



# UNIVERSITY OF ŽILINA

## ...university with tradition

UNIVERZITNÁ 8215/1  
010 26 ŽILINA  
SLOVAK REPUBLIC  
[www.uniza.sk](http://www.uniza.sk)

# UNIZA location



# Basic information

- **1953 - Prague – College of Railway Transport**
- **1959 - the University of Transport (VŠD)**
- **1960 - relocation to Žilina**
- **1980 - University of Transport and Communications (VŠDS)**
- **1996 - University of Žilina - UNIZA**



# Basic information

- Only polytechnic university in the northwest region of Slovakia
- **Unique in Slovakia** - long tradition on education and research in the fields of **transport**
- One of former transport universities founded in former soviet block (Dresden, Warszaw, Gyor, Belgrade)



# Railway oriented research fields

- Operation and Services
- Construction and Engineering
- Electrical Engineering
- Telecommunications
- Informatics
- Management and Marketing
- Mechanical Engineering
- Civil Engineering
- Crisis and Security Management



# Centres of excellence in transport oriented research

- ERDF - Structural Funds
- CEX for Transportation Engineering
- CEX for Intelligent Transport Systems and Services



# Research orientation in general

- Experiences within other programmes COST, DGs, etc., 20 ongoing international research projects
- Experiences within 5<sup>th</sup> FP, 6<sup>th</sup> FP, 7<sup>th</sup> FP and H2020 (first projects) with 12 ongoing international research projects including ERAChair – ERAciate project
- New challenges within Horizon 2020 and more



# Transport oriented projects FP5, FP6, FP7

- FP5 – Intransnet – coordinator
- FP6 – EurNex – partner
- FP7 – **VEL-Wagon, Tellibox, SurfTran, CeTra, ETRA.CC, EURO\_Trans-Days, U-Stir, Star-Net Transport, ..., ERAdiate**



# VEL-Wagon

- Versatile, Efficient and Longer Wagon for European Transportation

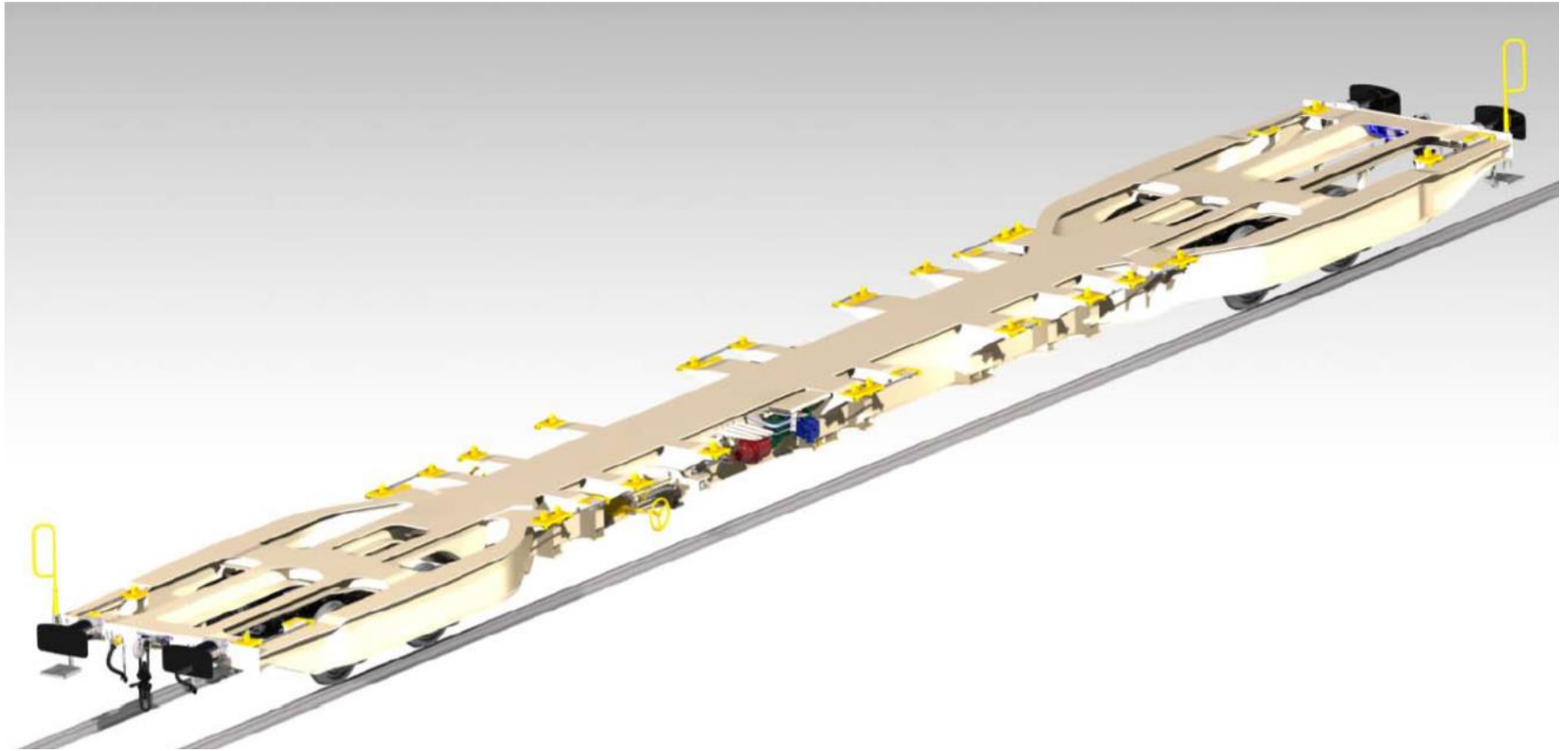


**TATRAVAGÓNKA  
POPRAD**

[www.vel-wagon.eu](http://www.vel-wagon.eu)



# VEL-Wagon



# ERAdiate

- Enhancing Research and innovAtion dimension of the University of Žilina in **intelligent transport systems**
- From 2014-07-07 to 2019-07-06
- Aimed at unlocking and strengthening the research potential and promoting excellence of the UNIZA as well as of the Žilina region in the field of Intelligent Transport Systems



# UNIZA in Horizon 2020

- State on the end of 2015
- 48 projects – member of consortium (33) or coordinator (15)
- 11 MSCA
- 7 ERC
  
- 3 supported, 26 rejected, 19 under evaluation



# Horizon 2020 – supported projects

- CaBilAvi – H2020-Galileo-2014-1 – Capacity building for aviation stakeholders, inside and outside the EU
- **Roll2Rail** – H2020-MG-2014\_TwoStages
- ECORoads – Effective and Coordinated ROAD infrastructure Safety operations – in frame of FEHRL



# Roll2Rail

- Full title: New Dependable Rolling Stock for a more Sustainable, Intelligent and Comfortable Rail Transport in Europe
- Lighthouse project of Shift2Rail
- The foundations for many of the technologies that will be continued within IP1: Costefficient and reliable trains

# Roll2Rail

- innovations in:
  - traction and power electronics,
  - train communications,
  - car bodyshell,
  - **running gear technologies,**
  - **brakes,**
  - train interiors,
  - noise and vibration
  - energy performance

# Shift2Rail area of interest

- UNIZA – non-JU member
- S2R-OC-IP2-01-2015 – Threat detection and profile protection definition for cyber-security assessment
- S2R-OC-IP5-01-2015 – Freight automation on lines and in yards



# Shift2Rail area of interest

- S2R-OC-CCA-01-2015 – Long-term needs of different actors in the railway sector
- S2R-OC-CCA-04-2015 – Safer infrastructure – improved object detection and prevention of safety critical events and integrated mobility
- Or subcontractor in complementary topics for the JU members

# Contact

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