



ERAdiate

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

ERA Chair project ERAdiate

Activities and achievements

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Pre-Meeting of National Delegates, Brussels, 22 January 2018

Presentation Overview

- ERAdiate overview
- ERAdiate recent projects
 - H2020 MG-8-5-2017 MoTiV
 - FFG SIMMARC
 - H2020-MSCA-RISE SENSIBLE
 - Lloyd's Register Foundation - Decentralised real-time electric vehicle charging: optimality, fairness and resilience
 - EC public tender DG MOVE/B4/2017-358 Technical support related to sustainable urban mobility indicators





UNIVERSITY OF ŽILINA

Slovakia



7,728 students being educated at seven faculties in 129 accredited fields of study in all forms and degrees of university studies

About ERA Chairs

- Currently part of “Horizon 2020” programme by the European Commission related to “Promoting Excellence and Widening Participation” expected to **close the research and innovation gap in the EU**
- Bring high quality researchers and managers to universities and other research organisations with the potential for **research excellence**
- Institutions should implement **structural changes** to achieve excellence on a sustainable basis
- ERA Chairs grant **does not cover infrastructure and research costs (CSA)**



Setup of ERA Chair Programme

- **11 ERA Chairs granted out of 111 applications**

Country	Institution	Area of research
Belgium	Université de Mons	Energy efficiency in cities
Croatia	University of Zagreb -Faculty of Veterinary Medicine	Molecular veterinary medicine
Czech Republic	Masarykova univerzita	Life sciences
Estonia	Tallinna Tehnikaulikool	Chemistry and biomass treatment
Poland	Instytut Genetyki Roślin Polskiej Akademii Nauk	Plant biology
Portugal	Madeira Interactive Technologies Institute Associacao	Human computer interactions
Republic of Serbia	Institut Za Nuklearne Nauke Vinca	Nanotechnology
Slovakia	Zilinska Univerzita v Ziline	Transport systems and communication technologies
Slovenia	Institut Jozef Stefan	Food analysis through radioactive isotopes
Spain	Universidad de las Palmas de Gran Canaria	Aquaculture
The United Kingdom	Falmouth University	Digital games design

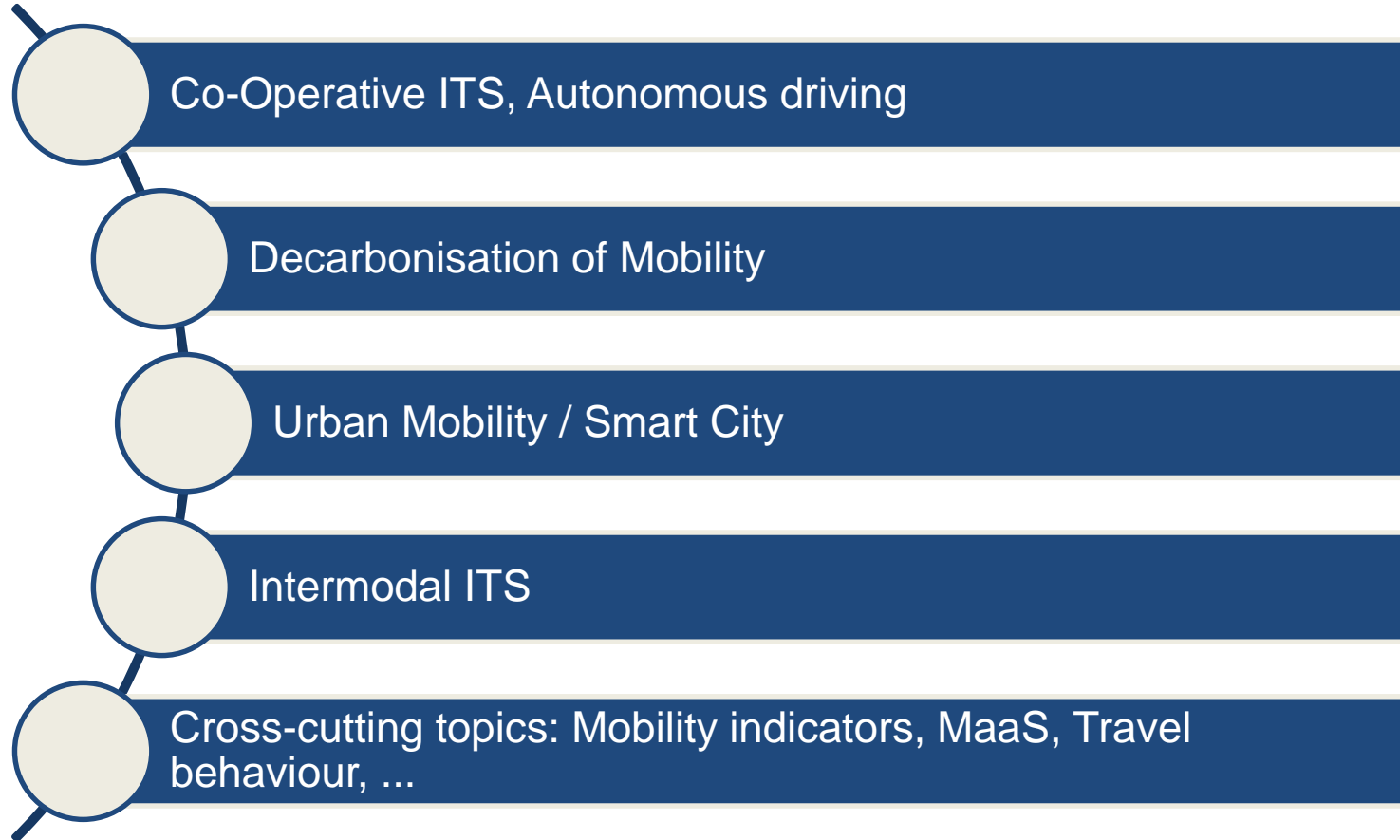


About the ERAdiate project

- **ERA Chair pilot project funded under FP7 Pilot (2014-2019)**
 - One of the first ERA Chairs in EU
 - First widening measure funded in SK
- **Realisation of full R&I potential of the Univ. of Žilina (Slovakia) and its region in the field of ITS**
- **ERAdiate bringing international experts in ITS to UNIZA**
- **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



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



MoTiV Objectives

1. Broaden the definition and assessment of VTT beyond the “time savings” consideration, based on a multidimensional time “value proposition” for the user
2. Gain an understanding of traveller’s reasons for his/her travel choices in line with the perceived value proposition of mobility
3. Assess to what extent ICT connectivity and transport services/infrastructure affect VTT across leisure and work activities and within cultures and generations
4. Elaborate specific actions and recommendations for mobility policy makers and solution developers that shape the value propositions of travel time

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 for Your Attention!

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