



# Working with engineers and planners

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Engineers  
are  
amazing

- Everything has been designed by an engineer
- Architects conceive the aesthetic, but engineers work out how things should be built
- BUT some infrastructure works well for its users/ communities, while other infrastructure does not
- The difference is in how and when the users/ consumers/ communities were engaged in the design process

# A typical engineer...

- Risk averse
- Detailed
- Conservative
- Solution focused
- Sequential
- Dislikes things they cannot control
- Exact/ precise
- Measured
- Rule follower





- Happy to try new things
- Big picture
- Open
- People focused
- Sequential
- Works well with complexity and ambiguity
- Rule maker/ breaker



**A typical P2 practitioner...**

# Key tips

1. **Learn to speak their language**
2. **Customise your language - acronyms, titles, process diagrams, pie charts**
3. **Speak in absolutes, with certainty and about tangibles**
4. **Stats and data are key**
5. **Confident, clear body language**
6. **Your mantra = risks, delays, cost**
7. **Use fear of outrage to create respect (last resort only)**

# Community is now the key project risk

Community outrage costs real dollars  
=  
\$20AUD billion in 10 years, road projects, Australia



11 Oct 2017

Australian Financial Review, Australia

Author: Jenny Wiggins • Section: Companies and Markets • Article type: News Item  
Audience: 47,179 • Page: 18 • Printed Size: 327.00cm<sup>2</sup> • Market: National  
Country: Australia • ASR: AUD 6,614 • Words: 545 • Item ID: 857422788

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Page 1 of 1

## Road projects hit wall because nobody asked the locals' view

Jenny Wiggins

Controversial infrastructure projects such as Sydney's WestConnex motorway and Perth's abandoned Freight Link could reduce costs if planners spent more time asking communities what they wanted, according to University of Melbourne researchers.

More than \$20 billion of Australian infrastructure projects have been cancelled, delayed or mothballed in the past decade due to community opposition, including Melbourne's East West Link toll road and the Perth Freight Link – both dumped – and the Gold Coast desalination plant, which has been the most of the line since it was opened in 2010. Scrapping East West Link cost Victoria almost \$1 billion.

The University of Melbourne's Next Generation Engagement project, which aims to improve community interaction on infrastructure projects, has called for the development of evidence-based tools to quantify the impact of engagement, including on financial costs.

"We don't have an accurate method to price social risk," said Kirsty O'Connell, the project's industry director.

Communities are increasingly demanding to be engaged in projects' development and design, and are far more sophisticated than they were 20 years ago, Ms O'Connell said.

"People do understand planning. They do understand project delivery and they want really detailed answers."

Sydney's WestConnex motorway is among projects hit with protests and lawsuits as communities try to prevent the toll road from being built. Residents' group Roadside Against WestConnex has called the Sydney toll road "wasteful, harmful and ill-conceived".

Dr Sara Rice, Next Generation's research director, said projects often did not bring in community engagement experts until it was too late and they were under attack. Communities should be engaged far earlier, during the planning phase and preparation of business cases, where they could help improve projects, she said.

Ms O'Connell, who led communications and engagement during concep-



Melbourne's East West Link toll road was dumped after communities stood their ground and opposed the project. PHOTO: KRAIG FREEMAN

development for the federal government's \$10 billion Tullahoma Rail project, said meetings with farmers and experts in land and water management had been useful in developing flood maps.

"That was a really important aspect in helping to de-risk that project and helping to understand what locals knew because often their knowledge was superior to what was held in a physical record," she said.

Next Generation wants to set up an international research centre to examine the value of community engagement, how to encourage professionalisation, how to measure social and the costs of community opposition, best timing and approaches, and the role of regulation and policy.

Dr Rice said other countries were also beginning to examine the merits of community engagement. They include China, which has become more con-

cerned about the environmental risks of infrastructure projects due to severe pollution and wants to understand the best contracting methods for public-private partnerships.

Next Generation is already working with Beijing's University of Tsinghua, which co-sponsors a centre for public-private partnerships on collaborative case studies.

The Singapore-based IDHRC Infrastructure Institute, which collects infrastructure investment data, is also interested in collaborating.

Next Generation has published an initial report on its research priorities and has opened it to public comment before a final report in November.

Industry had backed the project because it acknowledged a cost associated with community conflict and was looking for tools to improve engagement, Ms O'Connell said.

# Why is community the key project risk?

Answer (when talking to engineers)... **risks, delays, cost**

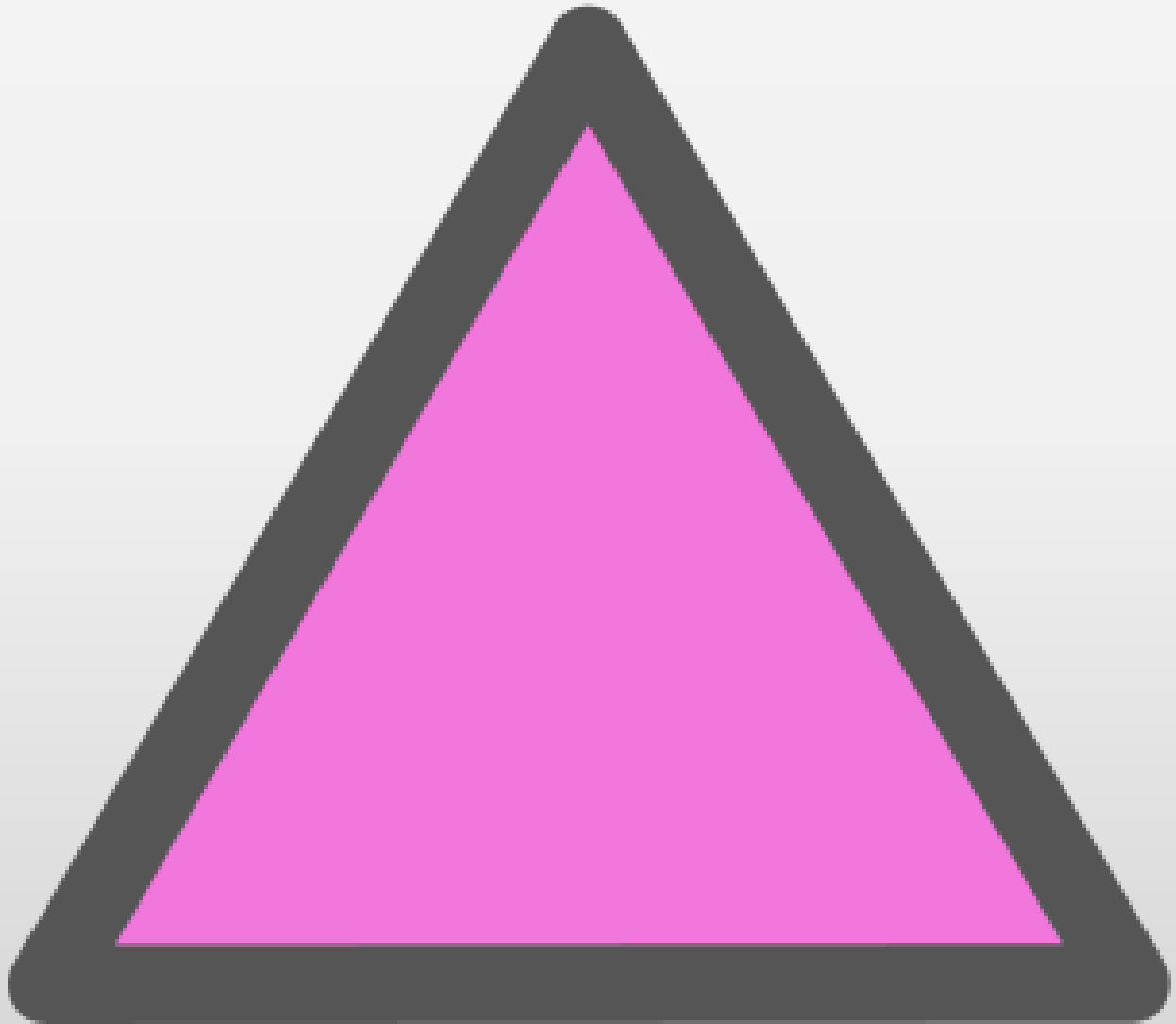
- technology enables everyone to be a protester
- consumers are more vocal than ever before and community outrage has increased
- three reasons why community is now the key project risk - meaning, trust and politics



Meaning is a  
critical social  
motivator



Trust in  
government is  
gone





All projects are political





Protestors are  
anyone and everywhere



From traditional design to  
co design – the evolution of  
engineering



1. Traditional = engineers designed based on what they believed was the best approach
2. Mid-point of engineering evolution = human, or user centred design
3. Final stage of the engineering evolution - P2!!!!



What's  
*it*

Like?

Lived experience is  
just as important as  
technical