Stakeholder engagement in the Sustainable Urban Logistics Planning: the case of Rome

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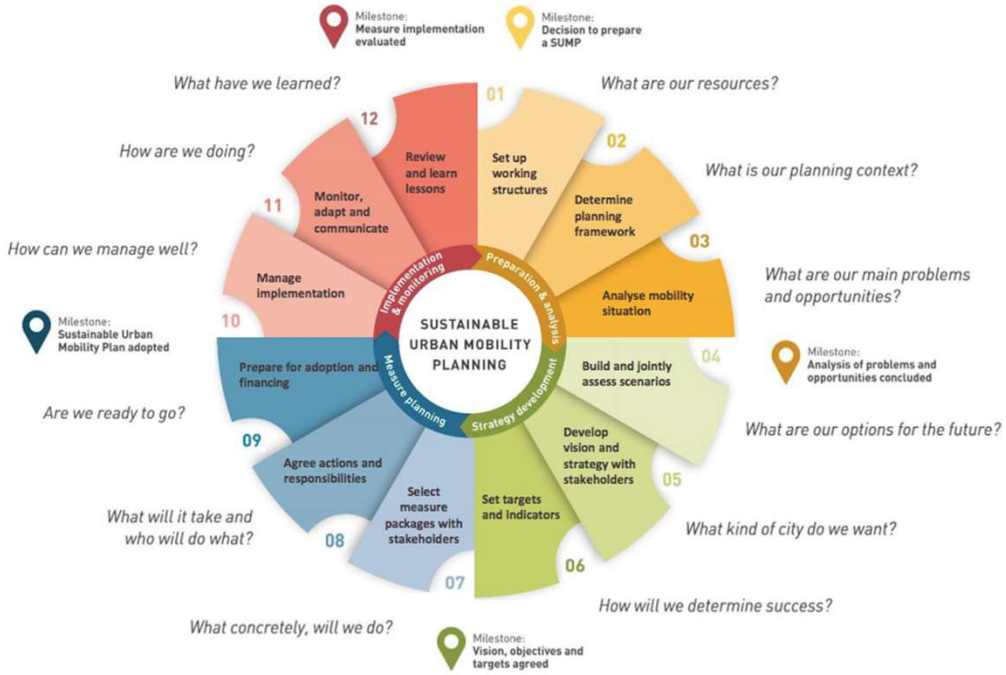
Agenda

- Context
- L-3D software
- Real-case application
- Conclusions

CONTEXT

Context



Co-creating sustainable and efficient solutions within Living Labs

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L-3D SOFTWARE

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Software structure

Stakeholders' preferences

Stated Preference & Discrete choice models

Share info with stakeholders

Storytelling

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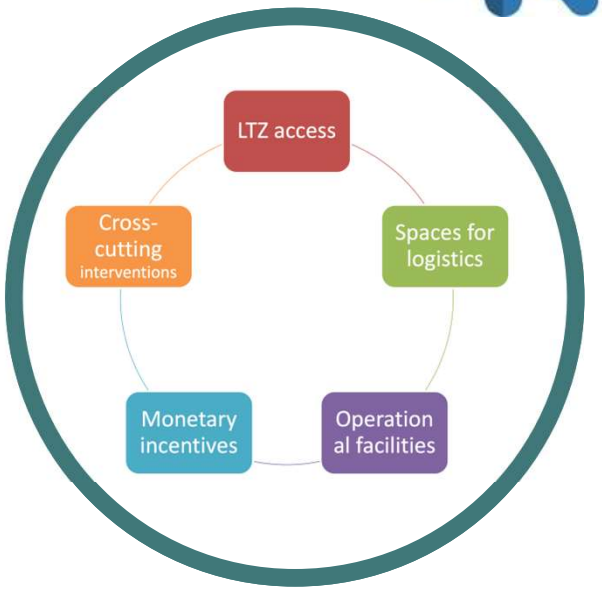
L-3D software

- Focused on co-creation processes
- Aimed at heterogeneous stakeholders contexts
- Tailored for workshops (duration up to 2 hours)
- Provides ex-ante policy acceptability analyses
- Produces optimised compromise solutions
- Stimulates engagement/participation via storytelling

L-3D Choose



LTZ access	Facilitations for green vehicles
Cross-cutting	Logistics in urban planning
Operational facilities	Priority lanes for green vehicles
Spaces	Integrated microhub network
Monetary incentives	Incentives for off-hours deliveries

Policy co-creation
Selection of the most relevant policy characteristics

Preference elicitation
Creation of stated preference questionnaire to be administered via smartphone or laptop

Policy prioritization
Identification of the top shared policy mix

L-3D Visualise

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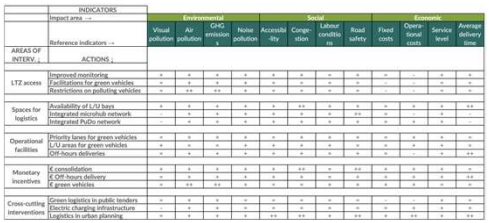


	INDICATORS	Environmental				Social				Economic			
	Impact area →												
AREAS OF INTERV. ↓	Reference indicators → / ACTIONS ↓	Visual pollution	Air pollution	GHG emissions	Noise pollution	Accessibility	Congestion	Labour conditions	Road safety	Fixed costs	Operational costs	Service level	Average delivery time
LTZ access	Improved monitoring	+	+	+	+	+	+	=	+	=	-	+	+
	Facilitations for green vehicles	=	+	+	+	=	=	=	=	-	-	=	=
	Restrictions on polluting vehicles	=	++	++	=	=	=	=	=	-	-	=	=
Spaces for logistics	Availability of L/U bays	+	+	+	+	+	++	+	+	=	+	+	++
	Integrated microhub network	-	+	+	+	+	+	+	++	=	+	+	-
	Integrated PuDo network	-	+	+	+	+	+	+	+	=	-	+	-
Operational facilities	Priority lanes for green vehicles	+	+	+	+	+	+	+	+	=	+	+	=
	L/U areas for green vehicles	+	=	=	=	+	+	=	=	=	=	=	=
	Off-hours deliveries	=	+	+	+	=	=	=	=	=	-	+	++
Monetary incentives	€ consolidation	+	+	+	+	+	++	=	++	+	+	+	=
	€ Off-hours delivery	=	+	+	=	+	+	=	+	=	+	+	++
	€ green vehicles	=	++	++	=	=	=	=	=	=	=	=	=
Cross-cutting interventions	Green logistics in public tenders	=	+	+	=	=	=	=	=	-	-	+	=
	Electric charging infrastructure	-	+	+	=	=	=	=	=	=	=	=	=
	Logistics in urban planning	=	=	=	=	++	++	=	++	=	++	=	++

Actors
Identification of the top shared solutions

Plot
Description of the impact/implications of the shared solutions identified

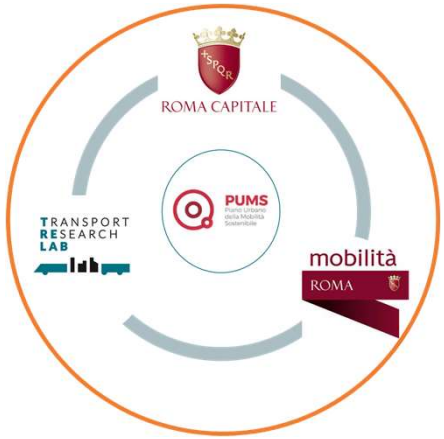
Story
Visual representation of preferred scenarios

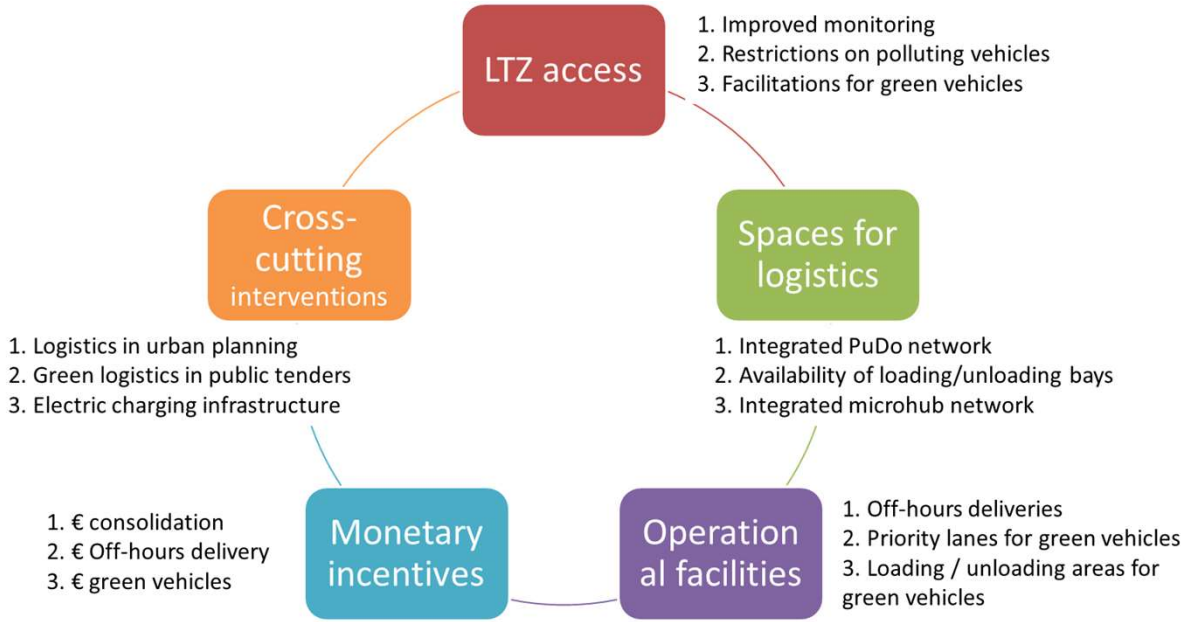
REAL-CASE APPLICATION

SULP – Metropolitan city of Rome

Prioritisation of strategic SULP measures

5K km²
5M inhabitants





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Results (L-3D Choose)

Compromise policy mix

- Monitoring improvement
- Green procurement
- Preferential lanes green vehicles
- L/U availability
- $ off-hour deliveries

Operators | Receivers | Senders

Stakeholder-specific best policy mix

Strategic areas	Operators	Receivers	Senders
LTZ access	Monitoring improvement	Green vehicles facilitation	Monitoring improvement
Cross-cutting interventions	Electric charging infrastructure	Green procurement	Green procurement
Operational facilities	Preferential lanes green vehicles	Preferential lanes green vehicles	Preferential lanes green vehicles
Spaces for logistics	L/U availability	L/U availability	L/U availability
Monetary incentives	$ green vehicles	$ off-hour deliveries	$ consolidation

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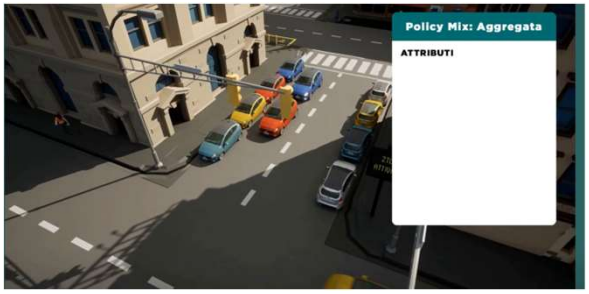
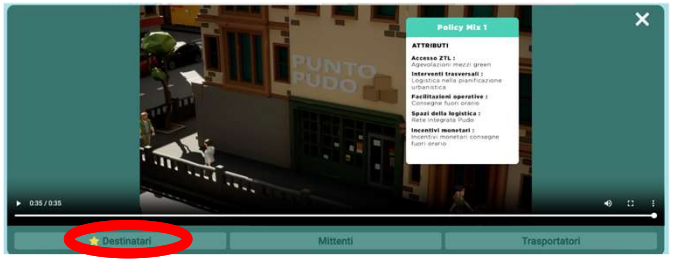
Results (L-3D Visualise)

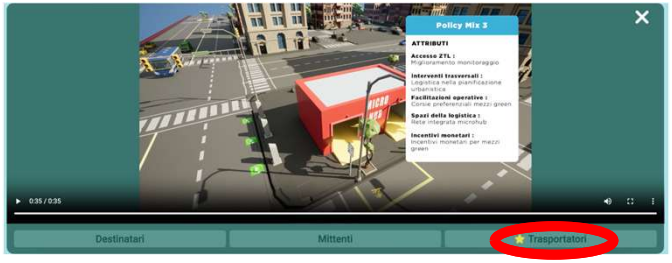
Status quo representation

Shared policy mix



Stakeholder-specific best policy packages





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CONCLUSIONS

Conclusions

- Next steps:
  - ✓ L-3D choose→ improve experimental design & modeling
  - ✓ L-3D visualise→ semi-automatic storytelling creation
  - ✓ Merge the two modules in a single APP
- L-3D is a useful tool for SUMP/SULP
  - ✓ Scalability → standard Stated Preference surveys
  - ✓ Transferability → other contexts

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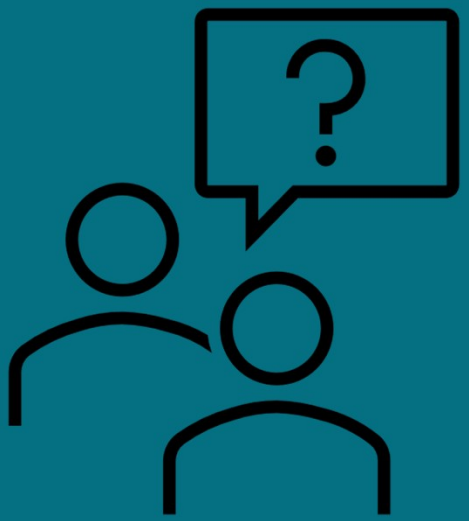
Thanks for your attention!



Questions?

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