total bid cost

Domestic versus international

39% of projects ranked external costs between 40-50% of the total bid cost

15 projects reporting external costs at 40-50% of total bid cost were D&C

Opportunity to investigate further?
Reimbursement

*Domestic versus international*

4 out of 38 projects reported being reimbursed for bid costs. Of those reimbursed, 50% of reimbursements covered external costs.

**SOUTH AUSTRALIA**
Alliance rail project ($A101-200m)

**DENMARK**
D&C road project ($A101-200m)

**VICTORIA**
D&C rail project
20-30% reimbursement ($A201-500m)

**QUEENSLAND**
PPP road project (> $A501m)

Opportunity for public sector to invest in IP to inform future projects?
Allocation of risk – fairness and cost

Domestic versus international

All projects reported allocation of risk in final tender price was between 0-10%

<table>
<thead>
<tr>
<th>Domestic Projects</th>
<th>International Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>61% of projects reported allocation of risk was fair</td>
<td>100% of projects reported allocation of risk was fair</td>
</tr>
</tbody>
</table>

Not surprisingly, of those reporting that risk was not fair, generally reported higher % cost allocated in the tender price to risk.

Opportunity to investigate further?
Design cost contribution to tender price

Domestic versus international

Q12 In cases where you were required to submit a design as part of your bid, what percentage of your final tender price was allocated to design?

41% of design costs were between 4-6% of the final tender price

27% design costs were >8% of the final tender price

International projects reported design costs were less than the average, at between 4%

Opportunity to investigate further?
52% of infrastructure projects examined in the survey were tendered under a design & construct model. 20 D&C projects examined as part of the survey. 3 were international projects.

- **Total bid costs as % of tender price**
  - <1% = 10 projects
  - 1-2% = 8 projects
  - 2-3% = 2 projects

- **Majority reported 40-50% of total bid cost were external costs**
  - 5 projects >50%

- **Majority reported Rating of 3-4 Project definition and scope – adequate**

- **2 out of 20 Projects received reimbursement**

- **0-68 Addenda issued**
  - Majority reported receiving between 0 and 15

- **Majority reported Less than 5% of final tender price allocated to risk**
  - Divided opinion on fairness of risk allocation

- **1-3 months Tender period**
  - Considered About right

- **Majority awarded within 1-3 months**

- **15 conducted pre-tender briefing**

**Design & Construct – common features**
Attributes of GOOD tender process performance

- Clarity of project definition rated high
- Lower total bid cost as % of final tender price
- Average tender period & award 1-3 months
- Risk allocation considered fair
- Lower % of final tender price allocated to risk
- Majority include a pre-tender briefing
- No more than 10

3.3 out of 5 for domestic projects
3.75 out of 5 for international projects
73% of projects agreed that the length of tender period was about right

All 4 international projects held a pre-tender briefing

Clarity of project definition rated high

Lower total bid cost as % of final tender price

Risk allocation considered fair

Lower % of final tender price allocated to risk

Majority include a pre-tender briefing

No more than 10

Low levels of late addenda
Attributes of POOR tender process performance

- Clarity of project definition rated LOW
- HIGHEST total bid cost as % of final tender price
- Risk allocation considered NOT fair
- Predominantly 5-10% allocated to risk
- HIGHER levels of late addenda
- Predominantly rated a 1
- Reported highest 8% total bid cost (% of final tender price)
- 100% reported allocation of risk not fair
- Highest reported 68

Clarity of project definition rated LOW

- VARIABLE satisfactory tender period & award
- HIGHER % of final tender price allocated to risk
Attributes of where risk is best allocated

- Clarity of project definition rated WELL
- Project performance rated WELL
- Lower % of final tender price allocated to risk
- Level of addenda UNDER 25
- Predominantly projects report <5% allocated to risk

Note: Complex projects e.g. report 5-10% (Metro subway, PPP, Level Crossings)

Average rating 3.9

Majority of projects reported <1% total bid cost as % of final tender price – across the range of project values

Tender period/award 1-3 months ABOUT RIGHT

100% reported either adequate or good performance

LOWEST total bid cost as % of final tender price
Possible options and next steps

• We need cross-collaboration between the many groups working on the cost of tendering and in procurement process reform, to come together and assist the development of new efficiency initiatives

• Possible options may be to:
  ✓ Investigate a framework to measure the effectiveness and efficiency of current tendering costs and procurement processes
  ✓ Establish benchmarks for the public cost of tendering to oversee best value process
  ✓ Review key areas such as legal, design and technical costs and investigate possible options for further efficiency
  ✓ Review opportunities for public sector to invest in IP and innovation for future projects
  ✓ Investigate the harmonisation of key risk definitions for common delivery models
Capacity Policy Chapter

Roads Australia working to get the most out of existing capacity, reduce the cost of bidding and improve public value

Scott Olsen, Capacity Chapter Chair
Dan Reeve, Capacity Chapter Deputy

Upcoming event: National Skills & Capacity Forum – 25 August 2017 SYDNEY
Generally the right people were in the room to answer queries.

Risks: Building value into everything we do

Dan Reeve
Capacity Chapter
Chapter Deputy
Roads Australia

National Roads Summit – 1 June 2017
QATAR RAIL PROJECT
DESIGN & CONSTRUCT
VALUE >A$501m

International Case Study - 3

- Total bid cost: Less than 1% of project value (Approx. A$5m)
- 40-50% of total bid cost were external costs (Approx. A$2.5m)
- <2% of final tender price allocated design
- Rating of 2: Project definition and scope – Rated poor (Pre-tender briefing)
- 0% of total bid costs reimbursed
- 15 Addenda issued: Considered ADEQUATE issuing agency performance
- Less than 5% of final tender price allocated to risk: Risk allocation considered fair
- > 3 months: Tender period – Considered About right

Awarded within 1-3 months
PERU METRO-SUBWAY PROJECT PUBLIC PRIVATE PARTNERSHIP VALUE >A$501m

International Case Study - 4

- <2% of final tender price allocated design
- Total bid cost: Less than 1% of project value
  Approx. A$5m
- Less than 5% of total bid cost were external costs
  Approx. A$250,000
- Less than 5% of total bid costs reimbursed
- Rating of 5
  Project definition and scope – Rated high
  ✓ Pre-tender briefing
- 20 Addenda issued
- 0% of total bid costs reimbursed
- 5-10% of final tender price allocated to risk
  Risk allocation considered fair
- 5-10% of final tender price allocated to risk
- >3 months Tender period
  Considered About right
- Awarded within 1-3 months

✓ Pre-tender briefing
SINGAPORE AIRPORT PROJECT
DESIGN & CONSTRUCT
VALUE >A$501m

Total bid cost
Less than 1%
of project value
Approx. A$5m

>50% of total bid cost were external costs
Approx. A$2.5m

0% of total bid costs reimbursed

<2% of final tender price allocated design

Rating of 4
Project definition and scope – well-defined
✓ Pre-tender briefing

Less than 5% of final tender price allocated to risk
Risk allocation considered fair

25 Addenda issued
Considered ADEQUATE issuing agency performance

> 3 months
Tender period
Considered About right

Awarded within 1-3 months

International Case Study - 2

✓ Pre-tender briefing