

## MOBILITY MEETS THE FUTURE





# MOBILITY MEETS THE FUTURE

Hardly any issue defines our globalised society more than mobility. Mobility means movement, change and participation. What requirements will determine the mobility of tomorrow? How will we move around in the future, what infrastructure will we have, and what might personal mobility look like in the future?

Current and future mobility concepts now face the challenge of changing user habits and a clearly recognisable change in user values. We work together with our customers on research projects to answer these questions. We help them designing future mobility solutions and putting strategies in place to compete on the mobility market of the future.

## What challenges do we face?

When it comes to mobility, people are faced with increasingly individual needs and requirements. These **changing mobility needs** call for new mobility concepts that can be flexibly designed and remodelled to meet requirements. Future mobility systems will no longer consider means of transport on their own, but rather combine, integrate and connect them. Different demands can be found in rural and urban areas, and so concepts are not directly interchangeable:

In **urban regions**, it is becoming less important to own and drive a car; the trend is heading towards multimodality. Much of the mobility demand is already centred around car sharing, public bicycle systems, ride sharing and intermodal information apps. As such, flexible mobility solutions are highly important.

In **rural areas**, cars are still the most important mode of transport. New ideas are needed to develop sustainable mobility solutions and create synergy between private and public transport.

**New technology** creates both opportunities and challenges. Developments like autonomous cars, alternative drive systems like electric motors, and connected vehicles all require

a change of approach and broaden the possibilities of the mobility market.

The inclusion of historically developed **infrastructure** and individual user requirements play equally decisive roles in the implementation of new mobility options.

## Our areas of expertise

Mobility 4.0: intermodal concepts and flexible mobility solutions	Smart City: intelligent movement and parking	Autonomous vehicles and their potential
Alternative drive technology for emission-free mobility	<b>NEW MOBILITY SOLUTIONS</b>	Electromobility in combination with in- telligent transportation systems (ITS)
Mobility in the age of geographic and social change	Intelligent use of transport with smart data	Neighbourhood approaches for sustainable living and movement



### Who is in need of attention?

Supply and demand is a symbiotic relationship, as new supplies create new requirements and give the mobility market its own dynamic. Established market actors have to take on new roles or are challenged by completely new players on the market: Will the taxi firms and other traditional transport companies of today operate fleets of autonomous vehicles in the future? What role will IT companies and start-ups play when innovating and establishing freshly-designed business models for the mobility sector? We bring together the different perspectives of companies, communities, transport providers, and work closely with our customers to develop solutions tailored to their needs.

### Mobility meets the future at the Fraunhofer Institute for Material Flow and Logistics

We research new mobility concepts for personal transport to pave the way into a multimodal, digital, economical, ecological and socially sustainable future.

The **digitalisation and connection of all parties concerned**, and **new transport options** (e.g. ride sharing) and **technology** (e.g. electromobility, autonomous cars, C2X) all play a decisive role.

An equal amount of attention should be given to rural areas, urban mobility, and medium- and long-distance transportation. The main objective is to **develop integrated, low-emission and adaptable mobility ideas**, taking into account current and future mobility needs.

We use quantitative and qualitative methods to analyse important developments on the mobility market. We identify potential business models by considering developments in technology, regulations and demand. The focus has shifted away from purely technical solutions; analysing social and behavioural

economics lays an important foundation for our cause-and-effect research. This makes it possible to identify new and existing solutions. As an external partner, we also take an objective view and help to highlight and minimise the risks of any decisions.

### An overview of our skills and services

Provision of requirement analyses for the introduction of new technology and business models	Development of business model scenarios	Pictures of the future and analyses of trends
Assistance with the identification and implementation of new mobility strategies	<b>SKILLS AND SERVICES</b>	Proof of concept support
New technology potential analysis	Interdisciplinary analyses of mobility innovations	Analyses of the social and behavioural economics of mobility solutions

### Our location

The Fraunhofer IML's Centre for Logistics and Mobility is located at the House of Logistics and Mobility (HOLM) at Frankfurt Airport. It offers the perfect starting point to remain connected across various locations when carrying out our application-oriented research. We provide interdisciplinary and applied research for the innovative mobility of the future.

You can find more information about our team and past clients at:

[www.iml.fraunhofer.de/mobility\\_frankfurt/en](http://www.iml.fraunhofer.de/mobility_frankfurt/en)

**Fraunhofer Institute for Material Flow and Logistics IML**

Board of directors:

Prof. Dr.-Ing. Uwe Clausen

Prof. Dr. Michael Henke

Prof. Dr. Michael ten Hompel (managing)

Joseph-von-Fraunhofer-Str. 2-4

4227 Dortmund

Germany

**Center for Logistics and Mobility**

Project Manager Mobility

Isabella Geis, M.A.

Phone: +49 69 668 118 302

E-Mail: [isabella.geis@iml.fraunhofer.de](mailto:isabella.geis@iml.fraunhofer.de)

Internet: [www.iml.fraunhofer.de/mobility\\_frankfurt/en](http://www.iml.fraunhofer.de/mobility_frankfurt/en)

Bessie-Coleman-Straße 7

60549 Frankfurt am Main

Germany