Road Safety Performance incentives
Safety Alliance - Background

- Primarily National and Regional strategic highway
- KiwiRAP high and medium high risk corridors
- High risk intersections 24
- $754m over 10 years approximately

- KP1 reduce death and serious injuries by 1,426 over 10 years
- KP2 improve the KiwiRAP star rating on 424km
- Success Factor 1 treat 8 high risk intersections by 2016 and 14 more by end of programme
- Success Factor 2 increase the star rating to above 3.5 for 135km of highway
Safety Alliance - Observations

- Serious issues over regression to mean impacts on selected corridors
- Move to Dsi equivalents
- Use of KiwiRAP rating to assess safety benefits
Two PPPs

Transmission Gully
• 26km new four lane highway
• Currently under construction

Puhio to Wakworth
• 38km new four lane highway
• Currently in design

Both
• Construction + 25 years operation
• Safety in both design and operation
Minimum Star Rating PPPs

- Requires a 4 star KiwiRAP rating

**Injury Crash Rate Associated with Each 100m Star Rating Category for Rural State Highways**

(Star Rating Categories with <2 Injury Crashes per Year Removed)

\[ y = 67.549652 - 7.891884 \times x^2 + 1.084689 \times x^3 \]

\( R^2 = 0.8709 \)
Safety in NZ PPPs

- PPP Model in NZ is outcomes based.
- Tenderers are evaluated with significant weighting applied to demonstrating the ability to deliver on these outcomes.
- Contractor gets paid an availability payment when the road is available for use.
- A performance regime sits within the PPP agreement and ‘incentivises’ the behaviours and outcomes we are looking for.
  - Influences design
  - Influences operations and need to improve performance (or asset) when required
Observation

- COMPLICATED
  - Charge for each fatal and serious crash
  - Charges increase when there are systemic crashes (location or cause)

- Self assessment of the minimum KiwiRAP compliance
- Unclear if the minimum 4Star is
  - Project as a whole
  - 5km lengths
  - 100m assessment sections
- Issues around value engineering of solutions and the allocation of risk between constructor and maintainer