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Trustpower and WEL Networks



Project Risk Management

Risk Analytics and Cost Integration

RiskNZ

Lunchtime Seminar - 07 March 2017

James Hunt – National Risk Manager – Fletcher Infrastructure
Risk Manager – Well Connected Alliance





SH!T HAPPENS!!





So in Summary...

WE ALL KNOW THAT SH!T HAPPENS!!

We do risk management to:

- A. Avoid it happening
- B. Limit how bad it is when it does happen
- C. Give it to somebody else to manage
- D. Prepare for it! (and prepare our stakeholders for it!)



Measuring it!





Two Parts...

Risk as a discipline attempts to answer two questions...

How much money/time do we need?

Risk Analysis

How are we going to limit/minimise the amount of time and money we need?

Risk Management

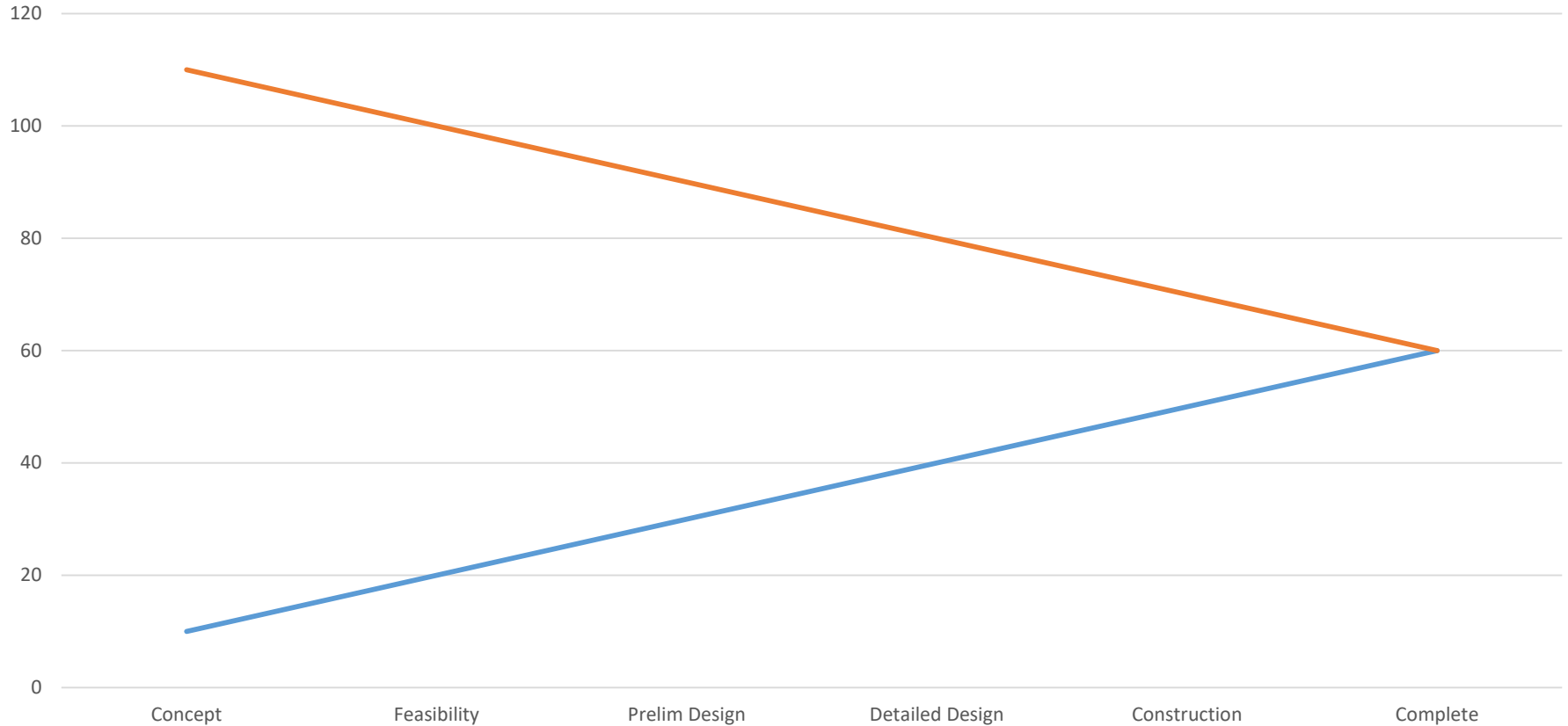
Militate = Before/Preventative

Mitigate = After the event to limit impact/respond



Project Uncertainty...

How much do we really know???





Risk Analysis...

Quantified Risk Assessment

Simply:

Probability/likelihood (%)

X

Impact (\$ or Days)





Examples...

Applied Basic Modelling...rolling the dice!

Probability:

Risk Binomial

Risk Poisson

Risk Discrete

Impact:

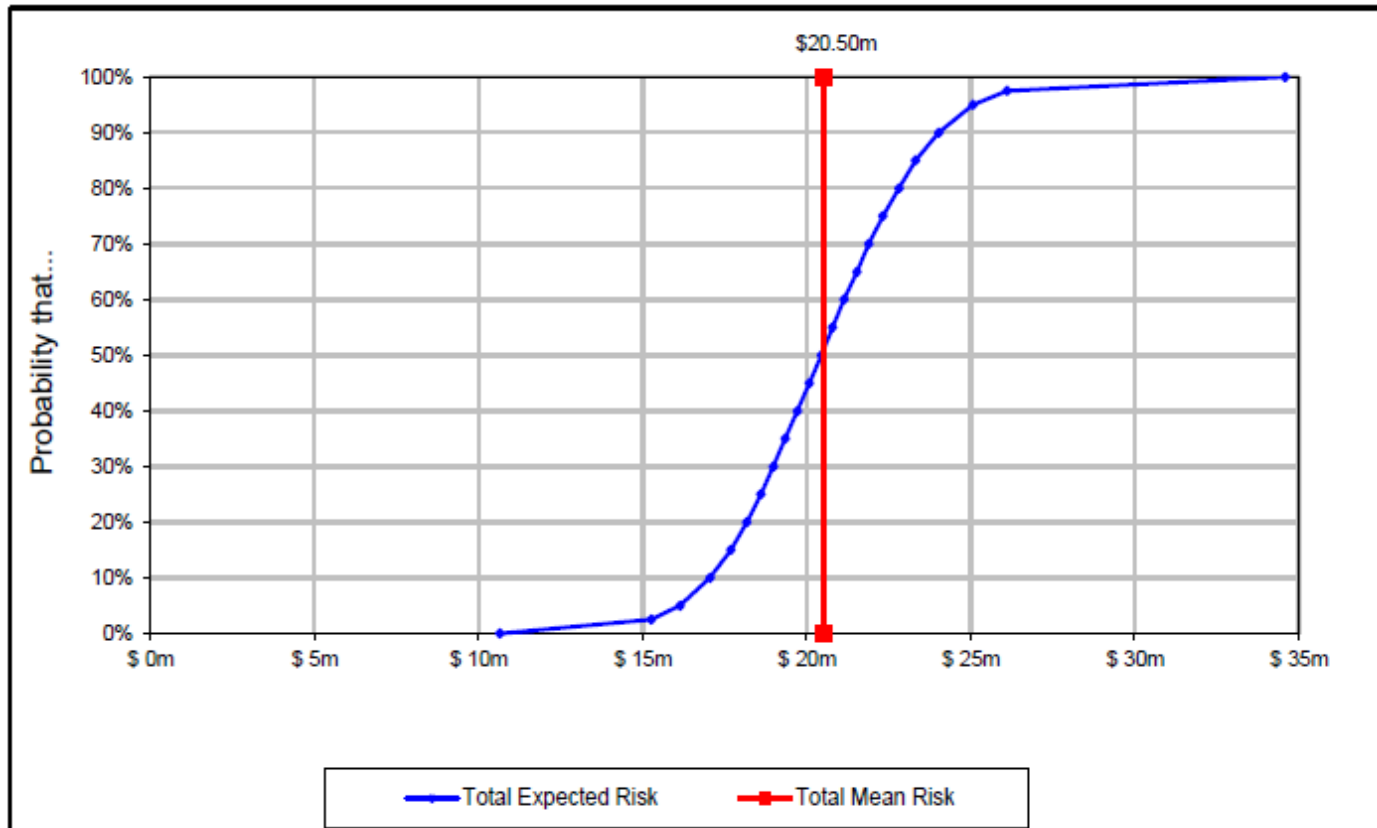
Risk Triangular

Risk Uniform

Risk Discrete

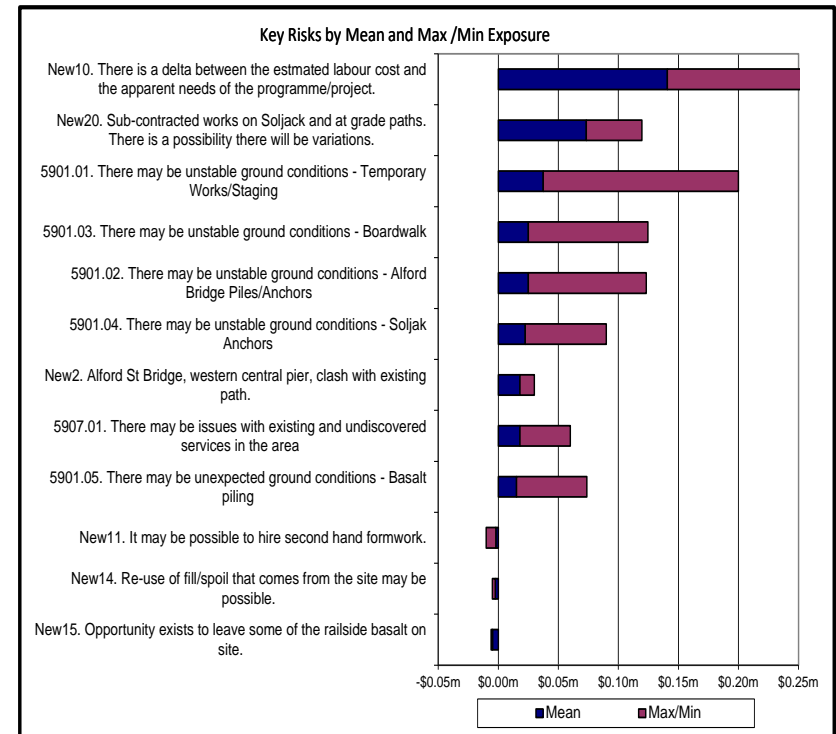
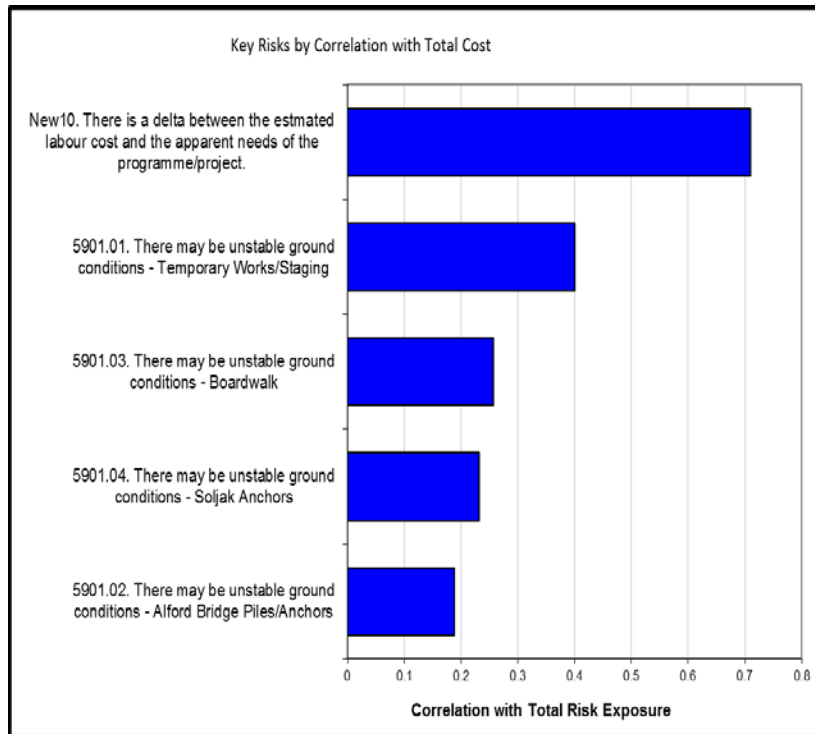
Outputs...

S-Curves



Outputs Continued...

Tornados






Analysing Risk Trends...

- All data tells a story
- Read the curve
- Learn from the history
- We deal in uncertainty





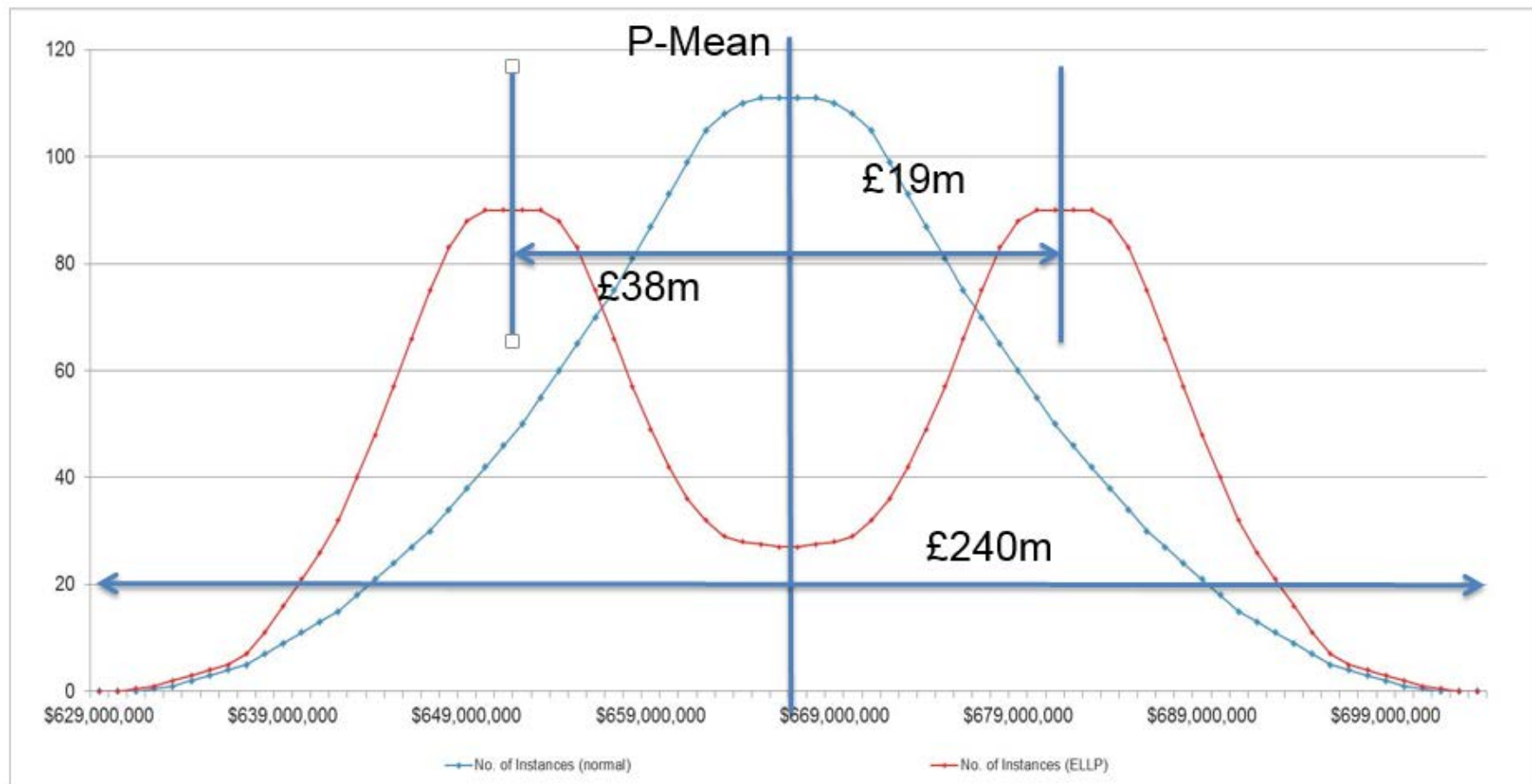
“The n’t^h degree of statistical certainty does not need to exist for us to make a meaningful conclusion or recommendation.”

James Hunt, August 2016



A clever solution...

Use of deterministic correlation to find a more true solution





Baselining...

The WCA Approach

- Risk Exposure vs Risk Allocation
- Risks need to be aligned with what is included in the Forecast/EFC (Identified Risk, or 'Known Unknowns')
- We also assess the idea that there are risks we cannot identify. (Unidentified Risk, or 'Unknown Unknowns')



Baselining continued...

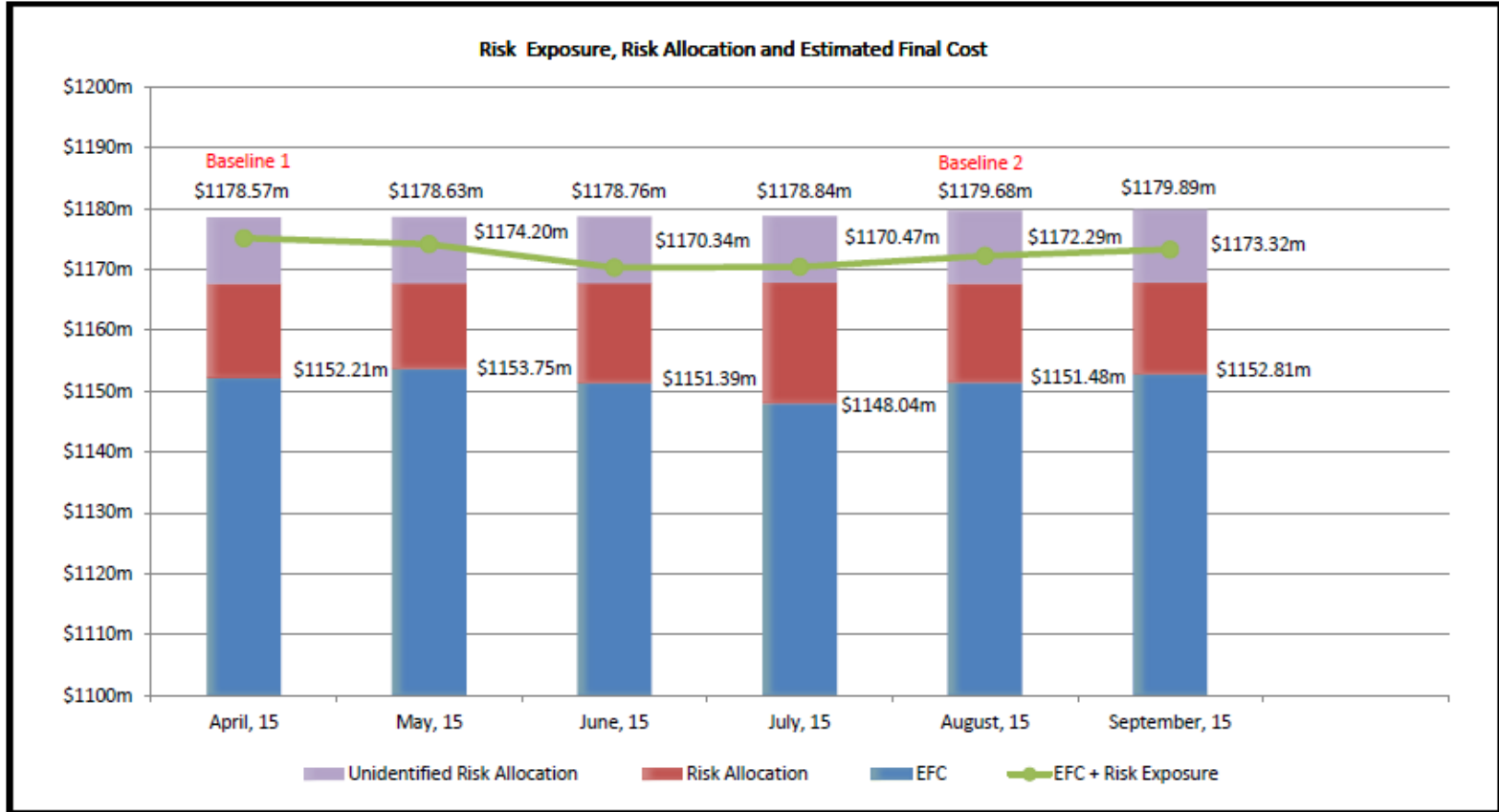
The WCA Approach – Concentrate!!

- Based on the risk exposure (the perceived risk the project faces at any frozen moment in time) we formed a risk allocation, a budget that prepares the project to pay for risks we may face.
- We then use the Risk Exposure at any time as a guideline of our project health against the budget we have told the Client/PAB/Home Companies we will need.



It looks like this...

Risk Allocation vs Risk Exposure





Measurement...

What can we learn?

- When are risk occurs or forecast changes on this project we absorb the cost in our Risk Allocation
- Alternative methods (Change Control, Contingency Management)
- By keeping a record of these changes and impacts we can learn more about where to focus our finite risk management energies for best use.



Questions?