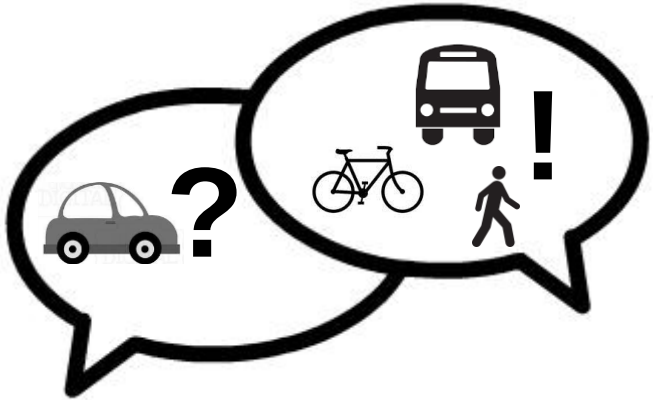

APPROACHES TOWARDS USER-ORIENTED MOBILITY SYSTEMS IN RURAL REGIONS

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AIT Center for Mobility Systems

INTEGRATED MOBILITY SYSTEMS

- Integrated modeling of mobility modes (e.g. pedestrian, bikes, cars, public transit)
- Impact assessments on different scales (micro- to macro & short- to long-term)
- Design of responsive mobility systems adapting to individual and collective needs

MOTIVATION

Specific challenges for mobility systems in rural and particularly **mountain regions** with respect to

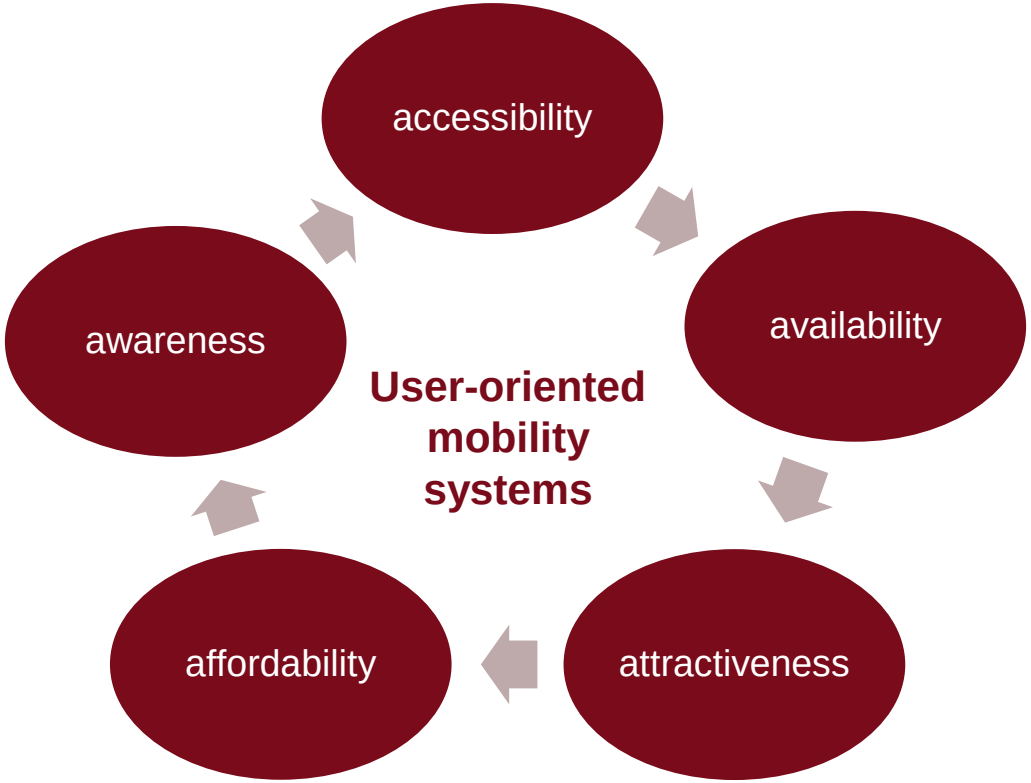
environment	transport demand	infrastructure
• heterogeneous topography and settlement structures • exposed to natural hazards	• mixture of daily traffic of residents and local enterprises • increasing volumes in the tourism sector with seasonal variation	• arterial roads primary in the main valleys and lack of alternative routes • public transport relies on buses with only few railway connections

APPROACH

There is **no “one-fits-all” solution but** regions can benefit from

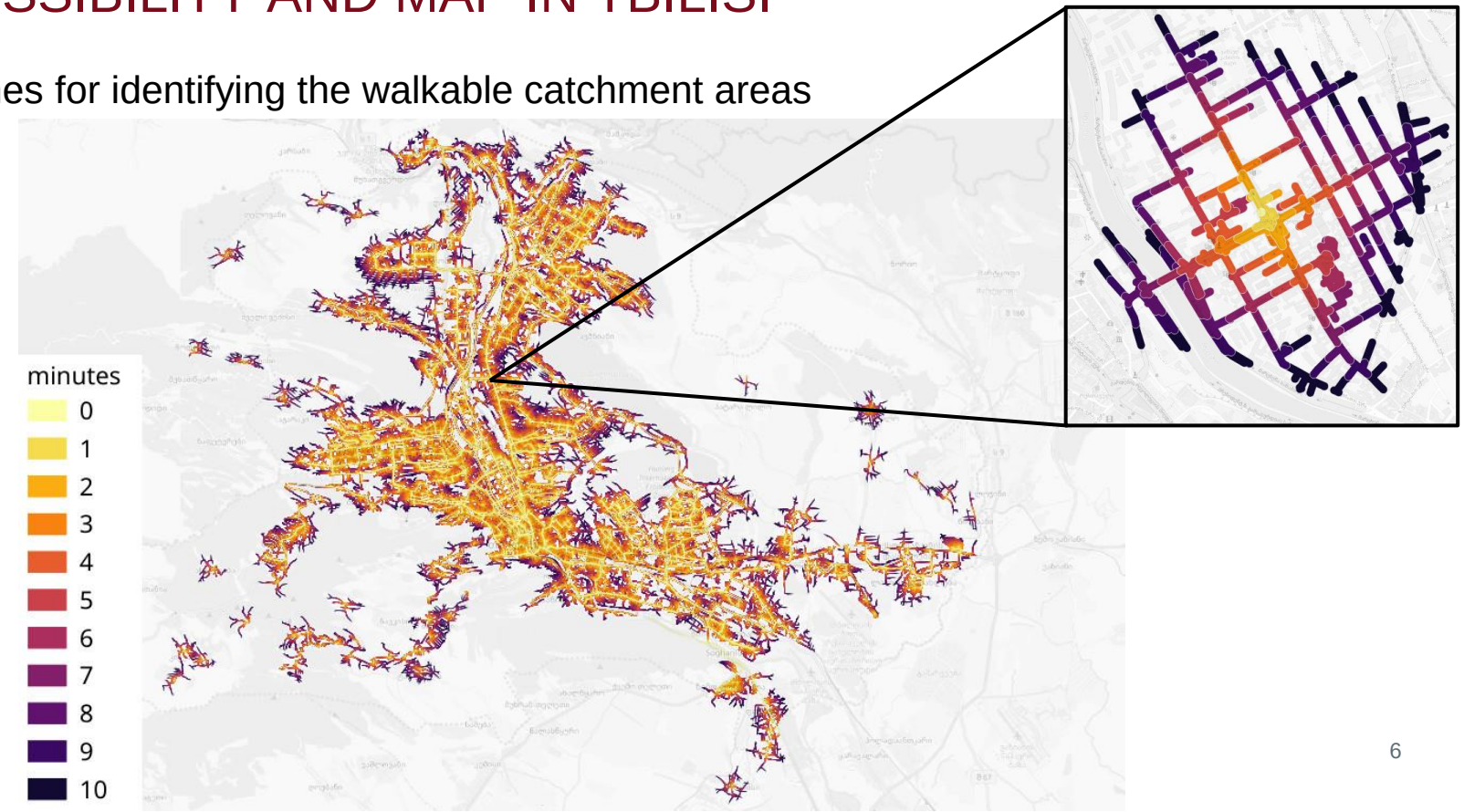
- new strategies and **measures to increase resilience** of the mobility system
- provision of **alternative route and transport concepts**
- seamless integration of various transport modes (**MaaS**)
- **autonomous driving** to address the first/last mile
- **traffic management concepts** to unbundle touristic traffic and demand responsive transport (e.g. for dispersed settlements)

KEY ASPECTS IN THE CREATION OF USER-ORIENTED MOBILITY SYSTEMS



EX. STUDY OF PUBLIC TRANSPORT ACCESSIBILITY AND MAP IN TBILISI

Isochrones for identifying the walkable catchment areas



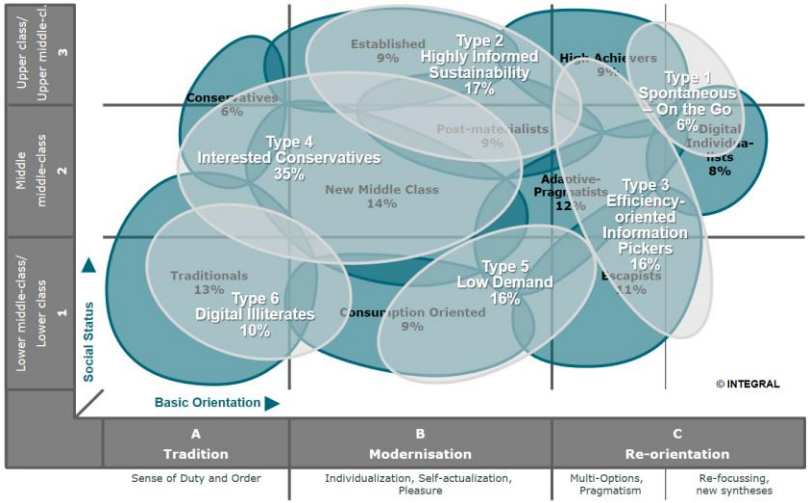
EX. INTRODUCING ADDITIONAL LOW EMISSION SERVICES

a successful introduction of **additional mobility options** strongly depends on

- the **characteristics of the offer** itself
- how well the **implementation** addresses
  - requirements for performance
  - minor shortages in the current infrastructure
  - spatial conditions
- encouraging **openness towards alternatives** via
  - information and low-level access
  - trial periods to test unfamiliar mobility alternatives
- **linking different (multimodal) mobility services** e.g. by implementing “mobility points” acting as major component of ICT solutions

EX. TARGET GROUP SPECIFIC ENCOURAGEMENT STRATEGIES IN AUSTRIA

6 **homogeneous groups** of shared mobility-related information needs



Individual **prerequisites** for information retrieval

	Spontaneous – On the Go	Highly Informed Sustainability	Efficiency-oriented Information Pickers	Interested Conservatives	Low Demand	Digital Illiterates
Information requirements	on-trip, mobile information, apps	pre-trip, multiple information sources	frequent new trips, high demand, new media	pre-trip information, online or print, hardly apps	little demand for information, mainly routine trips	no demand for information, reduced mobility
Motivation	efficiency, flexibility, experience	responsibility, sustainability, awareness	efficiency, rationality, planning	pragmatic, reliability, novelty	costs, planning, stability	security, costs, stability
Specific information interest	car-sharing, alternative transport modes, pooling, park and ride systems	car- and bike-sharing, alternative transport modes, cycle infrastructure, pooling	cycling infrastructure, (taking a bicycle in) public transport	cycling infrastructure, (supra-regional) public transport	park and ride systems	non

EX. POSSIBLE APPROACH TO INCREASE THE ACCEPTANCE OF PT IN TOURISTIC REGIONS

Survey of underlying motivations	• identify group- and situation-specific motivations for the choice of means of transport
Identification of intervention possibilities	• assess effects of possible incentives for the selection of alternative means of transportation
Development of statistical models	• estimate of the potential of incentives to shift traffic in mountain tourism by modelling
Implementation of measures	• assess the impact on real mobility behaviour during implementation
Elaboration of recommendations	• derive a catalogue of measures for tourism communities

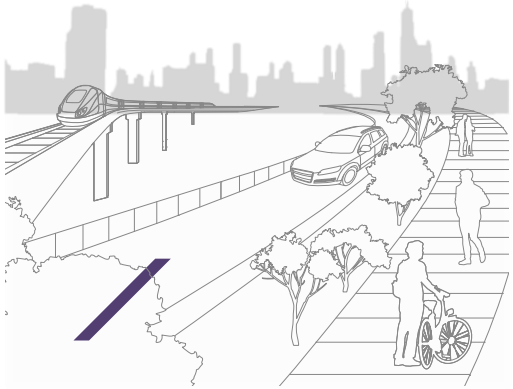
FURTHER ASPECTS

- focus not only on rural areas, but also **cities in mountain regions**
- **simple solutions** are necessary, which can also be applied to poorly developed traffic networks
- solution has to meet the **needs of different user groups** (inhabitants, commuter, tourists)

Feasible solutions for rural and particularly mountain regions:

- **SP-Off-RP data** for impact assessment
- link different (multimodal) mobility services at one hub (**mobility point**)
- plan to implement "**urban air mobility"** in mountain regions where necessary
- foster regional **bike sharing networks**
- emphasize **visitor flow management** in touristic regions

THANK YOU!



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