Development of a KPI-based Model for (Urban) Mobility

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What are the goals?

- Reduction of pollution
- Reduction of congestion
- Improvement of travel time
- Address a certain user behaviour that needs to be changed
- Willingness to adopt the scheme according to a changing environment
- Public acceptance
- Etc.

Empirical success factors

- Reduced congestion that created a better accessibility and reduced travel time
- Positive and measurable effects regarding pollution
- High public acceptance
- A strong political will to change the situation in a changing environment

Empirical success factors

Reduced congestion that created a better accessibility and reduced travel time

Positive and measurable effects regarding pollution

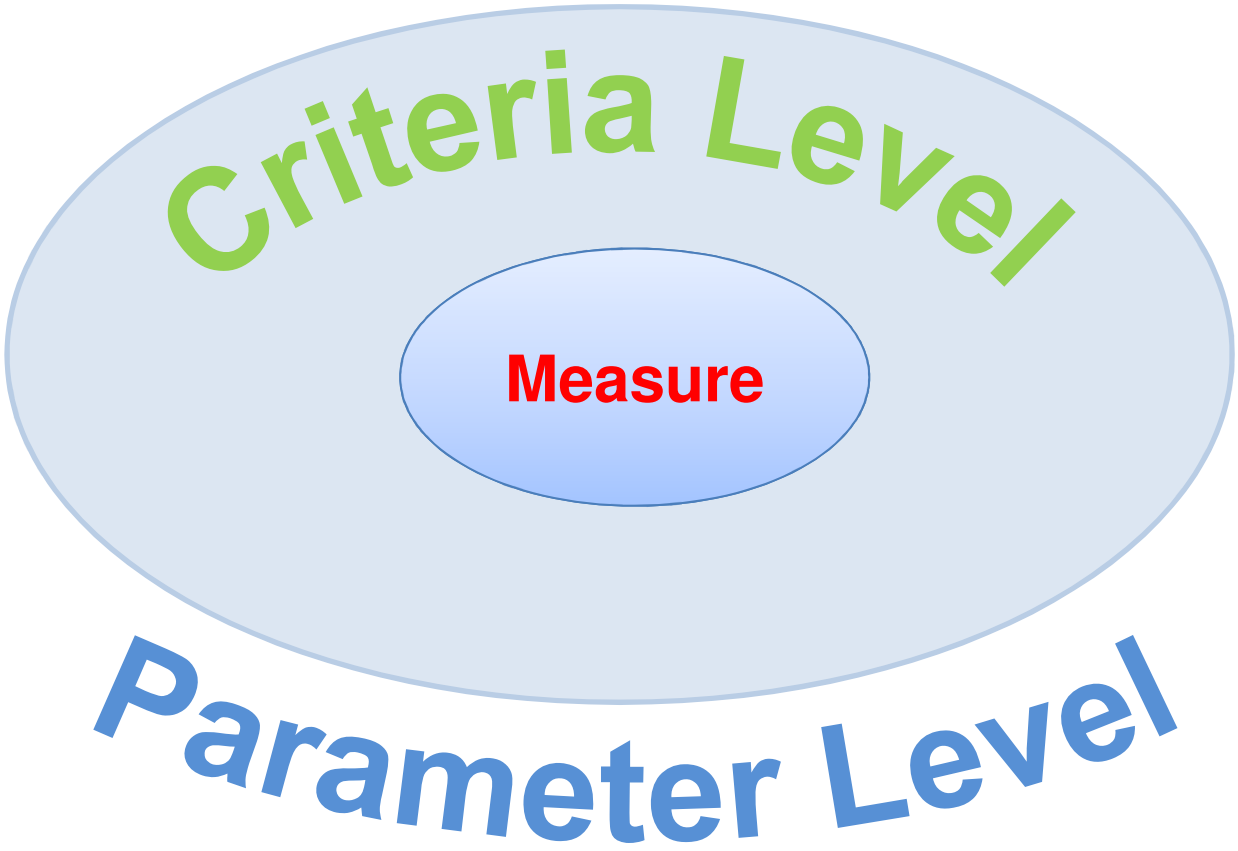
High public acceptance

Empiric observations are hard to transfer to other cities

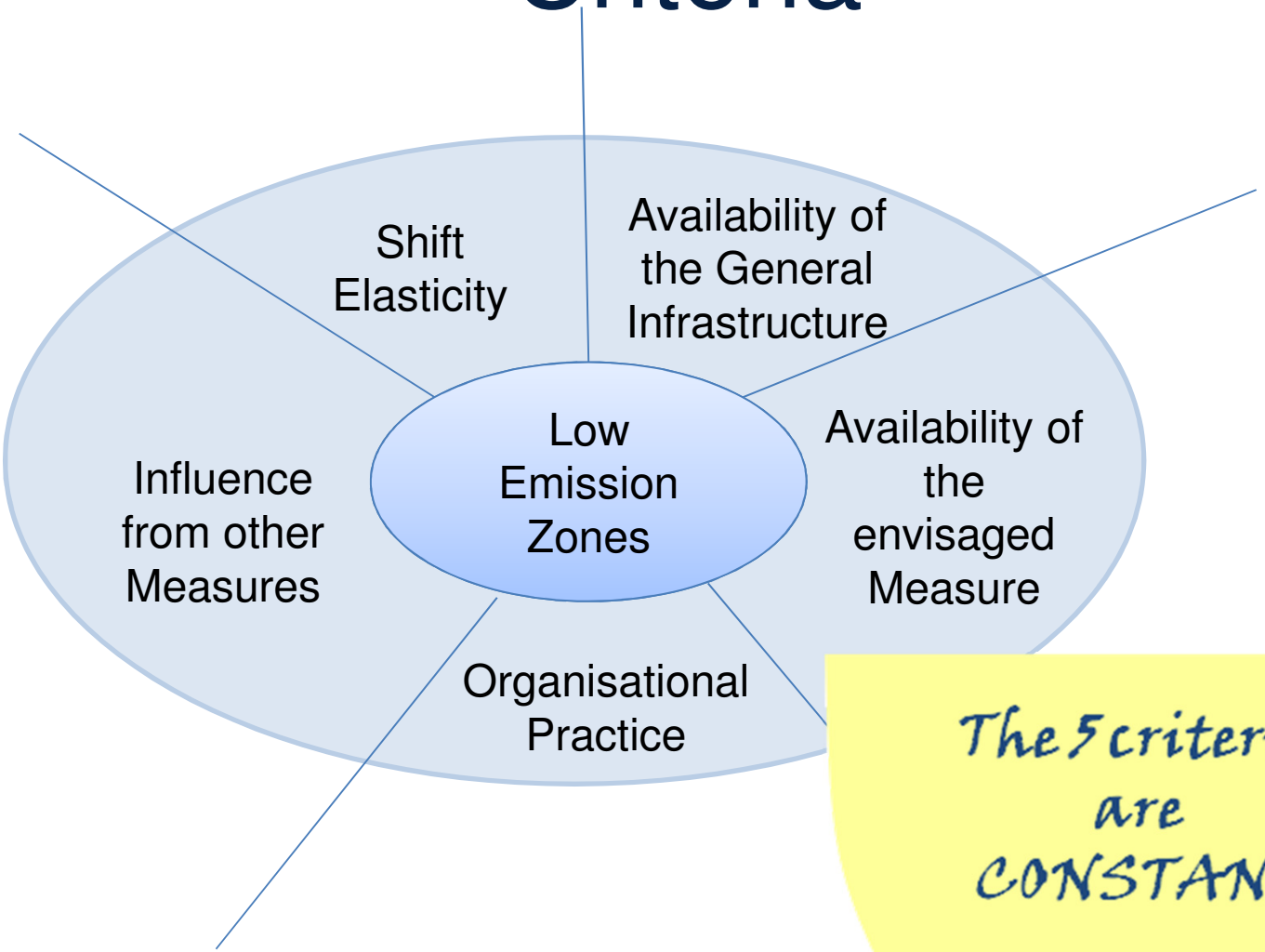
A structured approach based on measurable indicators increases the success probability and transferability

hange the situation in

The Criteria and Parameters Model

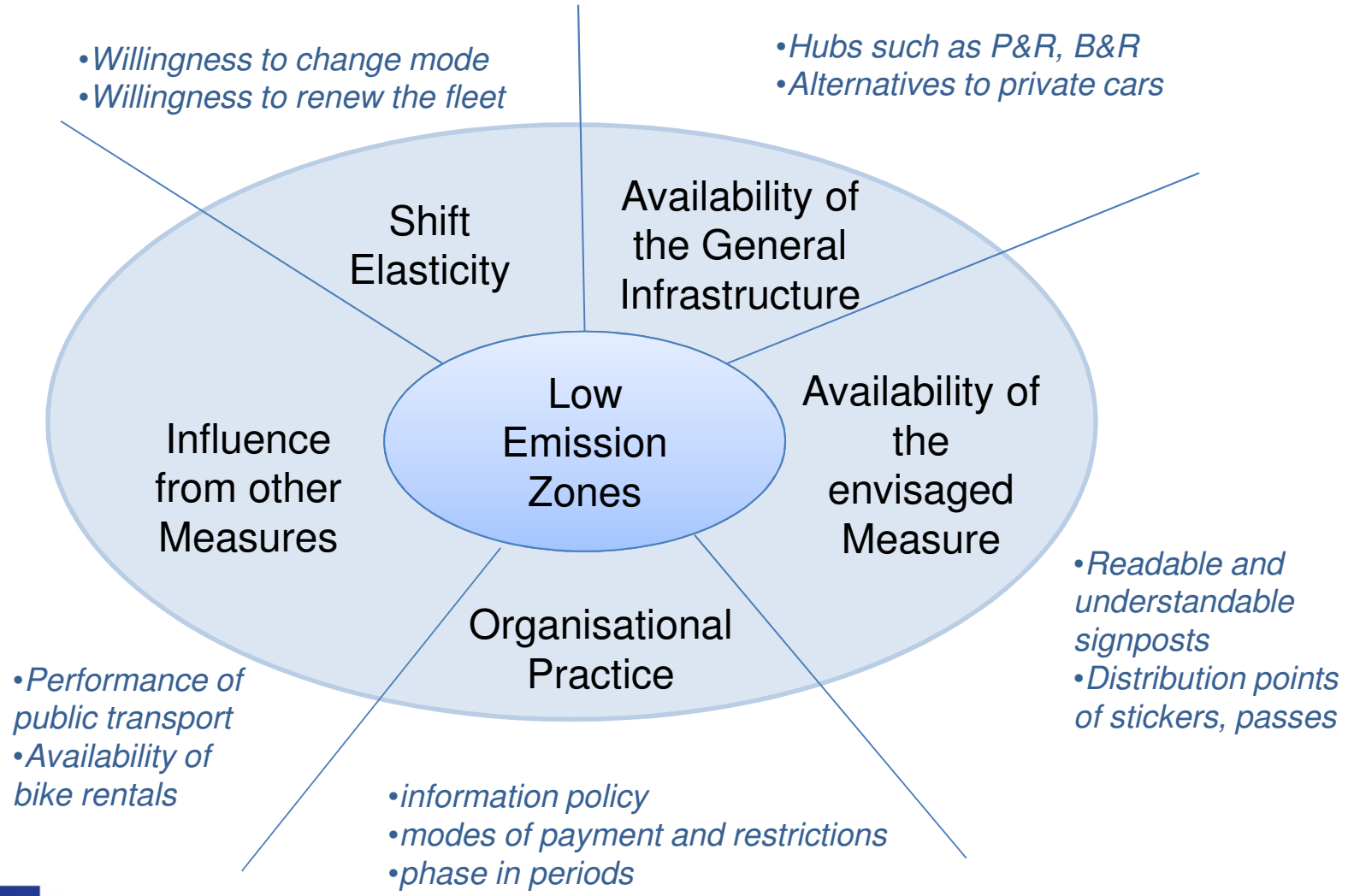


Criteria

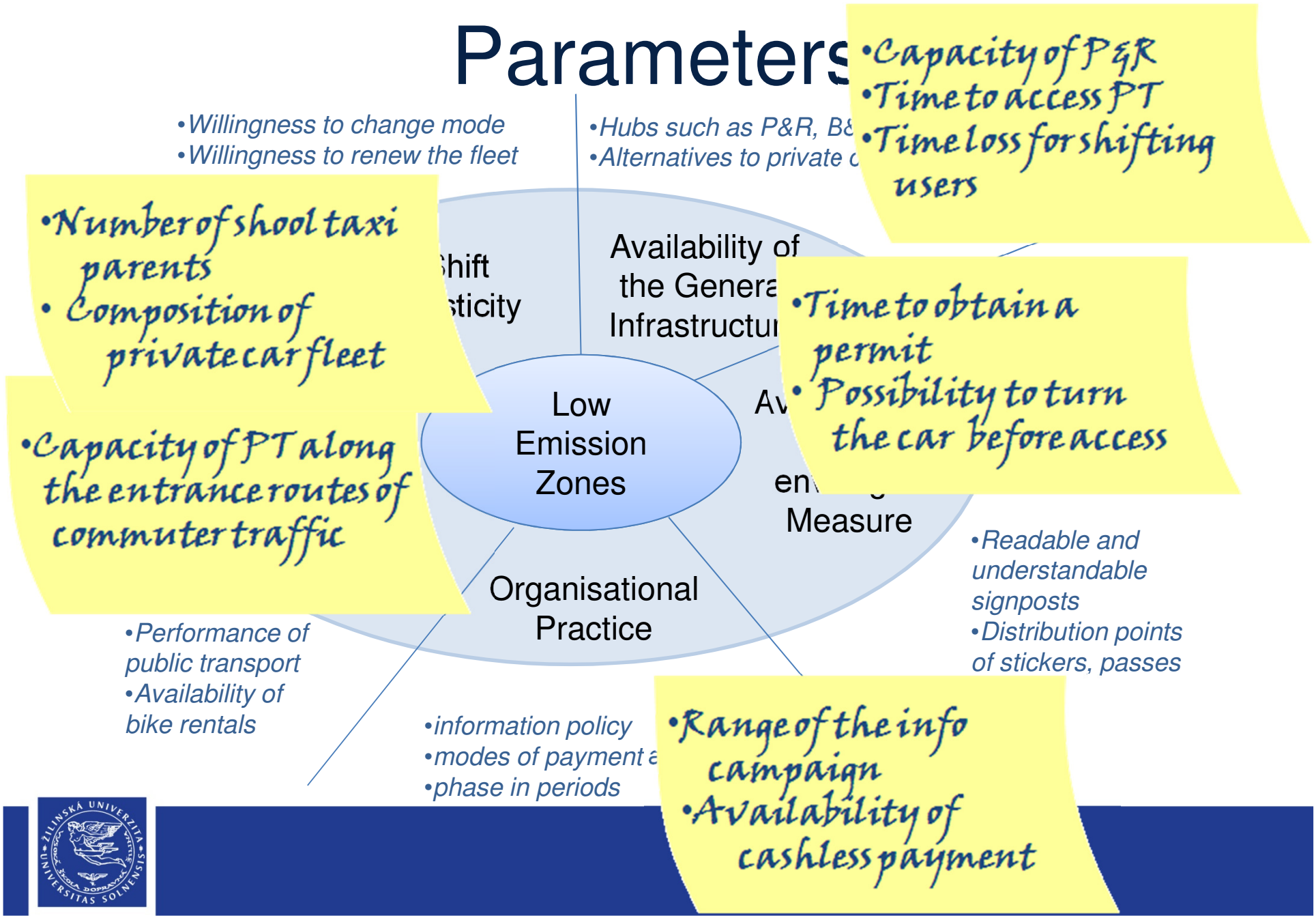


The 5 criteria are CONSTANT

Parameters


•Willingness to change mode
•Willingness to renew the fleet
•Hubs such as P&R, B&R
•Alternatives to private cars
Shift Elasticity
Availability of the General Infrastructure
Influence from other Measures
Low Emission Zones
Availability of the envisaged Measure
Organisational Practice
•Performance of public transport
•Availability of bike rentals
•information policy
•modes of payment and restrictions
•phase in periods
•Readable and understandable signposts
•Distribution points of stickers, passes

Parameters


•Willingness to change mode
•Willingness to renew the fleet
•Hubs such as P&R, B&
•Alternatives to private c
•Capacity of P&R
•Time to access PT
•Time loss for shifting users
•Number of shool taxi parents
• Composition of private car fleet
hift
sticity
Availability of the Genera Infrastructu
•Time to obtain a permit
• Possibility to turn the car before access
Low Emission Zones
Av
en
Measure
•Capacity of PT along the entrance routes of commuter traffic
Organisational Practice
•Readable and understandable signposts
•Distribution points of stickers, passes
•Performance of public transport
•Availability of bike rentals
•information policy
•modes of payment a
•phase in periods
•Range of the info campaign
•Availability of cashless payment

Systematic KPI identification

Category	Properties	Parameters
General infrastructure regarding parking	Availability of on-street parking lots	Number of commuters using private cars and demanding on-street parking
		Etc.
	Etc.	Etc.
Infrastructure for park pricing	Availability of vending machines	Average time to obtain a parking ticket
	Etc.	Etc.
Organisational practice for selling tickets and enforcing violators	Etc.	Etc.
Influence from other measures	Etc.	Etc.
Shift Elasticity	Etc.	Etc.

Systematic KPI identifi

Example: "Raise fees for on-street parking"

Category	Properties	
	Availability of on-street parking lots	Number of commuters using private cars and demanding on-street parking
		Etc.
	Etc.	Etc.
Infrastructure for park pricing	Availability of vending machines	Average time to obtain a parking ticket
	Etc.	Etc.
Organisati selling tick violators		Etc.
Influence fr measures		
Shift Elasticity		

The 5 Categories are constant

mobility related Properties are collated that are unique for the respective application

Every property can be described by its technical Parameters

Summary

The structured approach allows benchmarking of parameters

- faster benefit from other cities implementations
- Recognize required changes in a changing environment

Help for alignment is required

- Harmonizing the structured approach with the existing practice in cities

Transdisciplinary Conference

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The outcome of this co-organised event between the **COST Association** and the **University of Zilina,** namely the **ERA Chair project on ITS,** will contribute to the discussion on the deployment, impact and upcoming challenges faced by ITS at European level. Both organisers will count on their multiple knowledge and know-how on the topic through COST Actions and other European stakeholders active in ITS.

Thank you for your attention!

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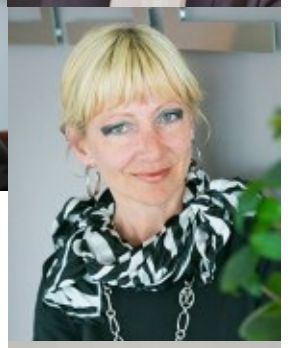
The People in ERAdiate

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