

What is Safe System?

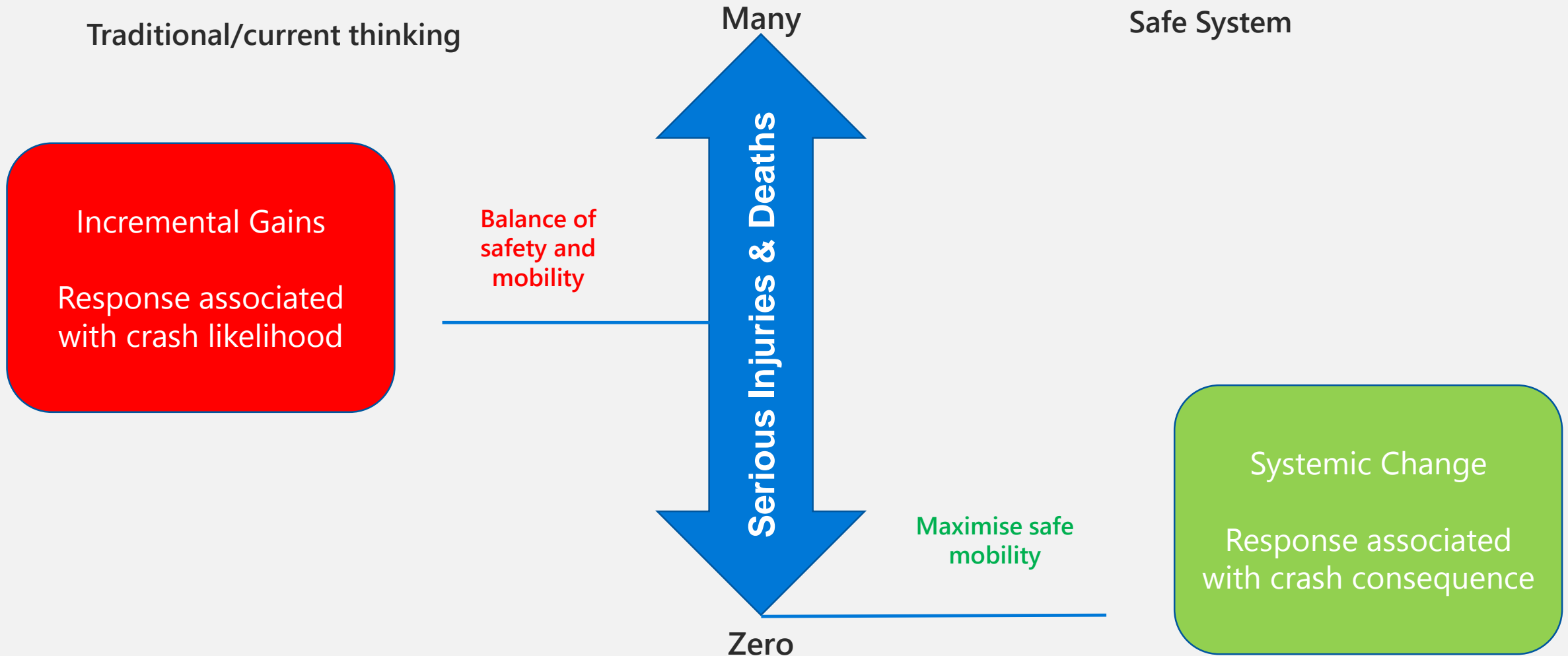


A vision which recognises that people will always make mistakes and may have road crashes, but the road system should be forgiving and those crashes should not result in death or serious injury.

It is a vision of zero deaths and serious injuries on our roads.



Introduction



Safe System aspirations



Safe System aspirations



- *Don't look for what causes crashes. Look to prevent the harm.*
- *Harm minimisation approach*
- *Don't blame the driver... don't look for fault. Work out how the system can be made safer.*
- So how do we eliminate fatal and serious injuries? Influence consequences.

Safety as a trade-off?



How many people do you
think are killed on SA roads
each year?

Vision of zero



- How many of you think we can get to zero deaths and serious injuries in Queensland?
- What does 'getting to zero' mean?
 - Systemic change, paradigm shift from following to leading
 - Time scale ...increasingly free of death and serious injuries
 - Achievable goals, e.g. no preventable deaths and serious injuries on urban motorways

Why a Safe System?



In memory of the 27,289 people who died or were seriously injured on our roads in the last ten years

Why a Safe System?



- Who thinks it was Jenny's fault?
- Can we accept...
 - that it is human to err? We all make mistakes.
 - that it is impossible to legislate/regulate/enforce/shame/scare/design out human failure to cope with the system?
 - that crashes will continue to occur?
 - that human bodies are frail and easily damaged in crashes?
 - that it is morally unacceptable to punish such human error with death and serious injury?
 - that it is our shared responsibility to deal with consequences of crashes and minimise harm?
- How can we make the road transport system more forgiving to all road users?

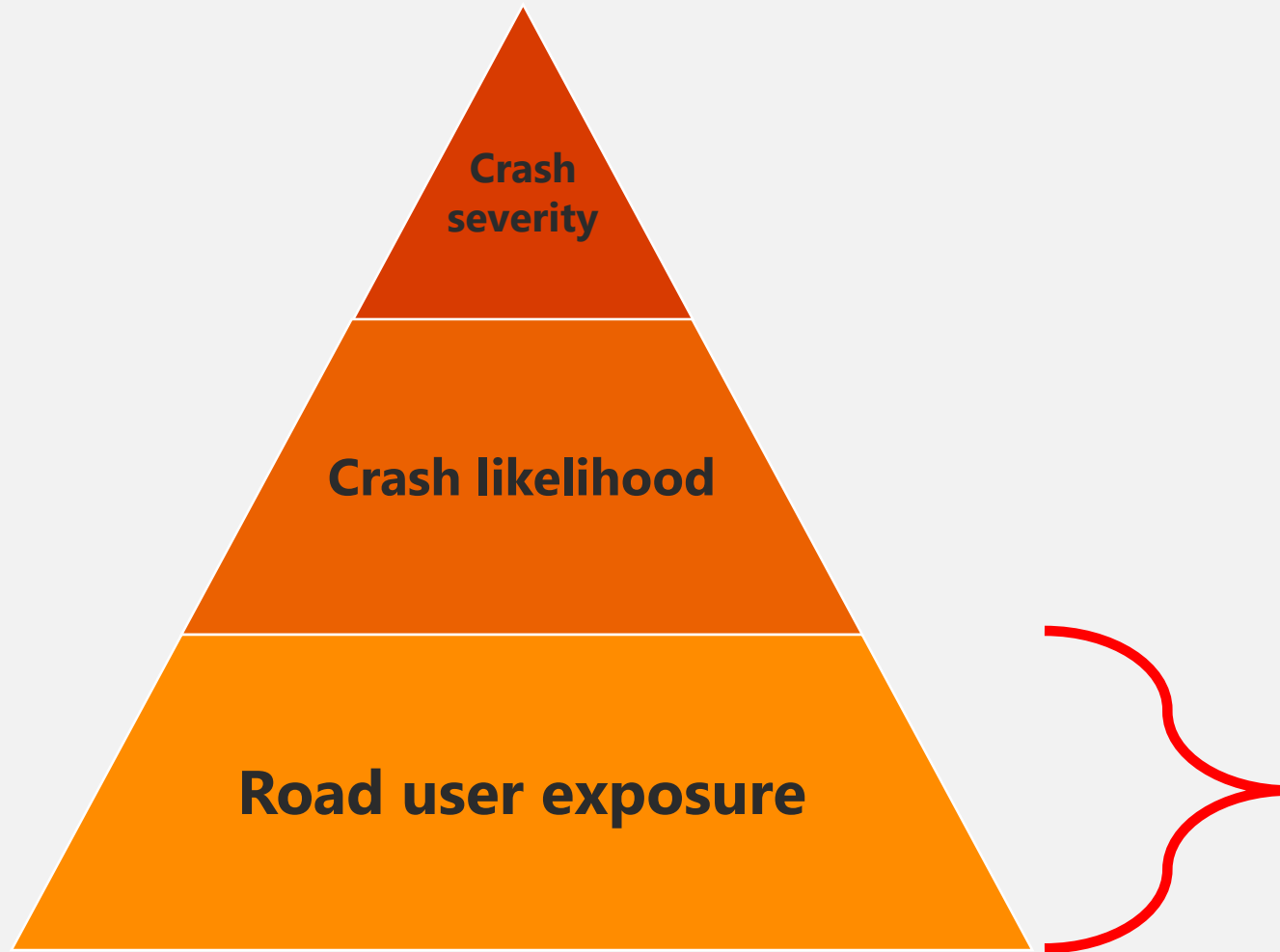
The Safe System model

Principles

- Human errors, crashes will happen
- Biomechanical limits to impact – known injury thresholds
- Crashes are predictable – long standing trends we will not be able to address using conventional approaches
- Shared responsibility – the four pillars of Safe System plus the post-crash care
- Solutions can be found across all pillars



How do we make the system safe?

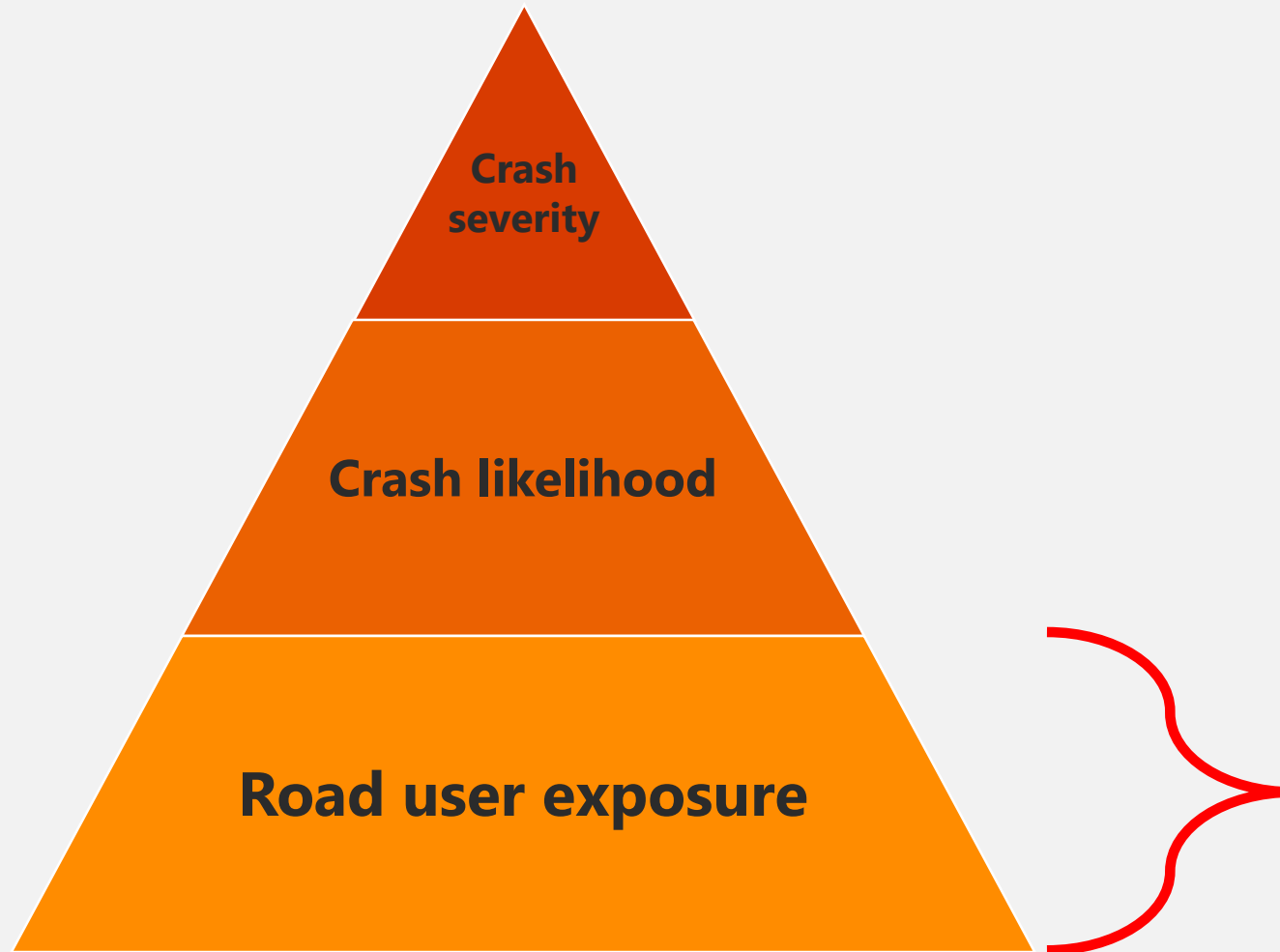


Remove conflict
(Road Closure)



Source: CASR

How do we make the system safe?

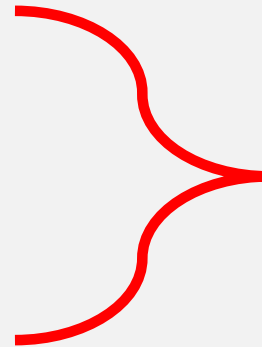
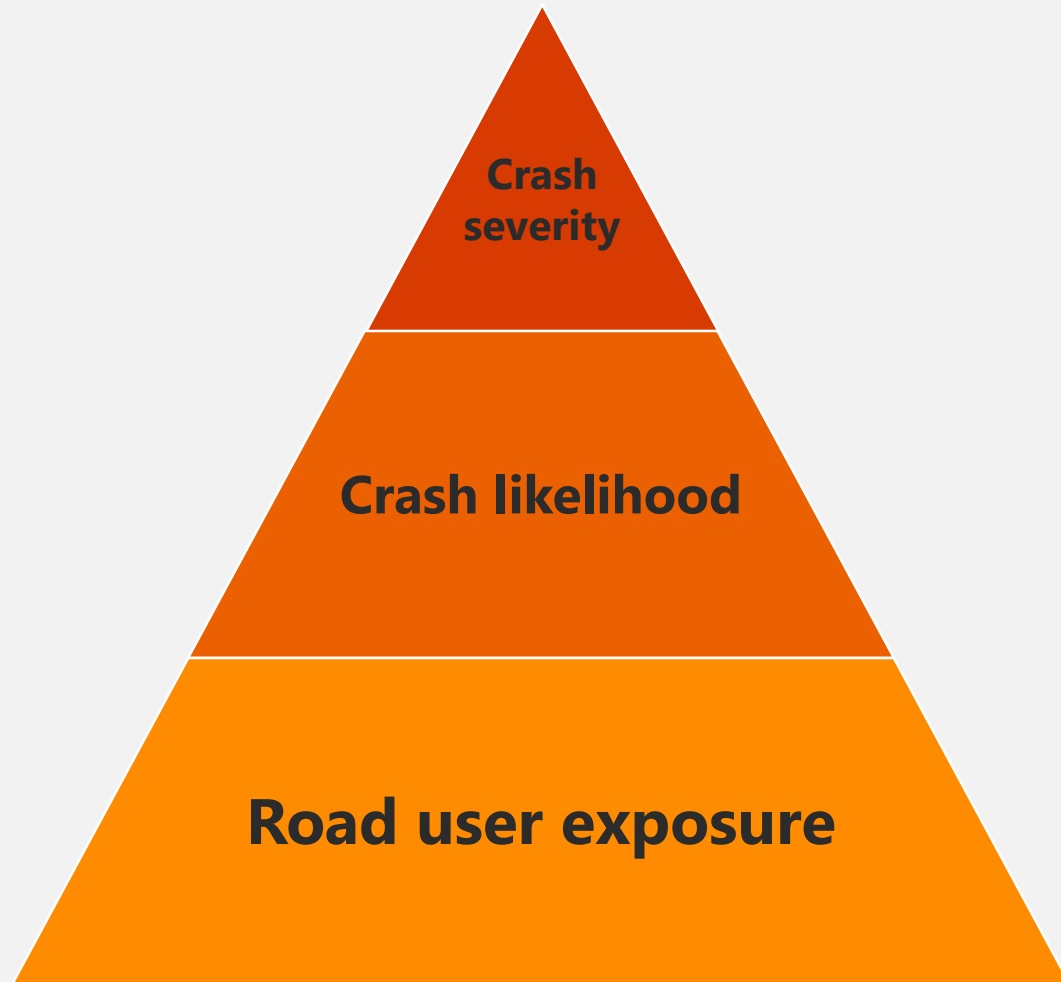


Remove conflict
(Segregated Bicycle Path)



Source: Kenn Beer

How do we make the system safe?

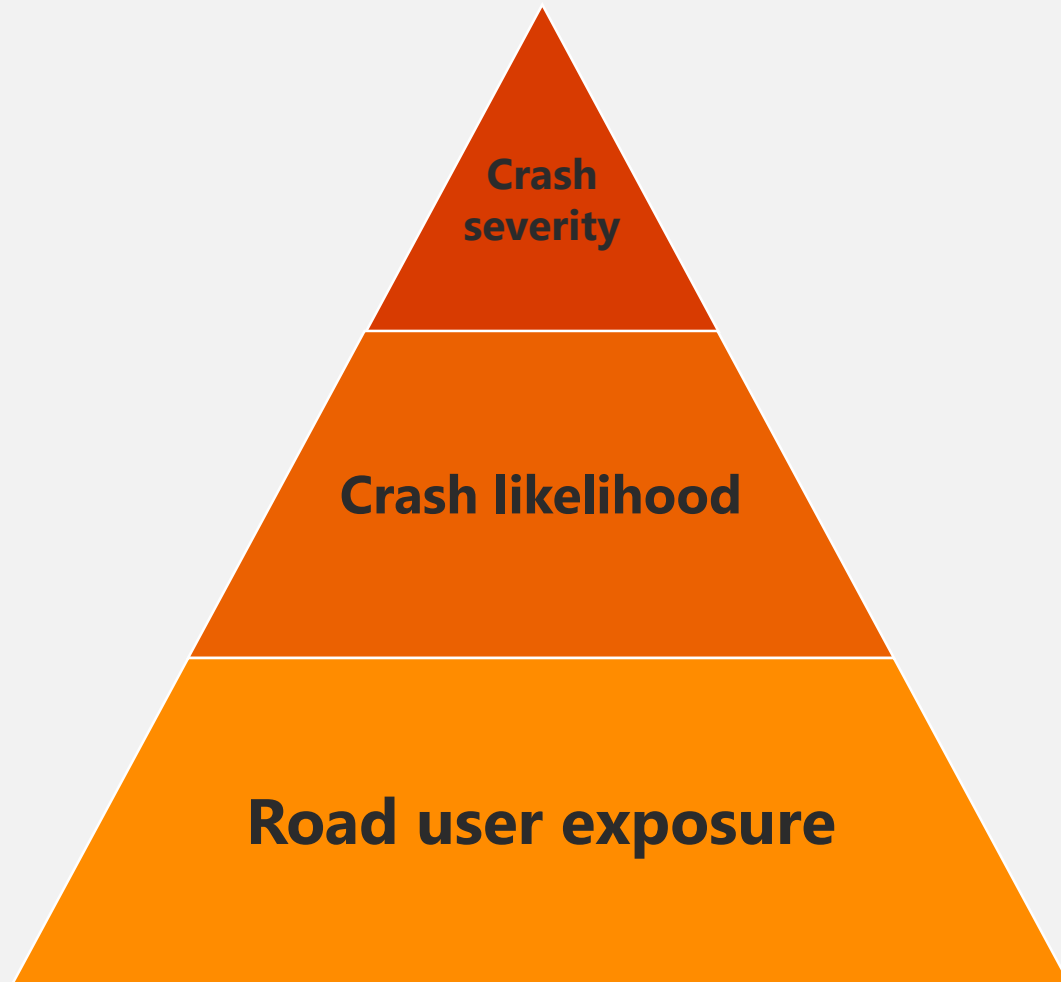


Reduce likelihood
(Wide Centre Line)



Source: CASR

How do we make the system safe?

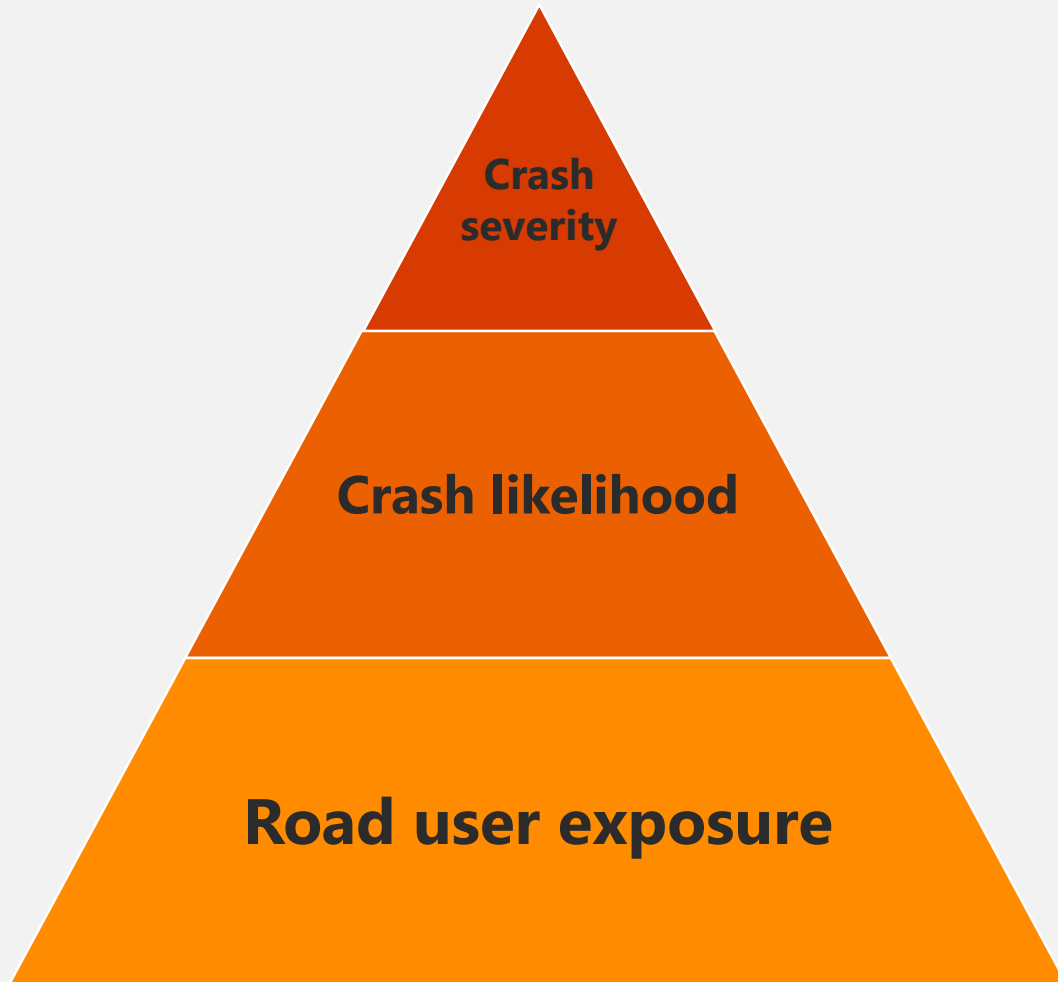


Reduce likelihood (Fully Controlled Right Turn)



Source: CASR

How do we make the system safe?

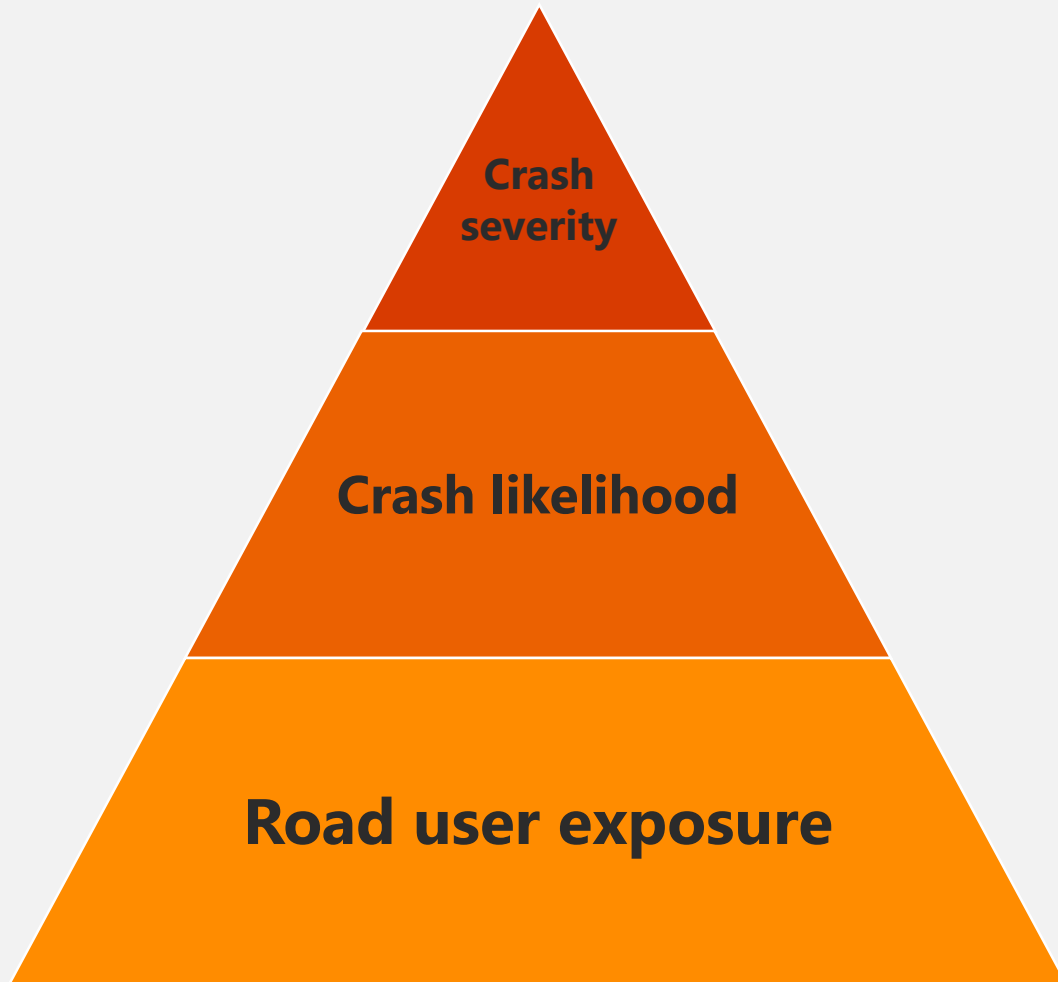


Reduce severity
(Safety Ramp)



Source: CASR

How do we make the system safe?



Reduce severity
(Roadside & Centre Line Barriers)



Source: Kenn Beer

How should we regard treatments?

Primary
Treatment

Supporting
(step towards)

Supporting
Treatment

Non-Safe System
Treatment

How should we regard treatments?



Primary Treatment

- Road planning, design and management considerations that virtually eliminate the potential of fatal and serious injuries occurring in association with the foreseeable crash types

Supporting (step towards)

Supporting Treatment

Non-Safe System Treatment

How should we regard treatments?



Primary Treatment

- Road planning, design and management considerations that virtually eliminate the potential of fatal and serious injuries occurring in association with the foreseeable crash types

Supporting (step towards)

- Road planning, design and management considerations that improve the overall level of safety associated with foreseeable crash types, but not expected to virtually eliminate the potential of fatal and serious injuries occurring
- Improves the ability for a Primary Treatment to be implemented in the future

Supporting Treatment

Road planning, design and management considerations that improve the overall level of safety associated with foreseeable crash types, but not expected to virtually eliminate the potential of fatal and serious injuries occurring
Does not change the ability for a Primary Treatment to be implemented in the future

Non-Safe System Treatment

Road planning, design and management considerations that are not expected to achieve an overall improvement in the level of safety associated with foreseeable crash types occurring
Reduces the ability for a Primary Treatment to be implemented in the future

How should we regard treatments?



Primary Treatment

- Road planning, design and management considerations that virtually eliminate the potential of fatal and serious injuries occurring in association with the foreseeable crash types

Supporting (step towards)

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Supporting Treatment

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Non-Safe System Treatment

Road planning, design and management considerations that improve the overall level of safety associated with foreseeable crash types occurring, but do not change the ability for a Primary Treatment to be implemented in the future

How should we regard treatments?



Primary Treatment

- Road planning, design and management considerations that virtually eliminate the potential of fatal and serious injuries occurring in association with the foreseeable crash types

Supporting (step towards)

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Supporting Treatment

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Non-Safe System Treatment

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The Safe System Stereotype

Large budgets, Transformational work



This is also Safe System

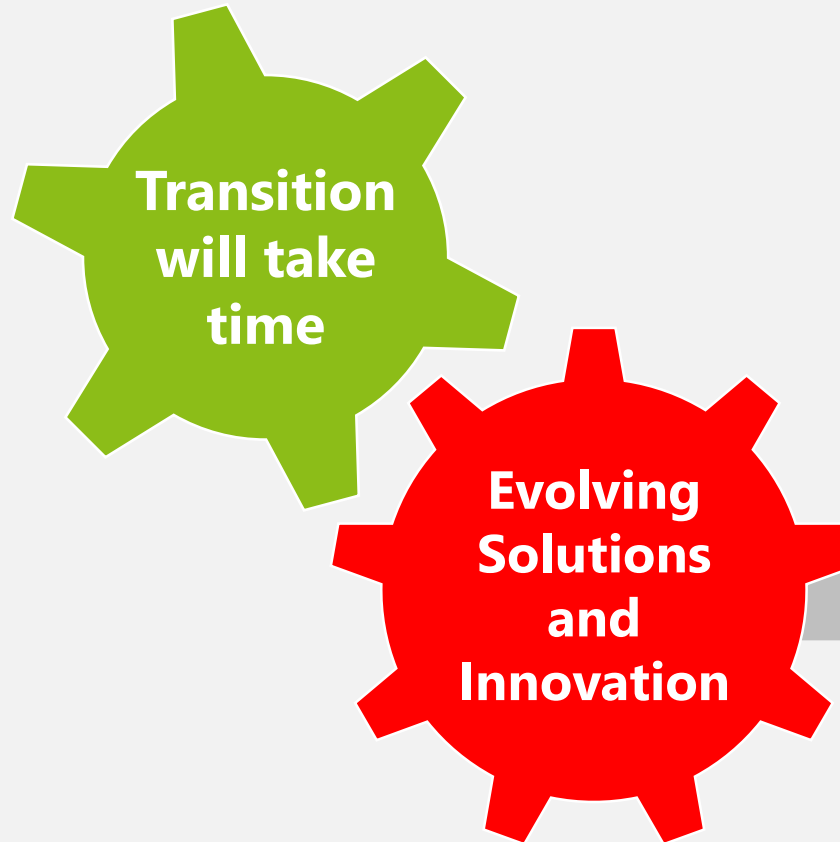


Safe System is aspirational



**Transition
will take
time**

Safe System is aspirational

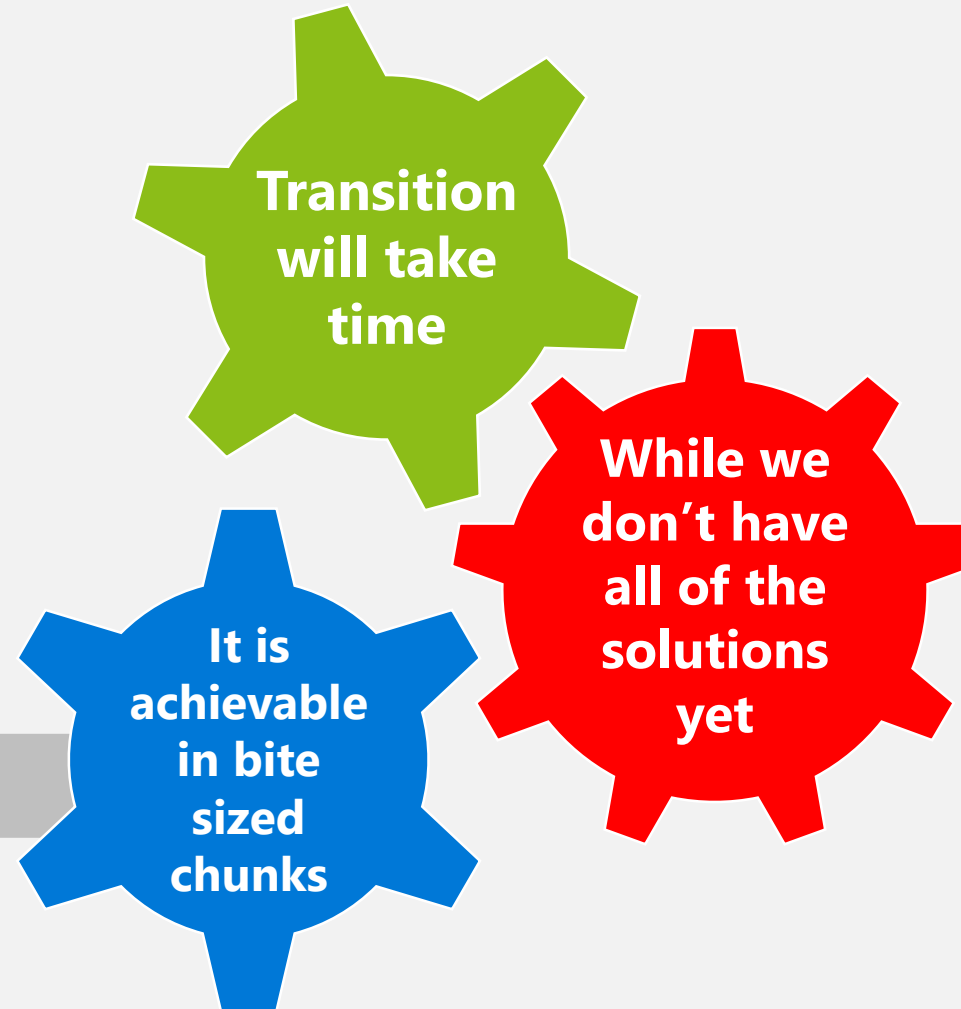


Source: CASR

Safe System is aspirational



Source: Kenn Beer

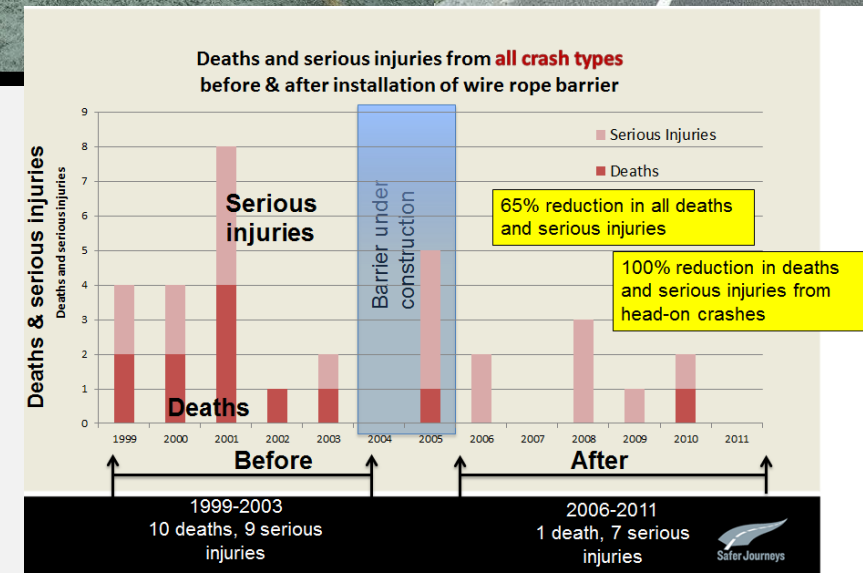


Waikato Expressway, New Zealand

Source: NZ Ministry of Transport

Upgrade to 2+1 roads

- 65% reduction in fatalities and serious injuries
- No fatalities due to head-on collisions
- Over 40 km of upgrade completed
- Total of 115 km of upgrades planned
- Wide medians with WRSB



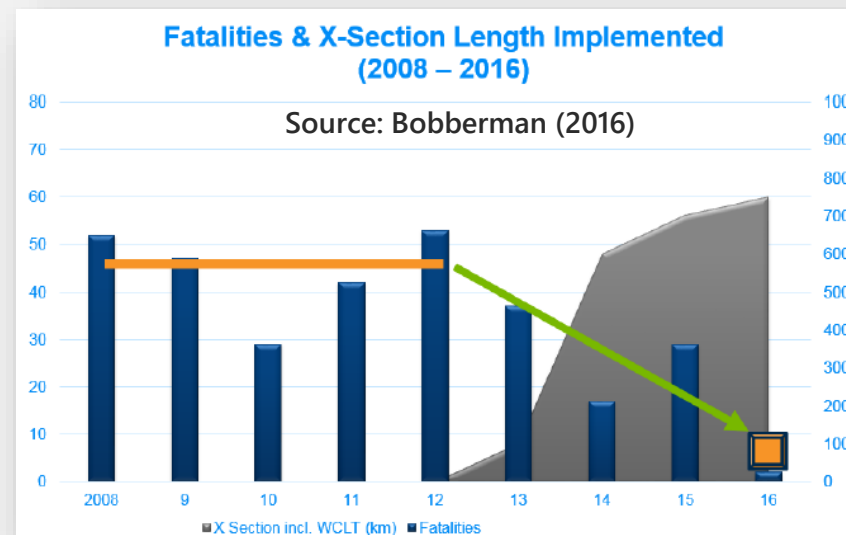
Bruce Hwy, Queensland

Supporting Treatments (Step Towards)

Focus on
incremental
gains

Driven by top-
down, network-
wide strategy

Network-wide safety
focus rather than a
project-by-project
focus on
“problem locations”



Melba Hwy, Victoria



Source: Kenn Beer

Youtube: TAC <https://www.youtube.com/watch?v=x-lxNNbV0LM>



Melba Hwy, Victoria – May 2016 crash



Source: VicRoads



Youtube: <https://www.youtube.com/watch?v=gNLTHvH9W3I>

Thank you

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