2020-2021 - Phase VI:

»Vehicle Technologies and Trends within the Transformation of Future Mobility«
Fraunhofer Institute for Industrial Engineering IAO
Profile of the institute and its eight areas of research

- Urban Systems Engineering
- Organisational Development and Work Design
- Mobility and Innovation Systems
- Human-Technology-Interaction
- Cognitive Engineering and Production
- Service and Human Resources Management
- Digital Business
- Responsible Research and Innovation Systems

Fraunhofer Institute IAO 1981
University of Stuttgart IAT 1991
Founded

Prof. Dr.-Ing. Prof. e.h. Wilhelm Bauer
Univ.-Prof. Dr.-Ing. Oliver Riedel
Univ.-Prof. Dr.-Ing. Dr.-Ing. E.h. Dr. h.c. Dieter Spath
Management board

Numbers in 2018:

- 42.6 M€ finance volume
- 173 Publicly funded projects
- 637 Employees
- 30 EU-projects
- 226 Scientific publications
- 337 Industry projects

“(FutureCar)”
Fraunhofer IAO - Mobility and Innovation Systems

Our knowledge can help you to solve the challenges of shaping the mobility of tomorrow.
In a nutshell: The Innovation Network FutureCar
A platform for joint and pre-competitive research on automotive technologies and trends

- Support in understanding and solving the challenges of a transforming automotive industry
- Organisation and content by Fraunhofer and invited experts
- Three conferences per year plus additional services
- 2 year membership contract
- € 20 K membership fee p.a.¹

Industry pain points

<table>
<thead>
<tr>
<th>Transformation of the automotive industry</th>
<th>New vehicle technologies</th>
<th>New market players</th>
<th>Increasing complexity</th>
<th>High uncertainty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation in mobility pre-development</td>
<td>Need of innovative idea generation</td>
<td>Specific and unknown user needs</td>
<td>Need of open mindset and external input</td>
<td></td>
</tr>
</tbody>
</table>

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 Society research
  - + Gateway to the research world and scientific insights
  - + Conjoint writing of funding applications
  - + Support in research and development

¹ € 10 K membership fee p.a. for SME: < 250 employees and either revenue < € 50 M p.a. or balance sheet < € 43 M p.a. (Art. 2 des Anhangs zur Empfehlung 2003/361/EG)
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
FutureCar Phase VI
»Vehicle Technologies and Trends within the Transformation of Future Mobility«

- Major transformation of established mobility systems
- Future vehicles are highly influenced by the »CAE« technological drivers
- Global trends, new mobility concepts and changing markets are shaping this transformation
- Success in future automotive business requires this holistic understanding of change

Global Trends
In digitization, urbanization, demography, sustainability, and individuality we see a global transition and change of mindset that will affect our understanding of mobility.

Mobility Trends
With micro- and urban air mobility, shared rides and other mobility services, cars will no longer be the only means of individual transportation.

Market Trends
New and developing markets, urban vs. rural mobility, shared vs. private usage, passenger vs. goods transportation: all these aspects will affect future vehicle segments.
Global Trends
Social movements and worldwide challenges will affect future mobility on a global scale.

FutureCar

Mobility Trends
New means of transportation and services will revolutionize today’s mobility understanding.

Market Trends
Shifting market demands will require customized mobility solutions.

Digitization

Urbanization

Demography

Sustainability

Individuality

Sharing Economy

Mobility on-demand

Intermodal Mobility

Micromobility

Urban Air Mobility

Mobility-Energy-Coupling

Shared Mobility

E-Mobility
The exit from fossil fuels will require more than equipping vehicles with larger batteries.

Connected Cars
Connectivity and data-based services will enable the transformation towards fully digitized vehicles of the future.

Autonomous Driving
Increasing automation will change future vehicles as well as the entire mobility ecosystem.

Reference:
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- AdobeStock
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- lukutin77 iStock
- Wenjie Dong iStock
- sarayut iStock
- Tramino iStock
- cybrain iStock
- VectorMine Adobestock
- Fraunhofer IAO
- peshkova AdobeStock
- loops7 iStock
- BMW Group
- BMW i Inside Future
- koppel stock
FutureCar Phase VI
Dedicated conferences on vehicle technologies and trends within the transformation of future mobility

- Six two-day network conferences are core elements of the Innovation Network FutureCar Phase VI.
- Concentrating on one main topic and three side topics per conference. All technological drivers are addressed and discussed four times on different levels.
Two-day conferences in changing locations with a versatile program are core elements of the FutureCar Innovation Network.

- 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

- We visit and experience R&D centers, labs, and creative workspaces.
  - E-Drives Lab, Fraunhofer NAS
  - Faurecia R&D Center, Hagenbach
  - Floatility MakerSpace, Hamburg
  - BMZ Battery Plant, Hanau
  - e.GO Prototype Factory, Aachen
  - Mobility Innovation Lab, Fraunhofer IAO

Examples from last network Phase V in 2018/2019

Presentations

- We present and discuss current and relevant network topics.
  - Presentations by IAO as impulses and discussion starters
  - Presentation of research findings by other Fraunhofer Institutes
  - Presentation of innovations by industry partners and external speakers
  - StartUp pitches by selected automotive entrepreneurs

Workshops

- 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
The FutureCar network brings together different players and experts in the fields of future automotive technologies and mobility trends.

The permanent network members benefit from all provided contents, the additional services as well as the gateway and early stage access to cutting-edge research.
**Additional services**

**Support and additional information on a regular basis**

- **Innovation Networks** base on collaboration and constant exchange of ideas about new technologies and their potentials
- **Knowledge transfer** through regular updates on the automotive industry and latest technology trends as well as interesting funding programs
- **Additional meetings** throughout the phase VI for content related networking opportunities

**Forum FutureCar:**
- Annual, public conference on a future mobility topic
- Free of charge for FutureCar members

**FutureCar Newsletter:**
- Monthly news covering the six pillars of E-Mobility, Connected Cars, and Autonomous Driving as well as Global Trends, Market Trends, and Mobility Trends
- Additional updates from industry and research

**Funding Program Screening:**
- Quarterly update on relevant funding programs for public project applications in FutureCar topics
- Support in consortia finding and application process

**Special Meetings:**
- TechDays, ThinkTanks, and RoundTables covering specific focus topics
- In-depth discussion and information during one day meetings
**Terms and conditions**

**Two-year contract for a company-wide membership including six conferences and additional services**

- **FutureCar** is collectively financed by all members and organized by Fraunhofer IAO
- Membership includes the attendance at all three conferences per year, including subsequent minutes, workshop results and presentations shared by the speakers
- **Additional services** during the whole network term and access to the Fraunhofer Society’s entire research community

**Network Term**
- Two-year contract, 01/2020 - 12/2021

**Network Schedule**
- Three two-day conferences per year (~March, July, October)

**Meeting Attendance:**
- Company-wide membership, not limited to specific groups or business units
- Four attendees max. per conference (exceptions possible)

**Membership Fee**
- € 20 K p.a.
- € 10 K p.a. with SME\(^1\) discount

**Network Language:**
- Slides and newsletter: English
- Communication: German (and English if necessary)

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\(^1\) < 250 employees and either revenue < € 50 M p.a. or balance sheet < € 43 M p.a. (Art. 2 des Anhangs zur Empfehlung 2003/361/EG)

Reference: Fraunhofer IAO, spcChrome iStock, genxGW, AbbeionStock, herreed Stock, Dimi iStock
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Contact us!
We are looking forward to get in touch with you!

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