



ERAdiate

Enhancing Research and innovAtion dimensions
of the University of Zilina in intelligent transport
systems

ERAdiate project

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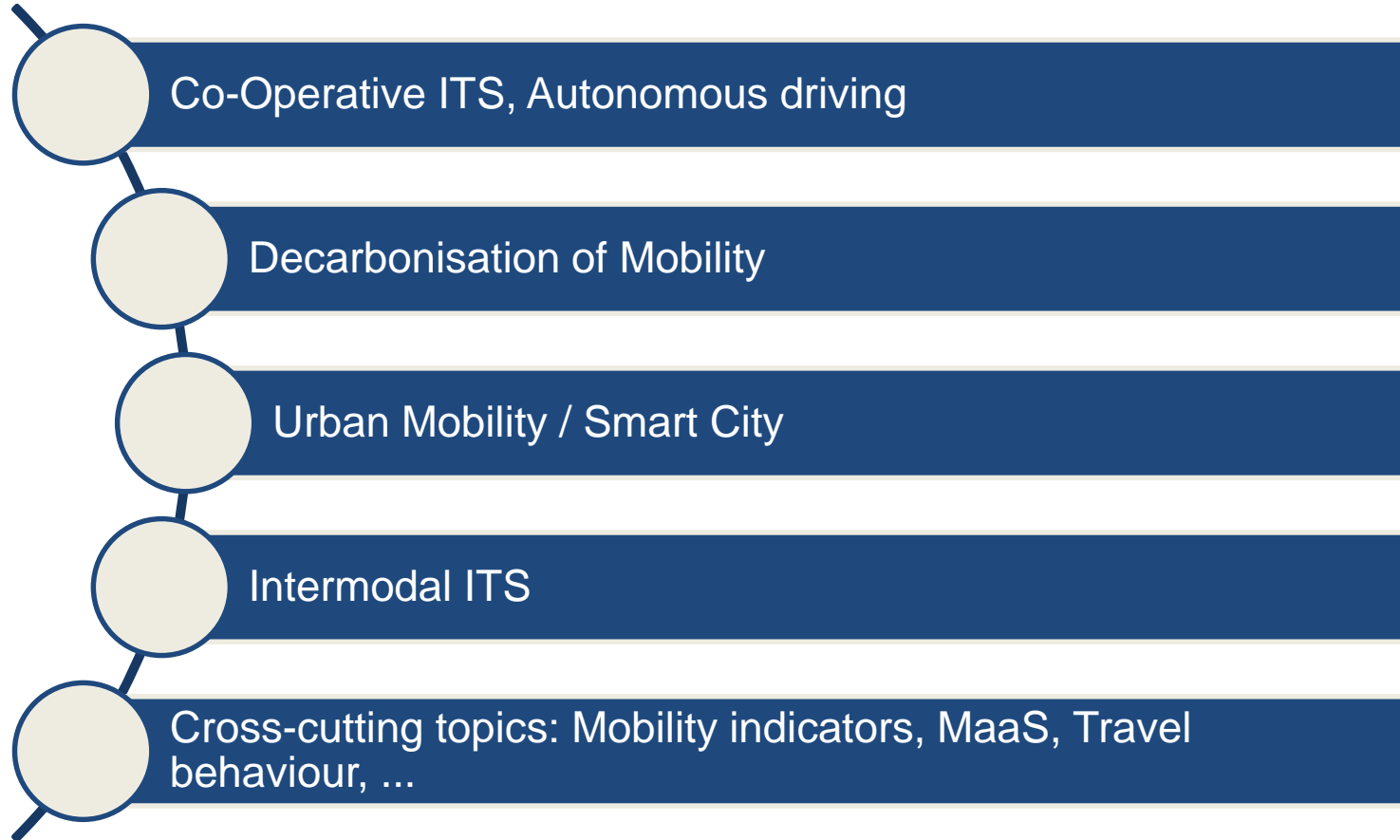
Meeting with Jaguar-Land Rover, Žilina, 6 December 2017

About the ERAdiate project

- **ERA Chair pilot project funded under FP7 Pilot (2014-2019)**
 - Part of H2020 pillar “Spreading Excellence and Widening Participation” expected to close the research and innovation gap in the EU
 - 11 out of 111 proposals granted!
- **ERAdiate bringing international experts in ITS to UNIZA**
- **Realisation of full R&I potential of UNIZA and its region in the field of Intelligent Transport Systems**
- **ERAdiate impacts beyond R&I**
 - Internationalisation,
 - Fostering Inter- Trans- disciplinarity
 - Institutional and structural changes
 - Regional impact by involving public and private actors in ITS initiatives and projects



ERAdiate Main R&I Themes



ERAdiate Focus Areas

Co-Operative ITS

- Communication
 - Ad hoc networks
 - Efficient communication
 - Security & trust
 - LTE
- Applications (mainly safety related)
- Standardisation – CEN & ETSI
- Localisation
 - Relative positioning
 - Trajectories
- Local Dynamic Maps (LDM)
 - Static map & dynamic information

ERAdiate Focus Areas

Decarbonisation of Mobility

- eMobility
 - Use of electrical vehicles, infrastructure & procedures
 - Simulation, mathematical modeling
 - Pricing models
- Indicators on GHG emissions
- Modal shift
- Shared Mobility

ERAdiate Focus Areas

Urban Mobility / Smart Cities

- Urban Mobility Indicators
 - GHG emissions
 - Safety
 - Connectivity
 - Inclusion
- Sensor networks & traffic management
- Incident detection & classification
- Urban logistics & last mile delivery

ERAdiate Focus Areas

Intermodal ITS

- Modal shift
- Shared mobility
- Modeling & Simulation
- Shift/price-elasticity
- Mobility as a Service (MaaS)
- Big Data
- Sustainable Urban Mobility Plans

Recent Projects / 1

- FFG - Austrian Research Promotion Agency
SIMMARC - Safety IMprovement using near Miss Analysis on Road Crossings – *Partner*
 - *24/7 recording of urban road crossings with automatic analysis of sound and video to recognise critical situations and further improve traffic management*
- EC: **I_HeERO** – Infrastructure Harmonised eCall European Pilot – *Associated Partner*
 - *eCall-implementation mandatory in EU from March 2018*

Recent Projects / 2

- H2020-MSCA-RISE-2016:
SENSIBLE – Staff Exchange Program – *Partner*
SENSors and **Intelligence** in **BuiLt** **Environment**
 - international, inter-disciplinary and inter-sectoral collaboration network
 - 3 universities, one national research council and 3 companies from 4 European countries
 - research and innovation staff exchanges and seamless exchange of ideas, expertise, data, testbeds, and know-how
 - sensors and their utilisation in smart building and smart parking areas
 - develop novel information sensing research and innovation approaches for acquiring, communicating and processing a large volume of heterogeneous datasets

Recent Projects / 3

- Alan Turing Institute - Lloyd's Register Foundation
Decentralised real-time electric vehicle charging: optimality, fairness and resilience – *Partner*
 - Strategies for coordinated charging of electrical vehicles
 - Avoiding congestion in the electric distribution network
 - Understanding the stochastic spatial and temporal demands placed on the networks
 - Develop a decentralised scheduling approach that allows a central authority to oversee the network and resource usage

Recent Projects / 4

- H2020-MG-2016-2017 (2016-2017 Mobility for Growth): **MoTiV – Mobility and Time Value** (Research and Innovation action) *Coordinator*
 - International, inter-disciplinary and inter-sectoral network
 - 7 partners from 6 European countries
 - Value of Travel Time (VTT) is relevant for decision-makers, transportation planners, engineers, and economists in the context of projects aiming at enhancing transportation infrastructure
 - Definition and methodology for the estimation of VTT based on the value proposition of mobility
 - MoTiV app linking travel planning with activity/mobility well-being indicators
 - European-wide behavioural and mobility dataset will be made available

Recent Projects / 5

- EC public tender DG MOVE/B4/2017-358 **Technical support related to sustainable urban mobility indicators** - *Subcontractor*
- Objectives:
 1. To give technical support to minimum 50-55 EU urban areas to use "SMP2.0 Sustainable Mobility Indicators" developed by WBCSD (World Business Council for Sustainable Development)
 2. To develop a benchmarking add-on to the on-line calculator tool developed by WBCSD in relation to the SMP2.0 Sustainable Mobility Indicators;
 3. To collect learnings to improve the indicators based on the concrete experience of cities
- Partners: RUPPRECHT CONSULT - Forschung & Beratung GmbH (Germany), Partners: TRT Trasporti e Territorio (Italy), Transport & Mobility Leuven (Belgium), Polis (Belgium), Eurocities (Belgium) and UITP, Union Internationale des Transports Publics (Belgium)
- Eight subcontractors – UNIZA (ERAdiate) + 7 others



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Thank you!

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