

POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

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CONFERENCE

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#POLIS2022

MORE: Co-design and redistribution of road space

Session 5A: Activating Active Travel – a Master Class

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Redesigning roads to meet new policy priorities

- The MORE project
- Policy priorities determine street designs
- A comprehensive co-created street re-design process
- Tools to support co-creation in street design
- Conclusions



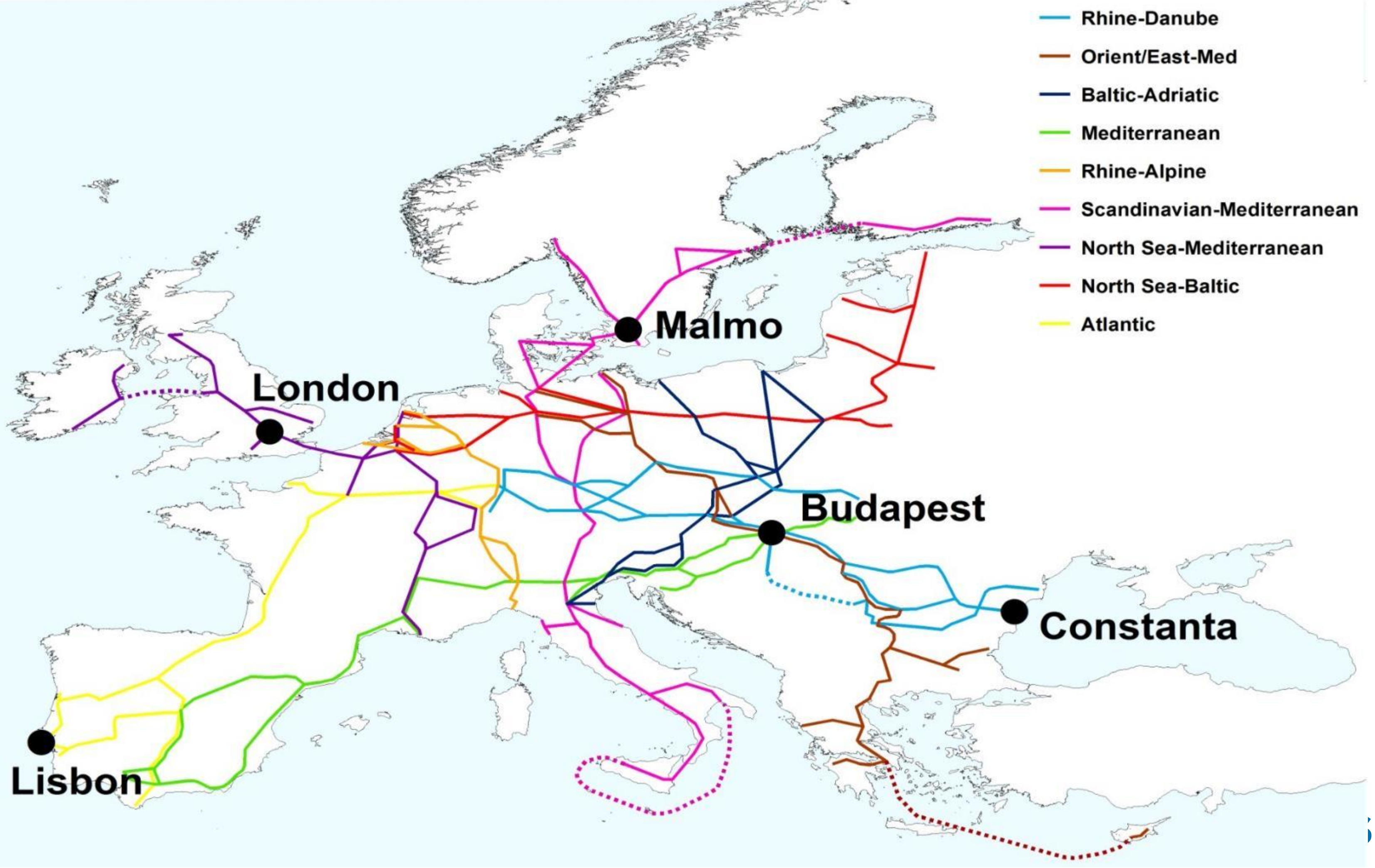
Multimodal Optimisation for Roadspace in Europe

- Identifies existing and future pressures on the main roads ('feeder routes') in cities that connect the 'Urban Nodes' – and their major attractors (city centre, port, etc.) - with the national/ TEN-T: Trans-European Road Network
- Develops design tools and processes that will enable these key routes to be planned, designed, managed and operated in a way that make them responsive to future pressures, in a flexible manner
- 18 partners, comprising five cities, five street user groups, five consultants/ industry and three universities

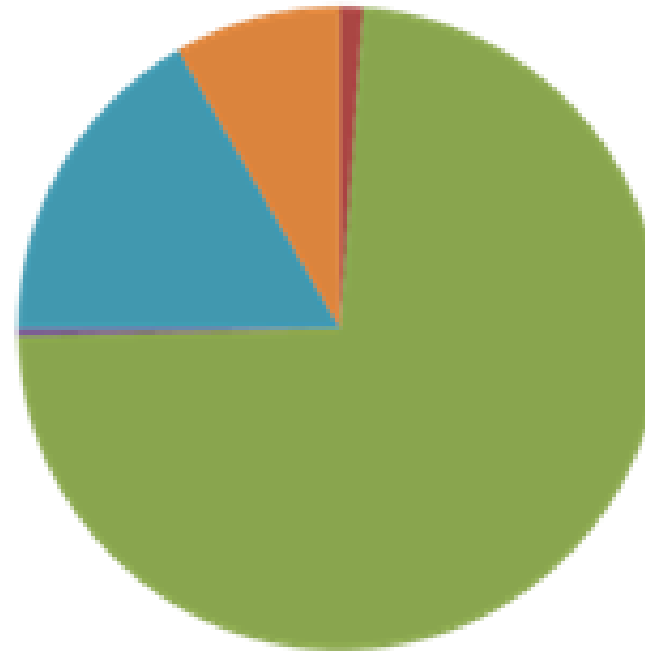




- Rhine-Danube
- Orient/East-Med
- Baltic-Adriatic
- Mediterranean
- Rhine-Alpine
- Scandinavian-Mediterranean
- North Sea-Mediterranean
- North Sea-Baltic
- Atlantic

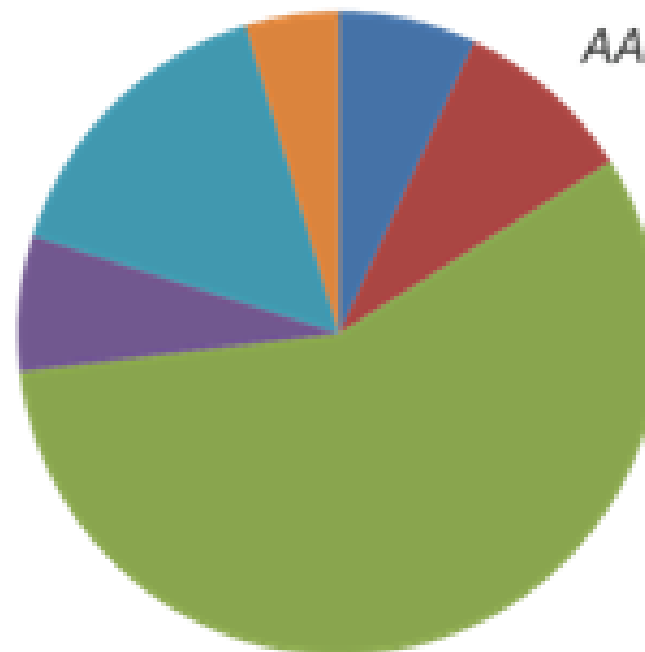


'Roads' vs 'Streets'



Total AADF:
128,239

- PedalCycles
- Motorcycles
- Cars/Taxis
- Buses/Coaches
- Light Goods Vehicles
- All HGVs



Total AADF:
29,593

- PedalCycles
- Motorcycles
- Cars/Taxis
- Buses/Coaches
- Light Goods Vehicles
- All HGVs



Designing to Meet Different Urban Policy Objectives



- Road building
- Car parking
- Lower density
- Dispersion



- Public transport
- Cycle networks
- Roadspace reallocation

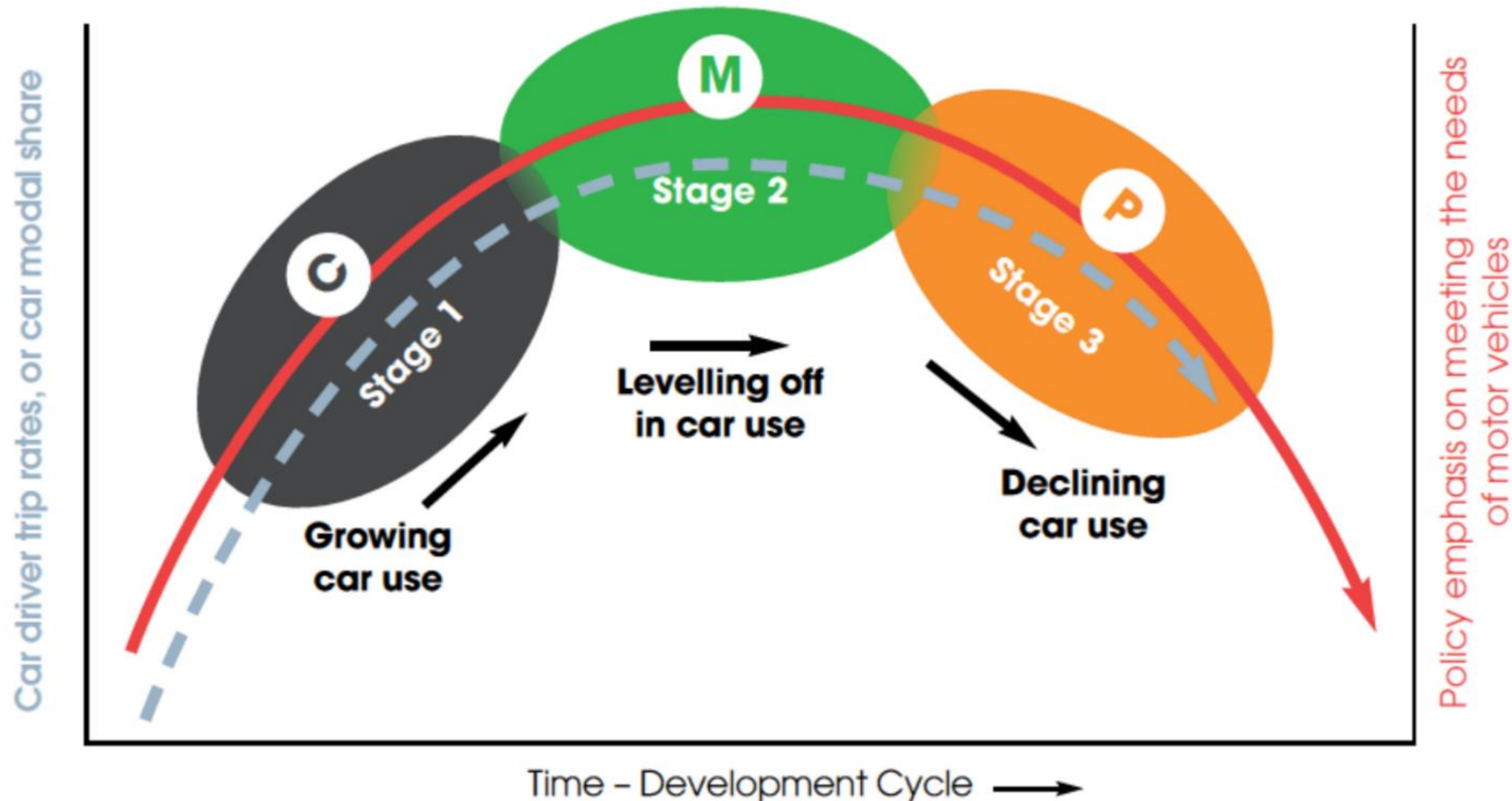


- Public realm
- Street activities
- Traffic restraint
- ToD/mixed use developments



Policy objective and impact on car use

A 'U-shaped' trajectory of car use intensity linked to the different stages



Contrast in Policy Measures: C -> P

The pictures show how this area of London has been transformed from a large traffic roundabout into a vibrant public space at the heart of the community, due to a shift in policy perspectives and corresponding priorities

London, Aldgate Square:

C Put in gyratory to increase road capacity (1960s)



Before

P Remove, to enhance place and provide new community heartland (2018)

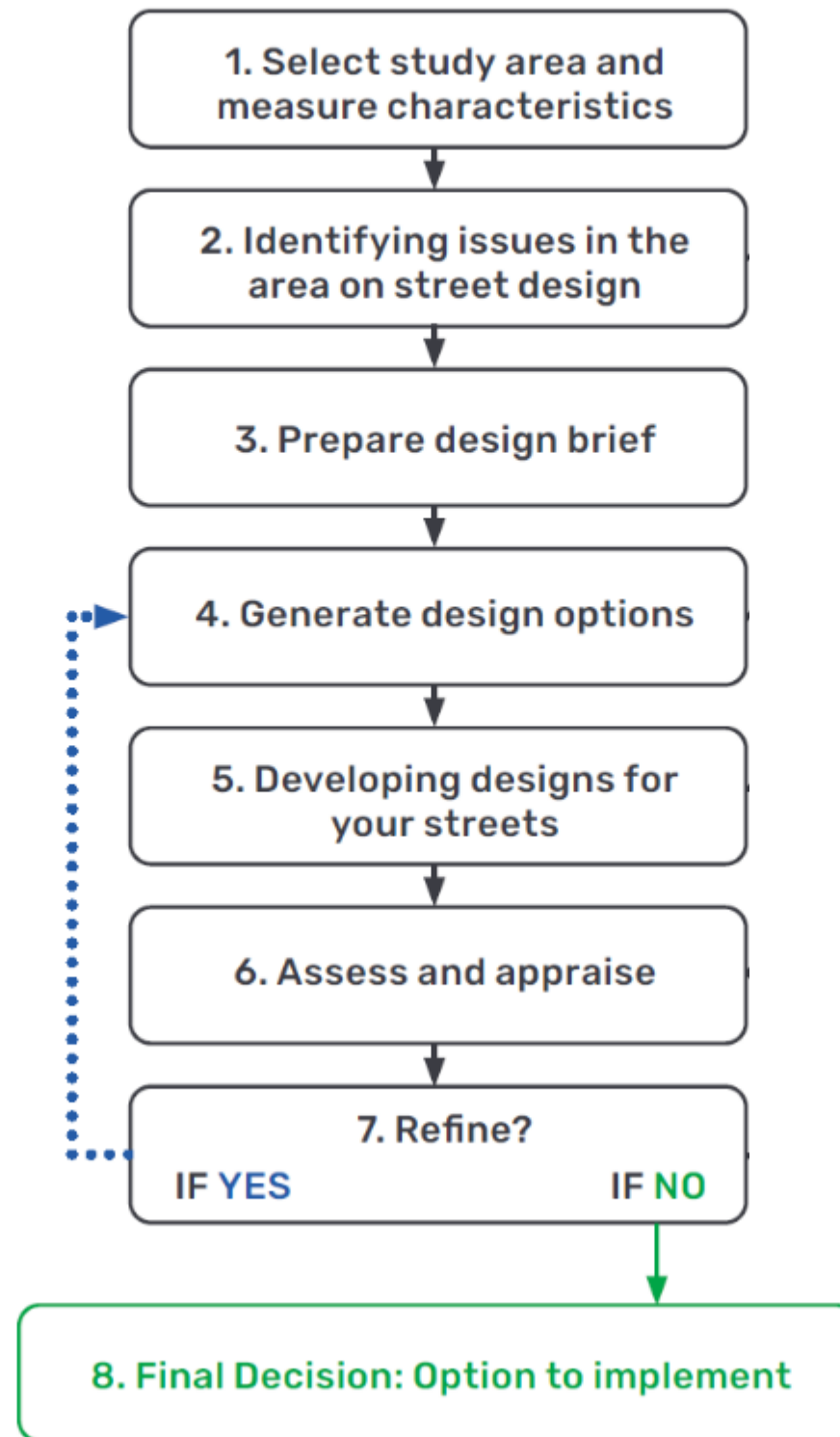


After



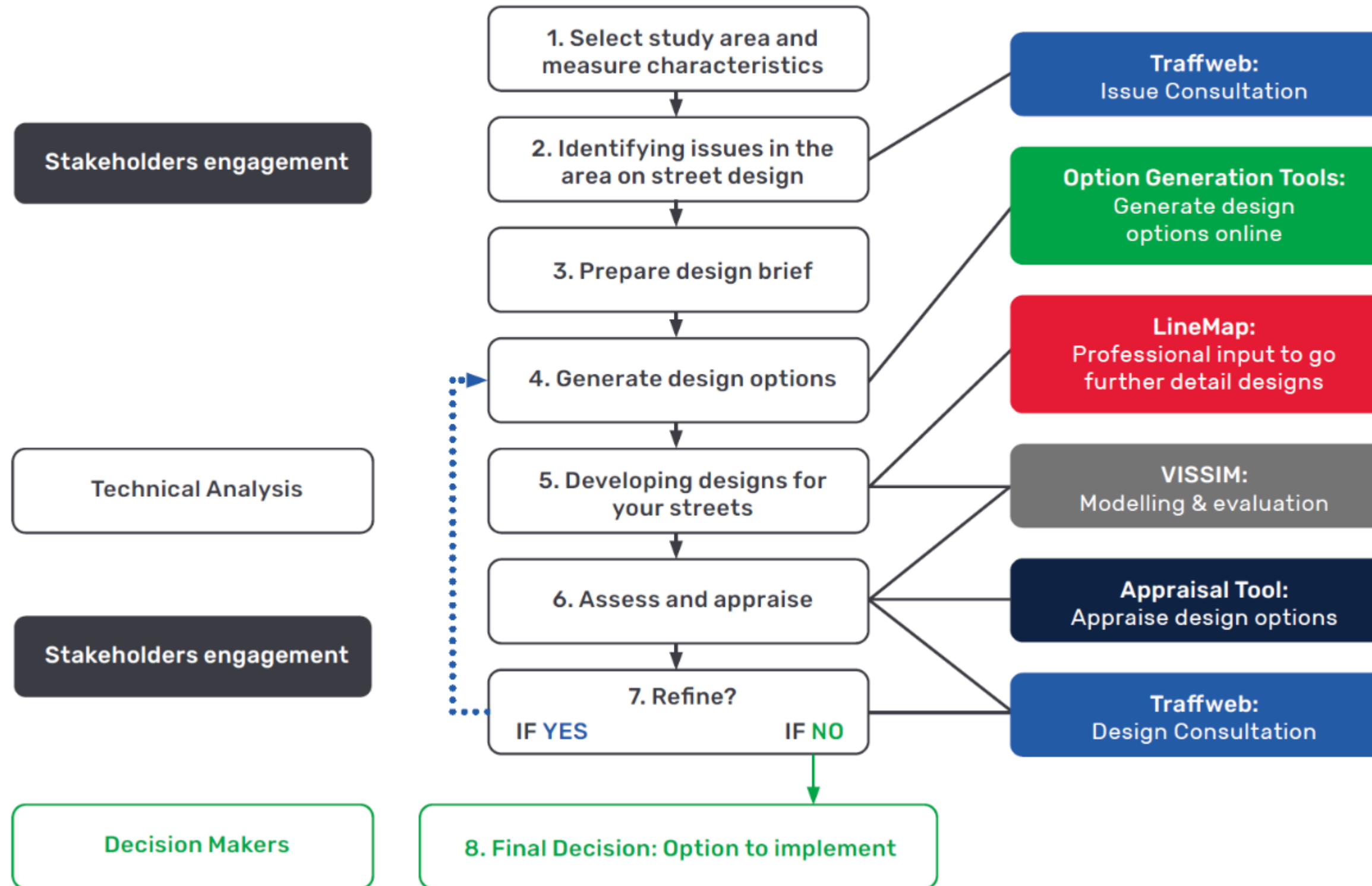
MORE street (re)design process

Consultation Process: Steps, Stakeholders involved, and Tools



MORE street (re)design process

Consultation Process: Steps, Stakeholders involved, and Tools



Policy Interventions tool output:

— Add or widen median strip

Description

Examples and evidence

Effect on road uses

Effect on policy objectives



Source of image: MORE

Type of policy: Space allocation

Also known as central reservation. Space between traffic lanes in different directions. It can be painted, raised with kerbs, or planted. Physical barriers (e.g. guardrailings) may be added, or kept, if already existent, to separate vehicles.

If the median has no physical barriers, it allows vehicles to pass cyclists or slower vehicles; emergency vehicles to cross over into the opposite lane; and pedestrians to stop and cross in two stages (at crossing facilities or informal crossings)

If the median is raised, wide enough, and has few gaps, it also allows pedestrians to walk along the road. Alternatively, it can provide space for place activities (e.g. seating areas), car parking, bicycle parking, or street furniture (e.g. lighting).

Median strips can be green spaces (e.g. trees, swales, grassed strips). If wide, they can be used as a cycle track or as a corridor for trams, light railway systems, or buses. Underground rivers can also be restored to run at-surface along the median.

The presence of a median strip, especially if kerbed, may reduce travel speeds, as gives drivers less flexibility. Kerbed medians without ramps also become a barrier to pedestrians with impairments at informal crossings.

POSSIBLE ROAD DESIGNS

[Back](#)
[Restart](#)
[Next](#)

Check one or more feasible options

City: Lisbon Road section: Lisbon_try

Season: Spring Day of week: Weekday Time of day: Morning Peak

Legend

Walking			Place activities		Green area	General purpose		Bus lane		Cycling		Bus + cycle	Parking/ loading	Tram line	
Narrow	Medium	Wide	Narrow	Wide		1 lane	2 lanes	1 lane	2 lanes	1 lane	2 lanes			1 track	2 tracks
2m	3m	4m	2m	3m	1.5m	3m	6m	3m	6m	2-3m	3-4.5m	4m	2.5m	3m	6m

Fill the checkboxes of all options you think are feasible in the road subsection

Left footway and kerbside Feasible	Left carriageway	Median strip	Right carriageway	Right footway and kerbside	Total road width (m)	Width of Design Elements (m)							Capacity per 75m ² of roadscape			Feasible ?						
						Walking	Place activities	Green area	General purpose	Bus lane	Cycling	Parking/ loading	Tram line	Movement (people)	Place activities (people)		Parking/ loading (vehicles)					
									27	7	0	1.5	6	0	4.5	0	6	360	10	0	<input type="checkbox"/>	
									27	7	0	1.5	6	6	4.5	0	0	360	10	0	<input type="checkbox"/>	
										27	8	0	3	6	5.6	2.4	0	0	350	20	0	<input type="checkbox"/>
									27	8	0	3	6	5.6	2.4	0	0	350	20	0	<input type="checkbox"/>	

Stakeholder street design in Malmo

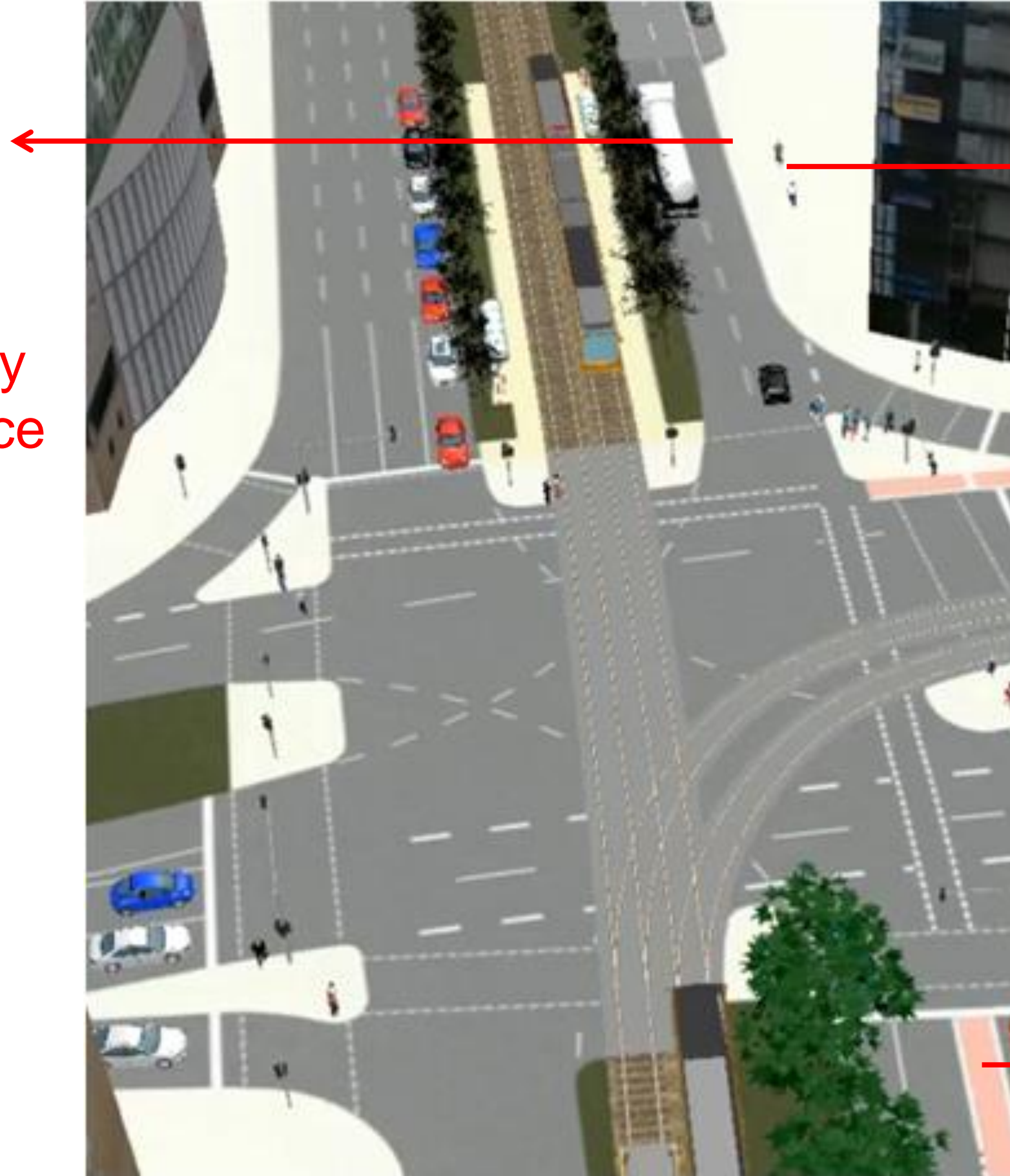


VISSIM Modelling development (PTV)



Parking and loading

- Kerbspace efficiency
- Ease of finding space
- Revenues



Pedestrians moving or not moving (place activities)

Dynamic roadspace reallocation

- movement → parking
- all vehicles → bus only
- ...

HOW TO USE THE TOOL

GENERAL INSTRUCTIONS

- The tool is divided into 4 modules. The first module asks the user for general inputs. The three analysis modules (Impact Assessment, Cost-benefit Analysis, and Multi-criteria Analysis) then use those general inputs plus additional inputs specific to each type of analysis. The three analysis modules can be run independently. The first tab of each of the 3 analysis modules (*IA0*, *CBA0*, and *MCA0*) include detailed information on the contents of the module and instructions on how to use it.
- The tool can be ran with minimal input data (input cells identified as "required"). However, in monay cases, leaving a cell blank means that the analysis will not take into account any other inputted data for the road use or policy objective in question.
- Some calculations use built-in values, located in hidden pages. These pages are locked. The user guide includes lists of all these values and their sources. In all cases, the tool user can define their own values, overriding the built-in values.
- Some of the items in the inputs pages have an ⓘ symbol. Click on that symbol for more information about the item

STRUCTURE

Click on tab name to go directly to that tab or click the module name to go to the first tab of that module

MODULE	TAB	CONTENTS
GENERAL INPUTS	In1	Inputs: Road design
	In2	Inputs: Link function
	In3	Inputs: Place function
	In4	Inputs: Wider impacts (economic, social, environmental)
IMPACT ASSESSMENT	IA0	Introduction: module description, inputs, outputs
	IAin	Additional inputs: political priorities
	IAout	Output
COST-BENEFIT ANALYSIS	CBA0	Introduction: module description, inputs, outputs
	CBAin	Additional inputs: monetary unit values
	CBAout	Output
MULTI-CRITERIA ANALYSIS	MCA0	Introduction
	MCAin	Additional inputs: scales and weights of different stakeholders
	MCAout	Output

GENERAL LEGEND

INPUTS

- Input (required)
- Input (optional)
- Input by choosing from dropdown menu

OUTPUTS

- Best option
- Other options
- Option that violates the specified political criteria
- Options that violates legal standards or best practice
- Not applicable (not enough inputs)

TEXT

- brown font* Instructions
- blue font* Copied from another cell or page. Can only be changed by changing the original value
- red font* Calculated from another cell or page. Can only be changed by changing the original value

Conclusions

- Comprehensive stakeholder engagement takes time, but leads to better outcomes
- Using scale blocks and maps makes the design process as simple as possible to understand, and highlights opportunities and physical constraints
- Enables cities to regain confidence of local people and plan with a wider understanding of the needs of an area.
- Allows members of the public to participate in street design and encourages innovative solutions
- Cities very pleased with the outcome – removes normal confrontational approach



Thank you for your attention!

For questions:

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