

Participation in EU projects, technology platforms and networks: (extract)

- **EU Projects (1/2013):** 12 ongoing (3 lead); 10 submitted;
- **Funding Programs:** ARTEMIS, European Framework Program, Marie Curie, RFCS
- **Member of:** A3PS, AC Styria, AMP Austria Mobile Power, AUTOSAR, EARPA, FVV, NAFEMS, ProSTEP-iViP, TechNetAlliance

Research Partners: (extract)



Industry Partners: (extract)



virtual  vehicle

Kompetenzzentrum
Das virtuelle Fahrzeug
Forschungs-GmbH.

RESEARCH ■ TECHNOLOGY ■ INNOVATION

Innovative technologies

VIRTUAL VEHICLE is a leading research and development center with over 200 employees that is dedicated to methods and enabler technology for vehicle innovations. Our world-wide network of partners in research and industry provides us with a strong foundation.

Simulation technology opens up new avenues

Enhanced simulation and development techniques enables early product design, the comparative evaluation of different alternatives and new optimization opportunities – so vehicle development becomes more focused and efficient.

Single components and overall system

Our main focus is on virtual vehicle development. This includes innovative simulation models, effective integration with test procedures and dealing with complex overall systems.

Testing & Validation

VIRTUAL VEHICLE offers comprehensive services in the fields of: NVH & Friction, Engine & Powertrain, Vehicle & Hybrid Safety.

Contact and Information:

virtual  vehicle

General Information
VIRTUAL VEHICLE Head Office

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Funding:

VIRTUAL VEHICLE is a holding company of the COMET K2 research program "K2-Mobility – Sustainable Vehicle Technologies". The ambitious K2-Mobility research program is a long-term funding scheme with a duration of 10 years and is endowed with over € 130 million until the end of 2017.



COMET K2 Forschungsförderungs-Programm - Funded by the Austrian Federal Ministry for Transport, Innovation and Technology (BMVIT), the Federal Ministry of Economy, Family and Youth (BMWFI), Österreichische Forschungsförderungsgesellschaft mbH (FFG), Das Land Steiermark and Steirische Wirtschaftsförderung (SFG).

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VEHICLE DEVELOPMENT-
SYSTEM INTEGRATION

Functional Prototype & CAE Integration

Model-based Systems Engineering

Simulation & Test based validation

Das virtuelle Fahrzeug

VIRTUAL VEHICLE

Research and Test Center

Competenzzentrum

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Design and Integration of Full Vehicle

Motivation and Objectives

Dealing with the vehicle of the future.

VIRTUAL VEHICLE offers an interesting combination of test procedures and innovative simulation models, a comprehensive system simulation as well as methods and processes for the entire vehicle development for road and rail.

In collaboration with numerous international premium OEMs, Tier-1 suppliers and software manufacturers our 200 researchers develop future technologies for efficient, affordable and environmentally friendly vehicles.

Company facts:

- *Founded in 2002*
- *More than 200 employees*
- *Annual Turnover: ~ 20 M. € (2012)*
- *K2 project budget ~ 70 M. € / 5 years*
- *More than 100 successful research projects with over 80 industry- and 30 research partners worldwide*



Extract from our Research topics:

Human Factor

- **Human Body Modeling**
- **Psychoacoustics**

Vehicle Dynamics & Comfort

- ***Automotive / Rail***
- ***Assistance Systems***
- ***Wheel/Rail Interaction***
- ***Mobile Air Conditioning***

Electric Vehicle (EV)

- **Energy Management**
- **Battery**

Lightweight Design

- **Materials**
- **Acoustics**

Powertrain

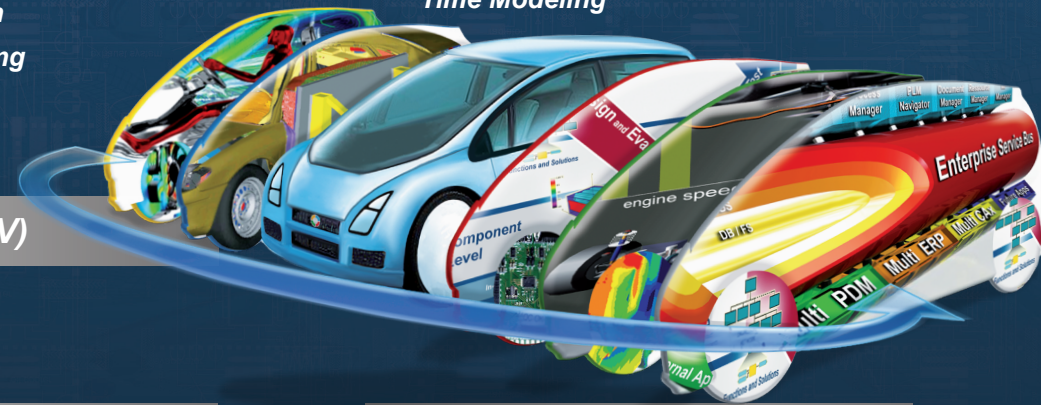
- ***Thermal Management & 1D Simulation***
- ***Thermal Design***
- ***Vibration & Friction***
- ***Hybrid Methods (testing & simulation)***

Vehicle Safety

- *Active, passive & integrated Safety*
- *System Design Methods*
- *Modeling of Joints*

HW / SW Co-Design

- *Simulation & Testing*
- *Hardware-in-the-loop systems/Real-Time Modeling*



System Integration

- *Co-Simulation*
- *Multidisciplinary Optimization*

Information Management

- *Flexible Information Integration*
- *Product Lifecycle Management*
- *Requirements Management*