From Disaster to Resilience: managing the reconstruction of Queensland’s Regional Road Network

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Agenda

1. Introduction & the task
2. Our Approach
3. Legacy
4. Conclusions
Introduction & the Task

- Cyclones & Storms from 2010-13 damaged more than 27,000 km
  - 82% of the Queensland’s State Controlled Network

- $6.519 billion Transport Network Reconstruction Program

- Federally funded (NDRRA), delivered by the State

- Qld Dept of Transport & Main Roads teamed with Jacobs (formerly SKM) in these regions:
  - Far North
  - Central West
  - North West
Introduction & the task

- 715 km/3159 km of road reconstructed
- 170 contracts awarded across 90 packages
- $696 million

- 1456 km/4384 km of road reconstructed
- 119 contracts awarded across 34 packages
- $516 million

- 2037 km/3500 km of road reconstructed
- 104 contracts awarded across 34 packages
- $342 million
Introduction & the task

Our task was to:

- Rebuild the road network to pre-existing standards by mid-2014
- Work seamlessly and collaboratively with TMR staff
- Do all things necessary including approvals, safety, risk and reporting, program and project management, business cases, design, documentation, contract admin, stakeholder consultation and management
- Budget = $1.55 Billion
Why was this Project complex?

- Size - $1.55 Billion/$6.519 Billion
- Remoteness of sites
- Stakeholder concerns
- Resources required
- Need to meet NDRRA funding deadlines
Imperatives

Reopen & Rebuild
Reputation
Value for Money
Spend Rate
Our Approach – Resilience – Cardwell

- To provide value for money for the community and minimise disruption, some reconstruction works were packaged together with federal/state-funded complementary works.

- Cardwell Foreshore Restoration and Enhancement funded by Council, Department and Disaster Relief money
  - Delivered improved road stability and better urban design outcomes.
Our Approach – Resilience – Pavements

- Upgrading road pavements to current engineering standards
- Widening where possible and where state could align other funding commitments
- Vertical geometry improved where possible on gravel roads to reduce yearly pavement loss
Our Approach – Resilience - Landslips

• Natural process of landslips is difficult to manage under current guidelines

• Very difficult to provide repairs to adjacent slip with lower factor of safety

• Difficult to prioritise and broader approach would be advantageous

• Review of guidelines required
Our Approach – Resilience and Betterment

- TMR development road

(Sealing the case for change)

Sustainable approach to betterment

- Major loss of unsealed pavements on a yearly basis

- Large whole of life cost savings if intervention over first 5 years
Our Approach – Innovative and sustainable

- Use of specialised plant to minimise traffic disruption
- Gravel compliance program to meet environmental requirements
- Native Title and Cultural Heritage management/corridor agreements
- Safety management – reporting in, fatigue management, and tail-end collision avoidance
Our Approach – Environment & Cultural Heritage

Effective delivery, quickly, in environmentally and culturally sensitive regions:

- Understanding requirements of pristine and intact wilderness areas with complex frameworks
  - Wild Rivers legislation
  - National Parks
  - Great Barrier Reef World Heritage Area
  - Wet Tropics World Heritage Area

- Strong trusting relationships and robust consultation with agencies
- Importance of TMR knowledge and relationships with Traditional Owners
- Corridor Agreements
Legacy

- Program delivered on time and budget
- Long term resilience improvements for the road network
- Program management systems
- Lessons learned documented
- >500,000 man hours worked LTI free
Conclusions

- Robust planning and preparation –
- Co-location is critical
- Understanding the department’s business and other programs
- Manage data and reporting
- Understand governance issues
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