



ERA^{diate}



Future Mobility in Smart Cities

A User Centered Approach

Dr. Karl Ernst Ambrosch, ERA Chair Holder



The 11 ERA Chairs



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



Tasks of ERA Chair

- Assembly of an excellent research team
- Increase critical mass
- Development of
 - Research infrastructure
 - International contacts & cooperation
- Workshop and conference organization
- Management of science and innovations
- Contribution to growth and jobs in line with regional innovation strategies





EU – Energy Roadmap 2050 Transport White Paper 2011

By 2050, key goals will include:

No more conventionally-fuelled cars in cities.

40% use of sustainable low carbon fuels in aviation;
at least 40% cut in shipping emissions.

A 50% shift of medium distance intercity passenger
and freight journeys from road to rail and
waterborne transport.

All of them will contribute to a **60% cut in transport emissions** by the middle of the century.

- SMART Cities, Access & Pricing
- Decarbonisation of mobility





User Centered Approach



- Quality of life
- Acceptance
- Information
- Usability
- Inclusive – mobility for all



User Centered Approach

- Home2work
 - Commuting
 - INFORMED traveler
 - Modal shift
 - Multimodal/public transport
 - Attractivity management
 - EV-priorisation
 - Public transport + EV



User Centered Approach

- Shopping
 - Multimodal/public transport
 - Walking / cycling
 - Last mile for orders via internet
 - Parcel distribution centres
 - Delivery / logistics using
 - Heavy bicycles
 - Tram





Smart Cities



- Preparation of strategic materials
- Definition of policies
- Assessment of different schemes
- Transfer of best practices
- Dissemination support
- Improvement: Before / After Analysis
- Success stories

Smart Cities

- Holistic approach: people, transport, energy, information, supply & disposal
- Application of ITS
- Limited access models for historic centers
- EV: charging infrastructure in public space?

EACH CITY IS UNIQUE – but for all apply

- Guidelines / Standards
- Handbook
- Toolbox
- Support





ERA^{diate}

Thank you for your attention.

Dr. Karl Ernst AMBROSCH

www.erachair.uniza.sk

karl.ambrosch@uniza.sk

