Innovation Network

FutureCar

»Mobility Transformation«

How to prepare solutions and organizations for change

Network Phase VII – 2023/2024

Fraunhofer Institute for Industrial Engineering IAO

Profile of the institute and its areas of research

Fraunhofer Institute IAO 1981
University of Stuttgart IAT 1991
Founded

Prof. Dr.-Ing. Prof. e.h. Wilhelm Bauer
Univ.-Prof. Dr. rer. oec. habil. Katharina Hölzle
Univ.-Prof. Dr.-Ing. Oliver Riedel
Apl. Prof. Dr.-Ing. habil. Anette Weisbecker
Dr.-Ing. Florian Herrmann
Management board

Numbers in 2021:

- 42.1 M€ finance volume
- 545 Research projects
- 647 Employees
- 230 Project partners
- 178 Scientific publications
- 832 Scientific presentations

Digital Business

Service and Human Resources Management Systems

Mobility and Innovation Systems

Cognitive Engineering and Production

Organisational Development and Work Design

Responsible Research and Innovation

Smart Energy and Mobility Solutions

Human-Technology-Interaction

Cognitive Service Systems

Urban Systems Engineering

The Innovation Network FutureCar in a nutshell

A platform for joint and pre-competitive research on mobility related technologies and trends

- Support in understanding and solving the challenges of a **transforming mobility sector**
- Organisation and content by **Fraunhofer and external experts**
- **Three conferences** per year plus additional services

Industry pain points

Transformation of the mobility sector	New vehicle technologies	New market players	Increasing complexity	High uncertainty
Innovation in mobility pre-development	Need of innovative idea generation	Specific and unknown user needs	Need of open mindset and external input	

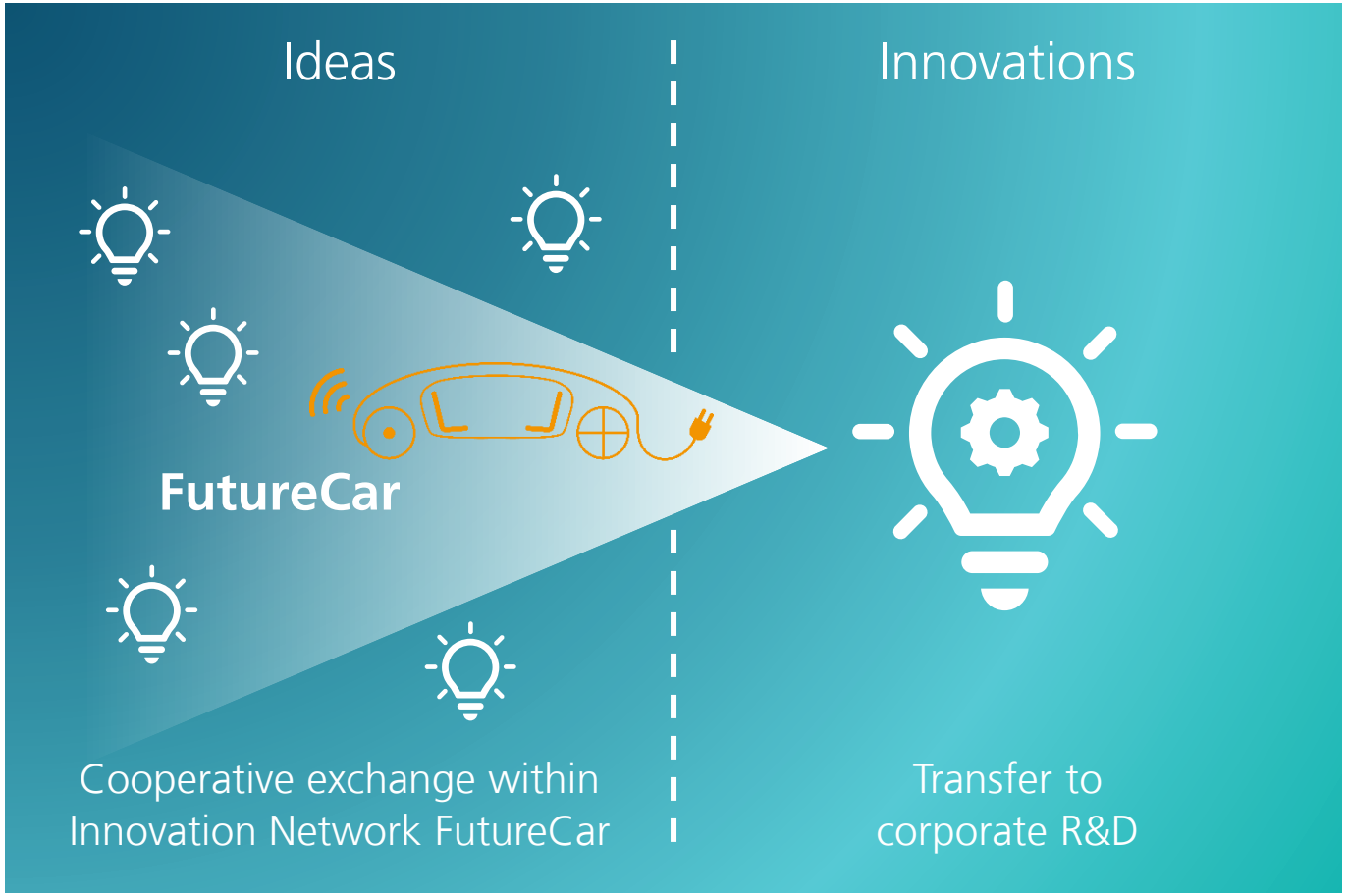
Solutions and benefits through FutureCar

Future technology and trend scouting	☑ Identification of new technologies and trends	☑ Validation of newly arising technologies	☑ Providing a knowledge lead
Strength through collaboration	☑ Bring together different players for new links and contacts	☑ Identification of new partnerships	☑ Exchange of opinions and collaborative learning
Gateway to Fraunhofer-Gesellschaft	☑ Gateway to the research world and scientific insights	☑ Conjoint writing of funding applications	☑ Support in research and development

Innovation Network FutureCar

A platform for joint research and pre-competitive dialogue

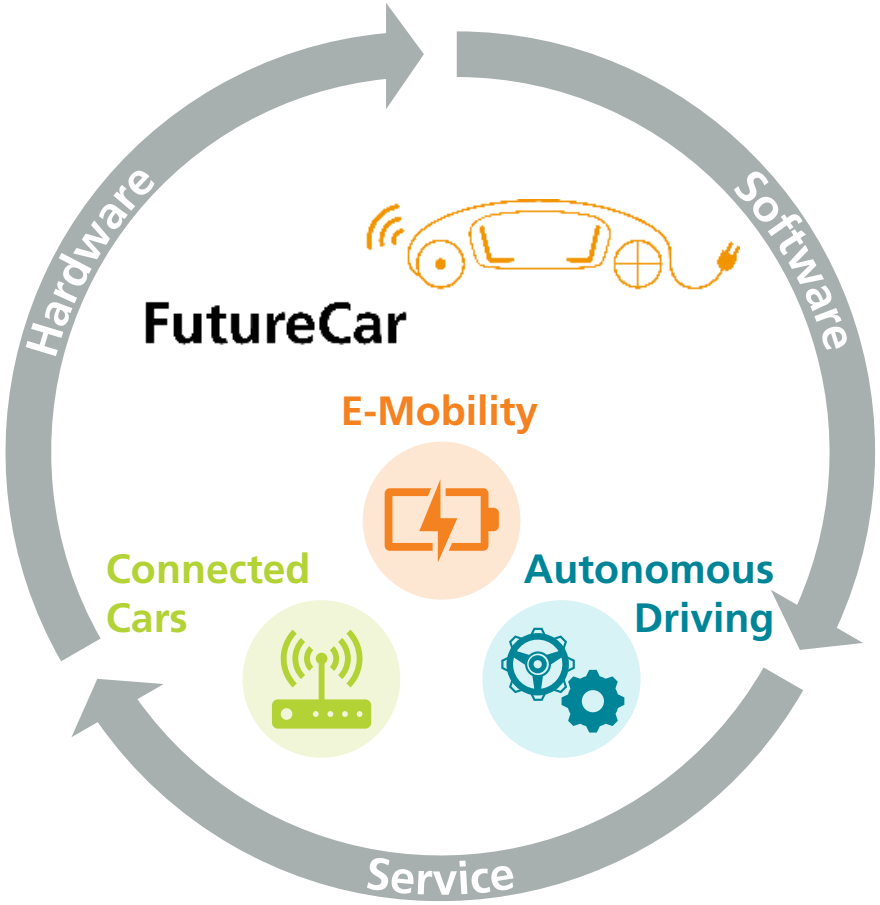
- Discussion of topics and ideas which are **ahead of corporate R&D** programs
- Open exchange of opinions leading to a **common understanding of early stage technologies**
- Meeting platform for like-minded innovators on a **multidisciplinary and cross-company basis**



Future vehicles are highly influenced by the »CAE« technological drivers

As known from previous FutureCar phases, technology trends form the core of activities

- The exit from fossil fuels will requires sophisticated solutions for future vehicle with **environmentally friendly drive trains**
- **Connectivity and data-based services** will enable the transformation towards fully digitized vehicles of the future
- **Increasing automation** will change future vehicles as well as the entire mobility ecosystem
- Within this context, future mobility solutions will be implemented in **integrated, new hardware, software, and services architectures**



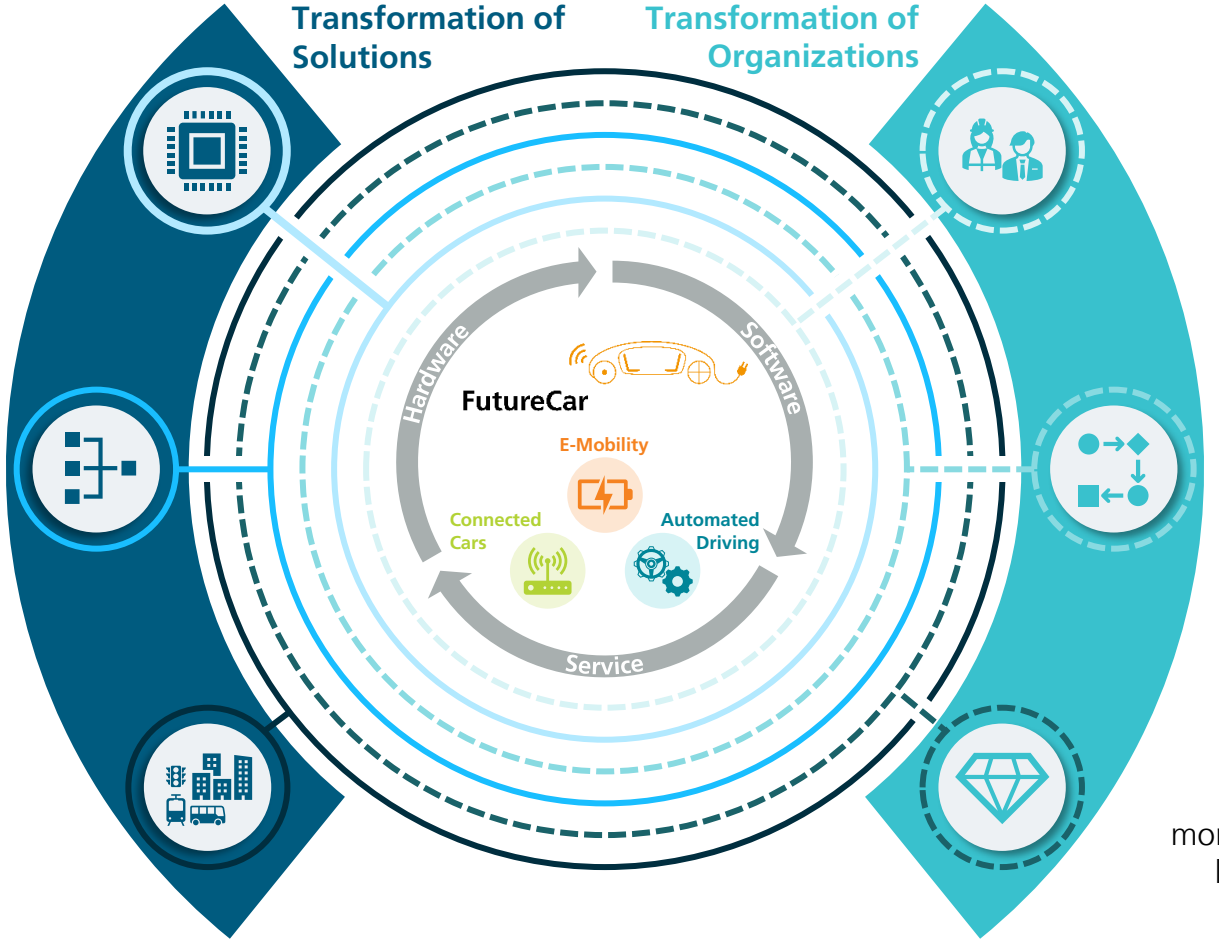
Topics in FutureCar Phase VII »Mobility Transformation«

Core automotive technologies in the changing mobility sector

Component-Layer
Innovative technology, new materials as well as components with smart functionality remain to be a major driver for future mobility solutions

Vehicle-Layer
Vehicles are no longer understood as an assembly of parts but rather a complex technical system of hardware, software, and services with respective architectures

Ecosystem-Layer
With vehicles being turned into smart mobility solutions, more attention must be paid to interdependencies within the ecosystems they are deployed in



Competencies
Transformation is not possible without gaining new knowledge and preparing employees for changing fields of activity

Processes
Interdisciplinary and agile development as well as production of integrated product-service systems require appropriate processes and methodologies

Value Creation
New possibilities of mobility data monetization and higher service orientation lead to new ways of generating revenue both independently and with partners

Transformation of Solutions

Future mobility solutions as innovative product service combinations and ecosystem constituents

Component-Layer

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Vehicle-Layer

Vehicles are no longer understood as an assembly of parts but rather a complex technical system of hardware, software, and services with respective architectures

Ecosystem-Layer

With vehicles being turned into smart mobility solutions, more attention must be paid to interdependencies within the ecosystems they are deployed in

Transformation of Organizations

Change can only happen if we adapt our ways of developing new mobility solutions

Competencies

Transformation requires gaining new knowledge, transforming the entire workforce and preparing employees for changing fields of activity

Processes

Interdisciplinary and agile development as well as production of integrated product-service systems require appropriate processes and methodologies

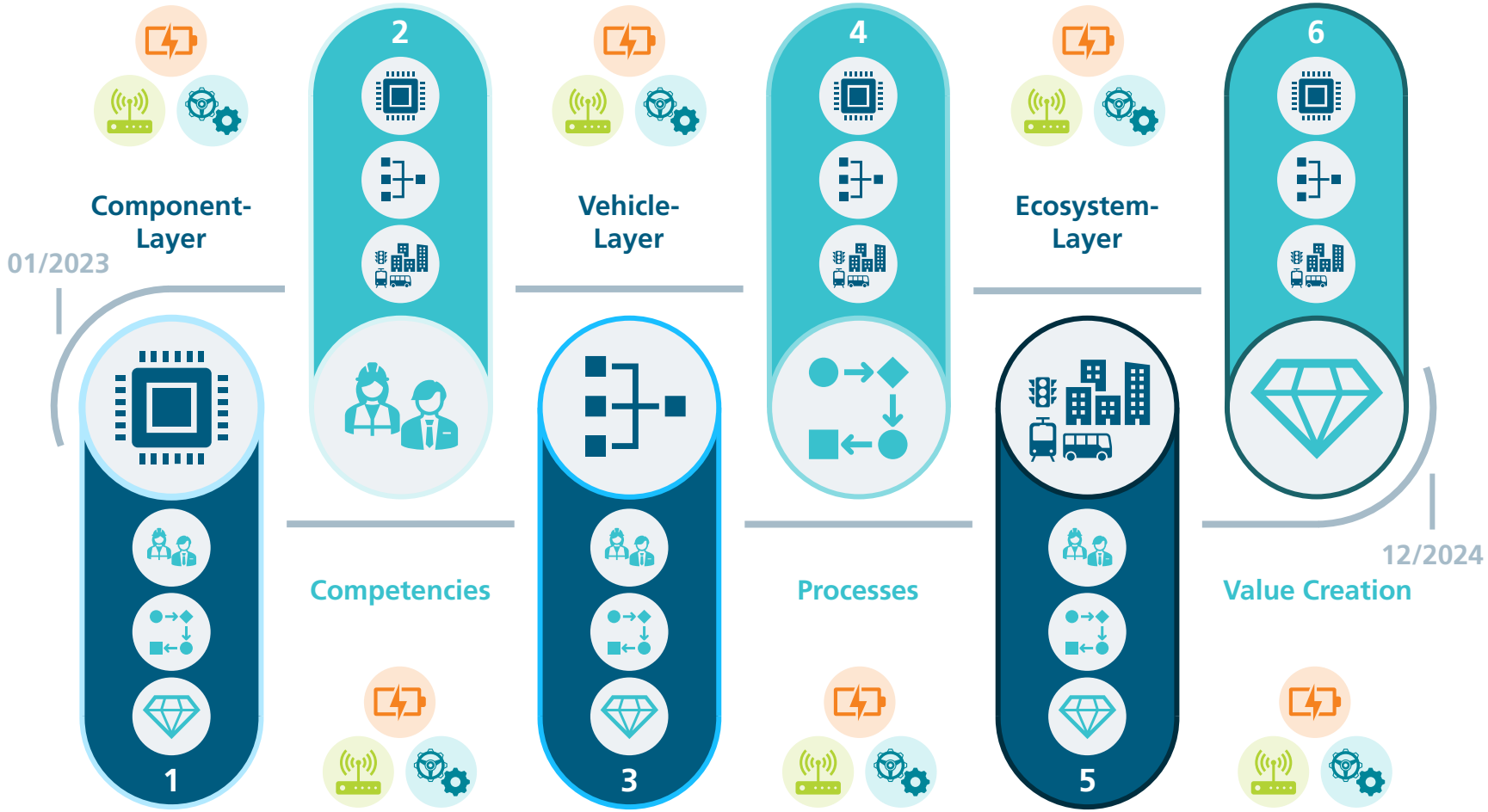
Value Creation

New possibilities of mobility data monetization and higher service orientation lead to new ways of generating revenue both independently and with partners

FutureCar Phase VII

Dedicated conferences on technologies and trends within mobility transformation

- A total of six **two-day network conferences** are core elements of the **Innovation Network FutureCar Phase VII**
- Each conference focuses **on one main topic**, additionally taking into account the respective **aspects of the other transformation area**
- Naturally, **automotive core technologies** will be the backbone of all FutureCar conferences



FutureCar Network Conferences

The core elements of FutureCar Innovation Network

- **Two-day network conferences** on versatile topics in **changing locations**
- The broad program provides **insights in different company and research labs** for a cross-company exchange.
- During the conferences there is **time for in-depth discussions and networking**.

Guided Tours

Visit of Gläserne Manufaktur

We visit and experience R&D centers, labs, and creative workspaces.

- Faurecia R&D Center, Hagenbach
- Lotus Tech Innovation Centre, Raunheim
- BMZ Battery Plant, Hanau
- e.GO Prototype Factory, Aachen
- Mobility Innovation Lab, Fraunhofer IAO

Presentations

Speaker session at The Drivery Berlin

We present and discuss current and relevant network topics.

- Fraunhofer IAO keynotes as impulses and discussion starters
- State of the art research insights by other Fraunhofer Institutes
- Presentation of innovative ideas and concepts from industry speakers
- Start-up pitches by selected automotive entrepreneurs

Workshops

Design workshop "Creating trust in autonomous vehicles"

We conjointly work in group and creativity workshops.

- Brainstorming of new project ideas
- Elaboration of project proposals
- Discussion of current issues in automotive industry
- Collaborative development of future network topics and fields of interest

Examples from previous FutureCar phases

Contact us!

We look forward to exchanging

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