Introduction of German Aerospace Center (DLR) and Delegation

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Our Mission:
• Exploration of the Earth and the Solar System
• Research for the preservation of the environment
• Development of environmentally friendly technologies to increase mobility, communication and security
Interdisciplinary Research Teams @ DLR

DLR employees at the Institutes (research)
State: December 31, 2017

- Engineer; 1736
- Construction E., 325
- Aerospace E., 779
- Electric E., 343
- other E., 289
- Phy; 447
- IT; 309
- Administration; 41
- Psychol.; 48
- GeoWi; 118
- Math; 87
- other NaSc; 166
- Others; 302
Approx. 8,200 Employees in total, with 31.8 % Women

- over 1000 ongoing dissertations
- over 850 final theses and student research projects per year
- approx. 520 internships / year

- 320 trainees
- 390 visiting scientists
- 16 % part-time

DLR employees at the Institutes (research)
State: December 31, 2017
DLR at a glance

- Research branches
  - Aeronautics
  - Space
  - Energy
  - Transport
  - Safety

- 40 research institutes and facilities at 20 sites in Germany

- Offices in Brussels, Paris, Washington, and Tokyo
Aeronautics
Giving wings to the future
• Research for safe, environmentally friendly flying
• Focal points: Vehicle development, air traffic management, air traffic control and atmospheric research
• Operation of the largest civil fleet of research aircraft and helicopters in Europe
Space
Crossing boundaries for Earth
• space exploration
• Observation of the Earth and its ecosystems
• Research under space conditions
• satellite communication and navigation
• Further development of space transport and space systems
Energy
Use of the sun as a source of energy
• Clean, sustainable and affordable energy for people and the economy
• Further development of gas turbine technology and solar thermal power plants
• Optimization of combustion technology, alternative fuels and storage media
Shaping **sustainable mobility** balancing interests from economy, society and environment

by

- Reducing energy consumption of road and railway vehicles
- Avoidance of harmful emissions, in particular CO$_2$, NO$_x$, soot and noise
- Increased safety, reliability and comfort
- More efficient use of existing infrastructures
- Improvement of multimodal transport chains
DLR Transport Research - Portfolio

- **Vehicles**: Develop systemic vehicle concepts
  - Next Generation Car
  - Next Generation Train

- **Traffic Management**: Realising seamless transport chains
  - Understanding and forecasting traffic and its effects

- **Transport System**: Severe traffic and forecasting traffic and its effects
  - Großeerignis and Katastrophen

**Budget**: 66 M€ pa
**Institutes**: 25
**Employees**: 660

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Institute of Transportation Systems

Railway Systems

Automotive

Intermodal Transport

Traffic Management

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## Technology Fields and Research Domains

### Technology Fields

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<td>Railways</td>
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<td>Public &amp; Intermodal T.</td>
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<td>Traffic Management</td>
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### System Architectures
- Data Acquisition and information gathering
- Human Factors
- Vehicle functions Development
- System functions Development
- Evaluation of Traffic
- Testing
Research Facilities

- Application Test Bed Intelligent Mobility (AIM), Simulations, Test Vehicles, Measurement/Test Facilities
We are one of the world’s leading providers of cutting-edge testing and location-based smart mobility solutions for manufacturers in the automotive industry and associated industries.

**OECON Products and Services GmbH**
- Mr. Dr. Fatih Özel

**eCall & TPSP**
eCall test systems for the automotive industry and eCall decoders for emergency response centers and TPSP

**Connected & automated driving**
Test- and Simulation systems for V2X cars
Location-based smart mobility solutions

**UAV Management**
DaaS - “Drone as a Service” Management software Platform for Drone flights beyond Line of sight (BVLOS)

**OECON is the world market leader in this environment**
Thank you for your attention!

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(Source: acatech, 2016)