

ROAD SAFETY FOUNDATION

Using Technology to Identify and Prioritise Interventions

How can we use technology to identify and prioritise interventions?

So much technology!

Sometimes technology is a solution looking for a problem

Sometimes it brings us a solution to a problem we have

It's important to discern the difference!

What are our main problems?

Funding and making a compelling case for road safety intervention

Prioritising based on evidence when collisions are sparsely distributed

Articulating our vision for the road network – what does the Safe System mean and how to we plan towards it

What is **not** a problem:

Our understanding of road safety engineering treatments

Knowing we have road safety issues!

Funding and making a case for intervention

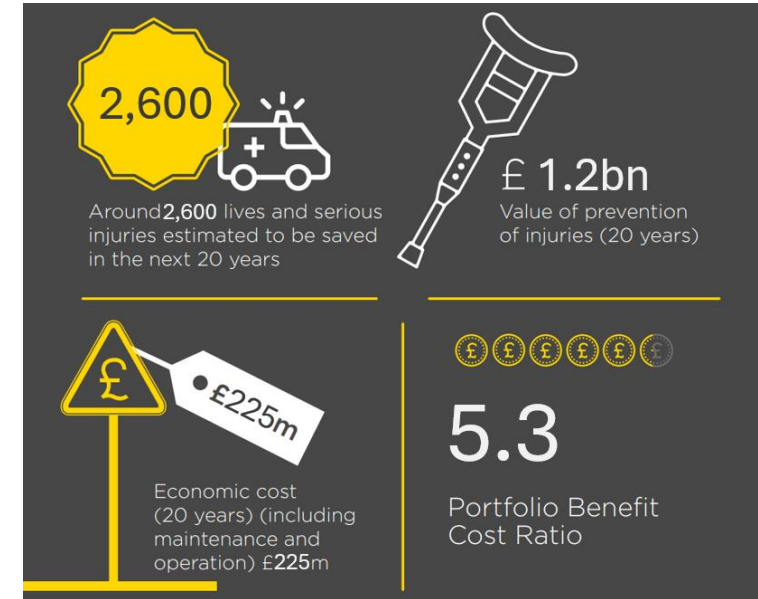
Funding availability is the one key issue we face

If a technology or methodology does not help with this, then it is not all that helpful

Funding and making a case for intervention

Crash risk mapping

iRAP



Country	Network	Value for Money bandings	Length (km)	Number of routes	Investment	Estimated 20-year values of prevention	Estimated 20-year fatal and serious injury savings	Overall estimated benefit-cost ratio
England	Strategic roads	Medium, High or Very High (BCR>=1.5)	2,031	66	£624m	£1,331m	2,797	2.1
	Major Road Network	High or Very High (BCR>=2)	4,497	262	£1,196m	£3,996m	7,875	3.3
	Other local 'A' roads	Very High (BCR>=4)	1,874	218	£450m	£2,837m	5,205	6.3
Scotland	Strategic roads	Medium, High or Very High (BCR>=1.5)	135	4	£39m	£64m	147	1.6
	Local 'A' roads	High or Very High (BCR>=2)	302	19	£72m	£227m	467	3.1

Prioritising when crashes are sparsely distributed

Robust collision cluster sites/hotspots/blackspots are increasingly difficult to identify

So what do we do?

Lots of near miss data becoming available:

Harsh braking and swerving

Intervention data

AI cameras for near miss studies

All very exciting but be careful to contextualise – e.g. roundabout/lower speeds

Near misses and slight collisions can follow a different pattern to fatal or serious

Prioritising when crashes are sparsely distributed

Does it help you with your business case (see earlier problem)?

iRAP

Ingest the data that is becoming available into a broader contextualised model

Provides the means to create a business case

Articulating a Safe System vision

What does a Safe System demand?

Total elimination of the possibility of a collision occurring becoming fatal or serious in outcome

Safe speeds (10% risk of death or serious injury)

20mph for cars where pedestrians and cyclists are present; 10mph where there are more people/vulnerable people

20mph for cars and motorcyclists where motorcyclists are present

30mph where head on collisions or side impact collisions are possible

Lower speeds/controls where heavier vehicles are present

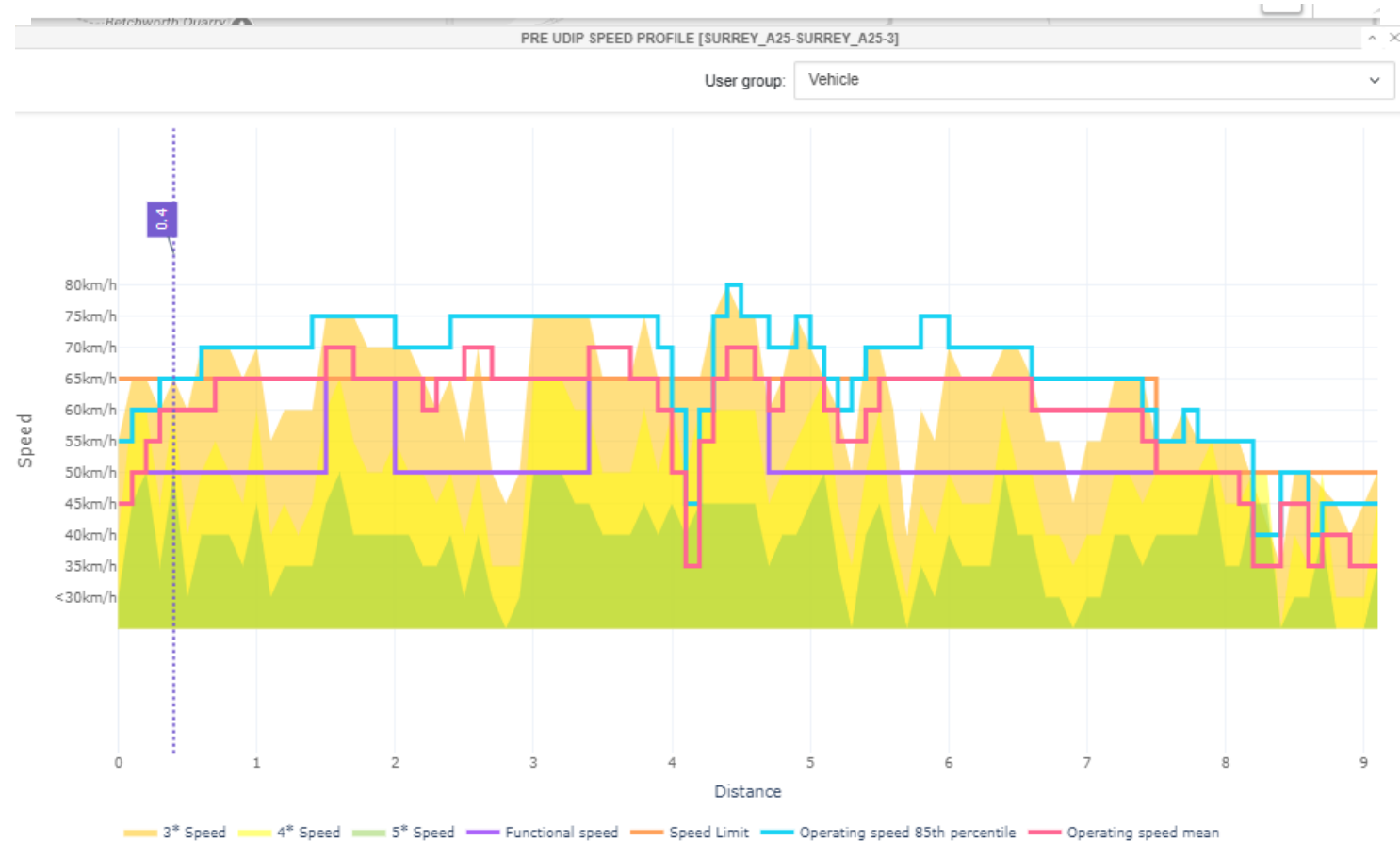
Clear or protected roadsides

Articulating a Safe System vision

Route Review Tool:

Articulate road safety performance in light of Safe System demands

Help us to plan towards a Safe System



Articulating a Safe System vision

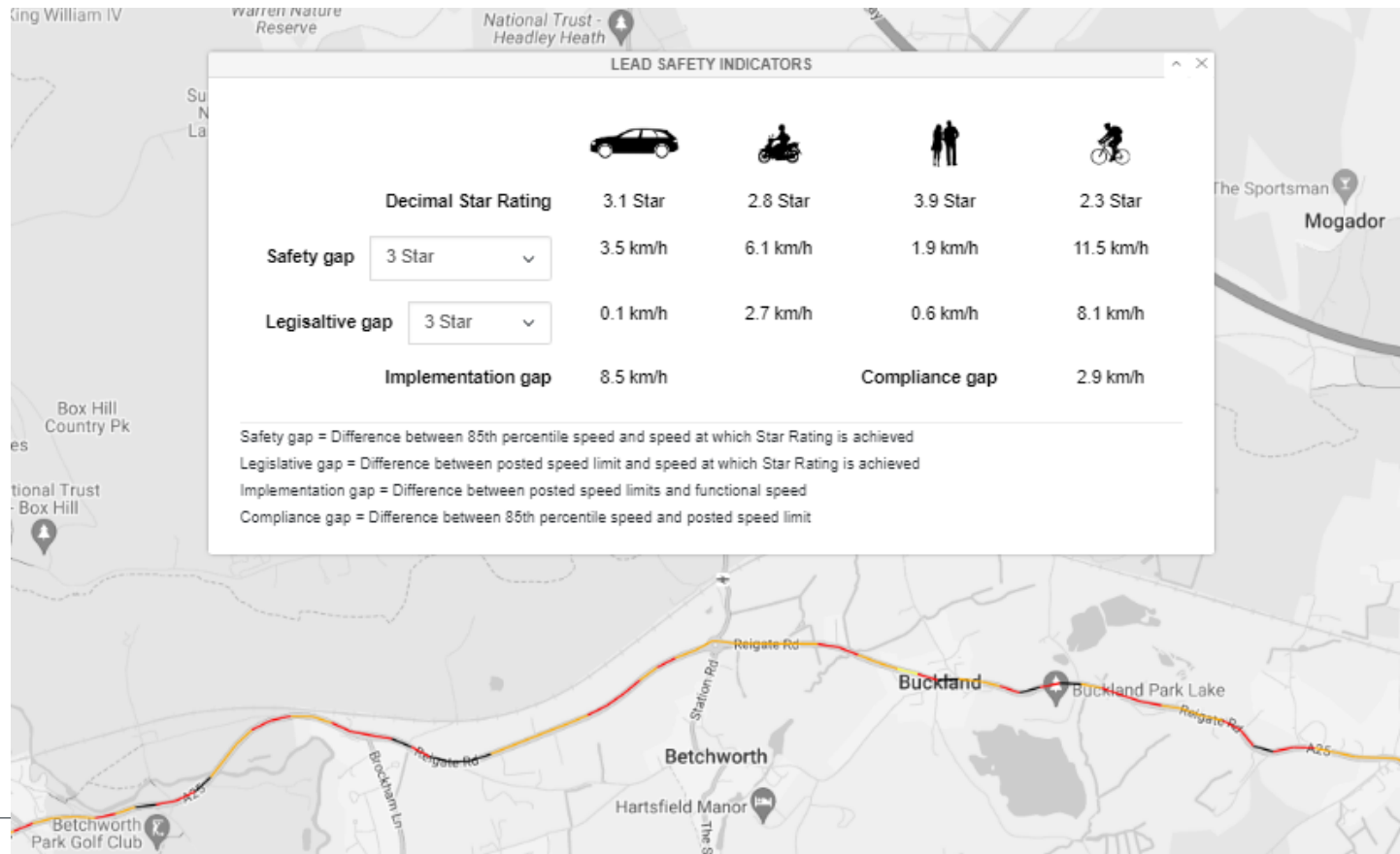
Route Review Tool:

Provides safe system metrics

Data: Measure the safety gap, the flow-weighted difference between actual driving speeds and speeds deemed safe according to iRAP's 3-star threshold

Target: Establish a baseline safety gap and set a target to reduce this gap by 2029, aiming to align actual driving speeds more closely with iRAP's safety thresholds

Department: Infrastructure and Environment



Vehicle Technologies

Will be exceptionally important for progression to a Safe System

But cannot offer the full answer and will not provide the 'head room' some might anticipate

Autonomous vehicles on our highest risk roads are a long time away

ADAS needs information from roads and will for many years to come

Conclusions

Technology will be the answer to some of our problems

But not all

Technology that just tells us about issues doesn't help with generating a solution

We need technology and solutions that help us to:

Prioritise

Articulate the business case

Plan and develop a safe system

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