

Urban Measures – New Safer Roads Investment Plans for Vulnerable Road Users

Kate Fuller



Background to the Project

New approach to
design



New knowledge
in road design



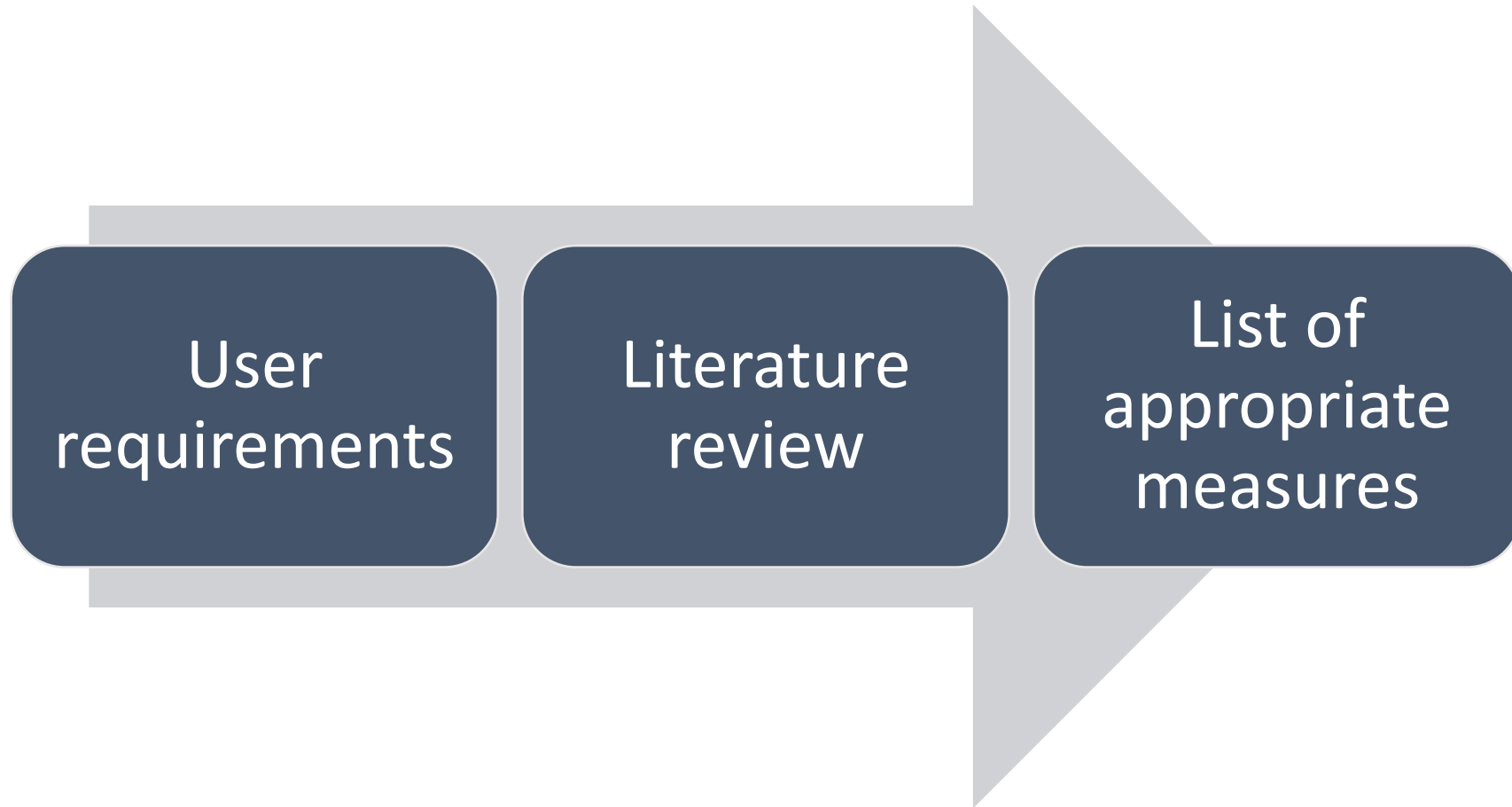
Provide new
urban
countermeasures
in the iRAP tools



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Background to the Project



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New countermeasure package

Safe speed

1. Traffic calming - Target speed (50 km/h)
2. Speed control
3. Traffic calming - Lane width
4. Traffic calming - Number of lanes
5. Traffic calming - Target speed (20 mph)
6. Traffic calming - Target speed (30 mph)
7. Traffic calming - Target speed (40 mph)
8. Traffic calming - Target speed (30 km/h)
9. Traffic calming - Target speed (40 km/h)
10. Speed limit reduction - Low enforcement (mph)
11. Speed limit reduction - Strong enforcement (mph)
12. Speed limit reduction - Low enforcement (km/h)
13. Speed limit reduction - Strong enforcement (km/h)

Safe crossings

16. Diagonal crossing
17. Signalised junctions with diagonal crossing
18. Give way crossings
19. Staggered crossings
20. Flush crossings

Safe ped/bike

21. Protected off-road cycle lanes
22. Pedestrian and cyclists' zone
23. Cycle street

Safe junctions

14. Junction channelization removal
15. Mini roundabout

Urban enhanced







24. Cycle Lane (on-road) - Urban
25. Cycle Lane (off-road) - Urban
26. Unsignalized crossing - Urban
27. Signalised crossing - Urban
28. Unsignalized raised crossing - Urban
29. Pedestrian fencing - Urban





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related countermeasure



 Stage 1 - Dataset definition	
 Stage 2 - Road survey	QA Required
 Stage 3 - Road coding	QA Required
 Stage 4 - Star Rating	QA Required
 Stage 5 - Fatality Estimation	QA Required
 Stage 6 - Investment Plan	QA Required

Countermeasure pack 

Trigger set pack 



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Use and feedback so far

Could increase
road safety for all
user groups

Countermeasures
reflect what is
needed in urban
areas

Countermeasures
are aligned with
Safe system
approach



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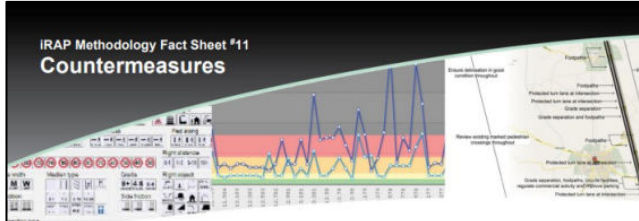
More information

<https://irap.org/methodology/>

https://resources.irap.org/CRM/Global/iRAP_Urban_Countermeasures_brochure.pdf

<https://irap.org/rap-tools/investment-planning/urban-countermeasures/>

**IRAP Methodology Fact Sheet #11
Countermeasures**



This factsheet is part of a series that describes the IRAP methodology. It describes the road safety countermeasures used in the methodology.

Related documents

This factsheet should be read in conjunction with:

- Other factsheets in the [IRAP Methodology Fact Sheet](#) series.
- [IRAP Road Attribute Risk Factor Fact Sheets](#).
- [Road Safety Toolkit](#).

Countermeasures and outcomes

A total of 94 countermeasures can be used in the IRAP standard countermeasure pack of the IRAP model. Users can also access an urban-enhanced pack with 23 additional countermeasures specially designed for urban areas. For each countermeasure, there is at least one 'outcome.' This refers to the road attribute code that is applied at the 100 metre segment of road when the countermeasure is 'applied'. The table below shows an example of the outcome and resultant change in risk factor for the installation of a w-beam safety barrier.

Example of countermeasure outcome

	Existing road (before countermeasure is installed)	Outcome (after countermeasure is installed)	Reduction in risk of death or serious injury (all other things being equal)
Road attribute *	Tree (>=10cm diameter)	Safety barrier – metal	
Road attribute risk factor (vehicle occupant run-off road)**	60	12	80%

* For more information, see: [Star Rating and Investment Plan Coding Manual](#).
** For more information, see: [IRAP Road Attribute Risk Factors: Roadside Severity – Object](#).



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Many thanks for listening.
Do you have any questions?

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