Plattform Urbane Mobilität (PUM)

Urban mobility platform Objectives & roadmaps

Cities for Mobility Congress Stuttgart 2023

Plattform Urbane Mobilität

VDA Verband der Automobilindustrie

Audi · BMW GROUP · Freie Hansestadt Bremen · Mercedes-Benz · Hannover · Hamburg · Ford · Landeshauptstadt Düsseldorf · Stadt Köln · Stadt Leipzig · STUTTGART · Landeshauptstadt München Referat für Stadtplanung und Bauordnung · LUDWIGSBURG · Nutzfahrzeuge

Sometimes a little idea makes a big impact

German automotive industry

786.000 employed

9 German Cities

8,1 Mio. inhabitants

Audi

BMW GROUP

Freie Hansestadt Bremen

Mercedes-Benz

Landeshauptstadt Düsseldorf

Ford

Hamburg

Hannover

Stadt Köln

Stadt Leipzig

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Landeshauptstadt München
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STUTTGART

VDA Verband der Automobilindustrie

Nutzfahrzeuge

PUM

Plenary Meetings

Expert Groups

Strategic Papers

Vision and Roadmaps toward climate-neutral mobility in cities (2023)

The objectives illustrate urban mobility from the point of view of the PUM

The visions for the year 2035 illustrate the ideas and objectives of the PUM for the future design of sustainable, urban mobility. These visions have been divided into five different spatial categories, since a wide variety of requirements apply to mobility depending on the city district. Viewed in combination, the objectives represent an exemplary German city for which there are comprehensive goals across all districts, such as:

Climate-neutrality

- Climate neutrality throughout the city as a overriding goal
- 100% Regenerative energy generation and use
- 100% electro-driven vehicles
- Bike expressways, incl. Bike & Rail

Space efficiency through new offers

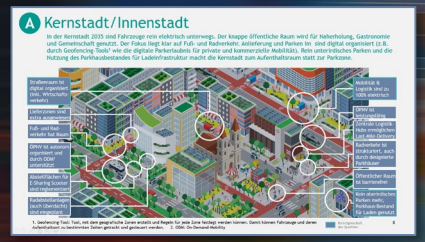
- Efficient use of space and use of space through digitization
- More efficient, convenient public transport with the promotion of mobility sharing
- 100% connectivity between all mobility offers

Traffic safety

- Accessibility in public space
- Autonomous vehicles in public areas
- Vision Zero in traffic

Content overview: Achievement of objectives operationalized through roadmaps

Objectives by 2035



Central city/city center

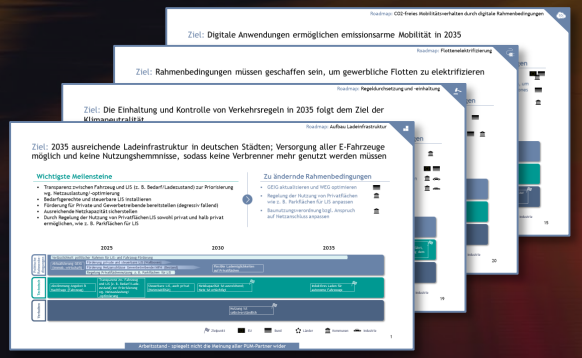
Mixed use districts

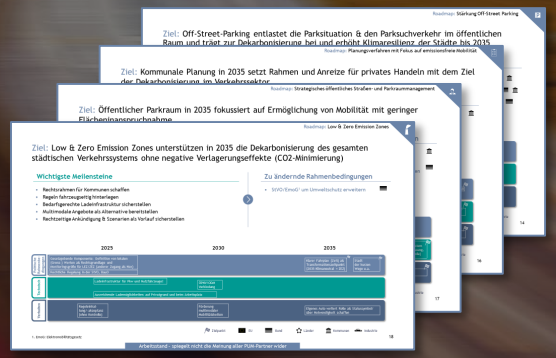
Residential areas with multi-story housing

Suburban residential areas (terraced houses)

Industrial parks

Roadmaps& Most Important Milestones



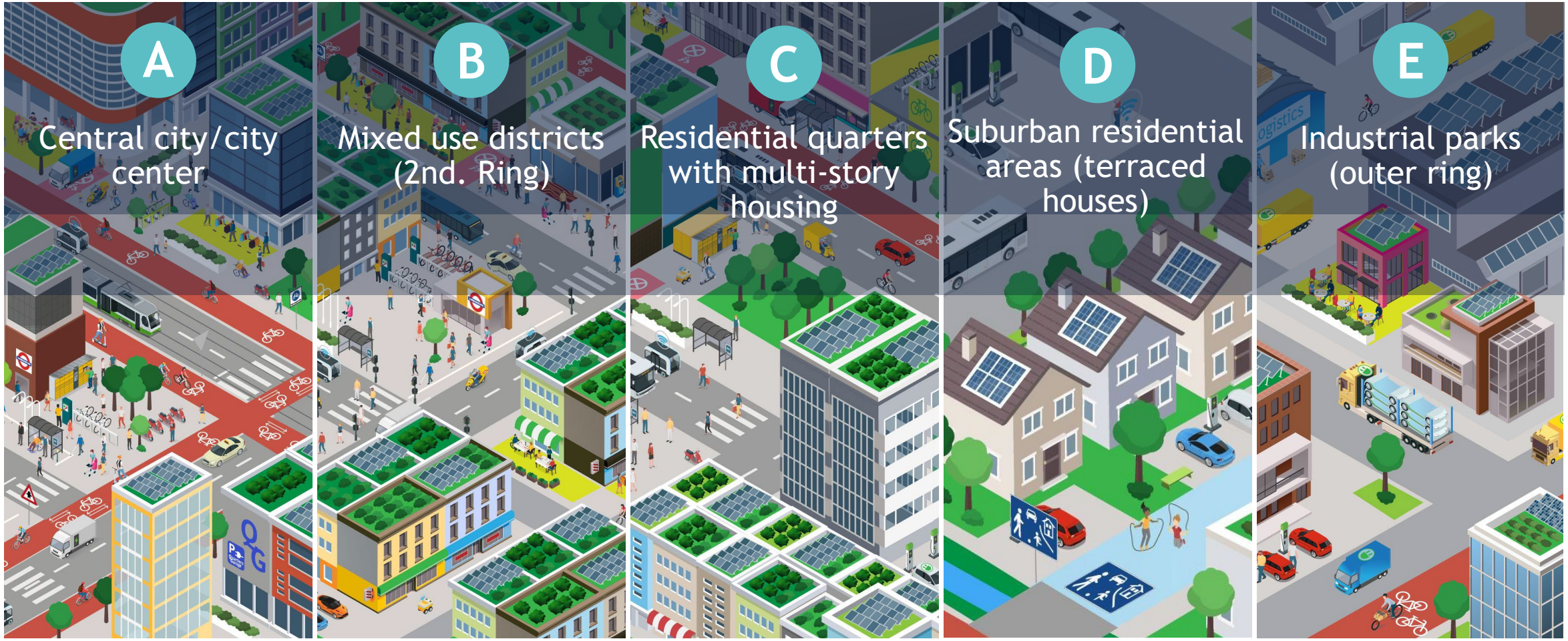


Roadmaps and most important milestones for achieving the objectives by 2035

Models of cooperation

Models of cooperation as best practice

Objectives have been divided into five different categories, as a wide variety of mobility requirements prevail, depending on the city district



A Central city/city center

In the core city of 2035, vehicles on the road are fully electrical. The public space is mainly used for recreation, gastronomy and the community. The focus is on walking and cycling. Due to digital booking, delivery and parking take up only a small amount of space, there are no longer any usage conflicts. Underground parking and the use of the parking garage stock for charging electric vehicles makes this district an encounter area instead of a parking space.

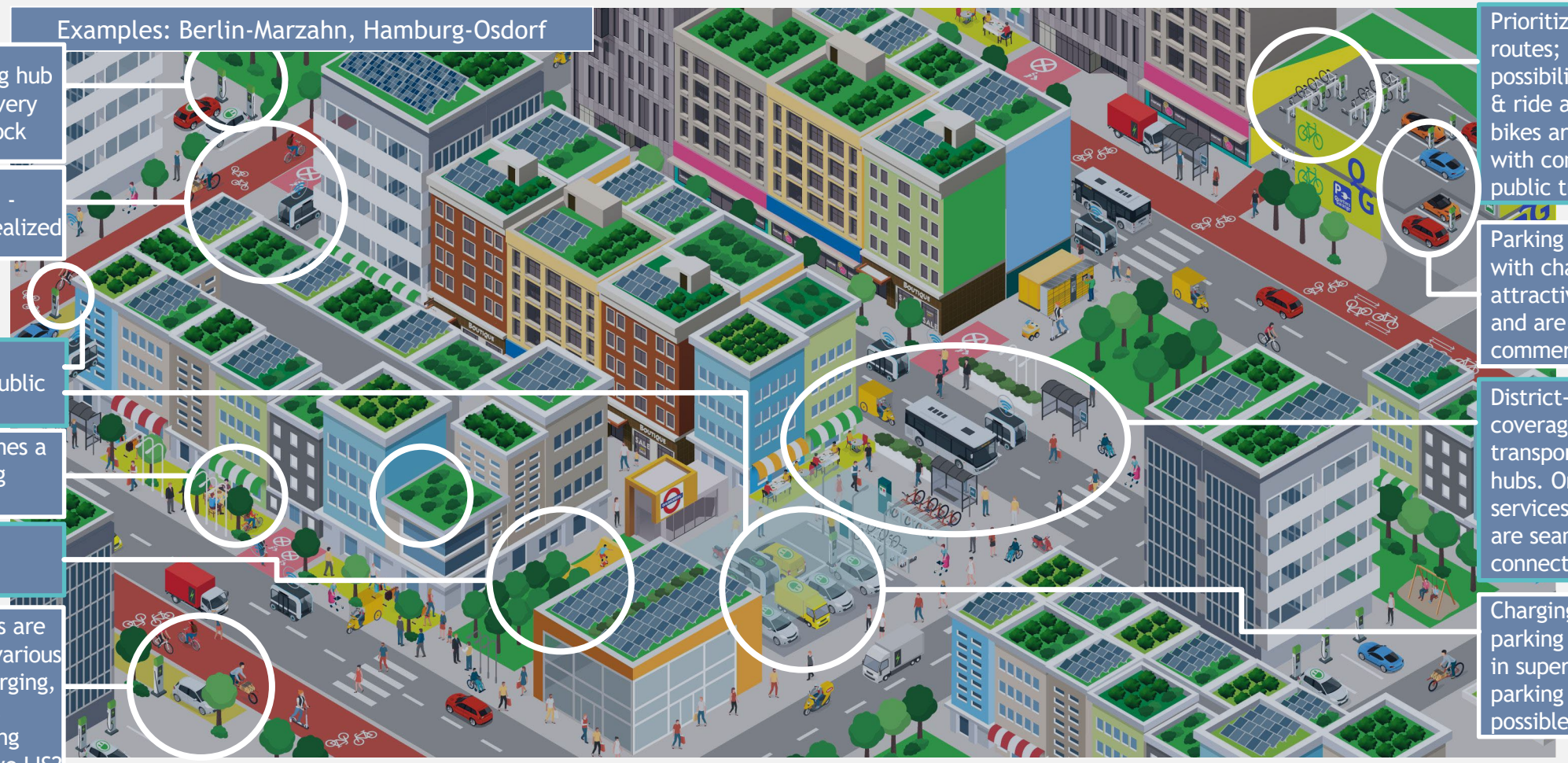
B Mixed use districts (2nd ring)

The mixed use district in 2035 will be a livable district of short distances. It is characterized above all by the gain of additional areas: The construction of centralized garages for residents leads to a new way of use by residents and commuters. Mobility hubs with sharing offers enable comfortable mobility - also for travelling to other districts.

C Residential areas with multi-story housing

The urban quarters in 2035 enable all sustainable and shared forms of mobility, so that space can be saved. The residential area is therefore characterized by a dense charging infrastructure, which is available both in the residential blocks and in public places. At the same time, alternative means of transport are available through prioritized cycling routes, mobility hubs and a dense public transport network. The attractively designed open spaces promote social life.

Examples: Berlin-Marzahn, Hamburg-Osdorf

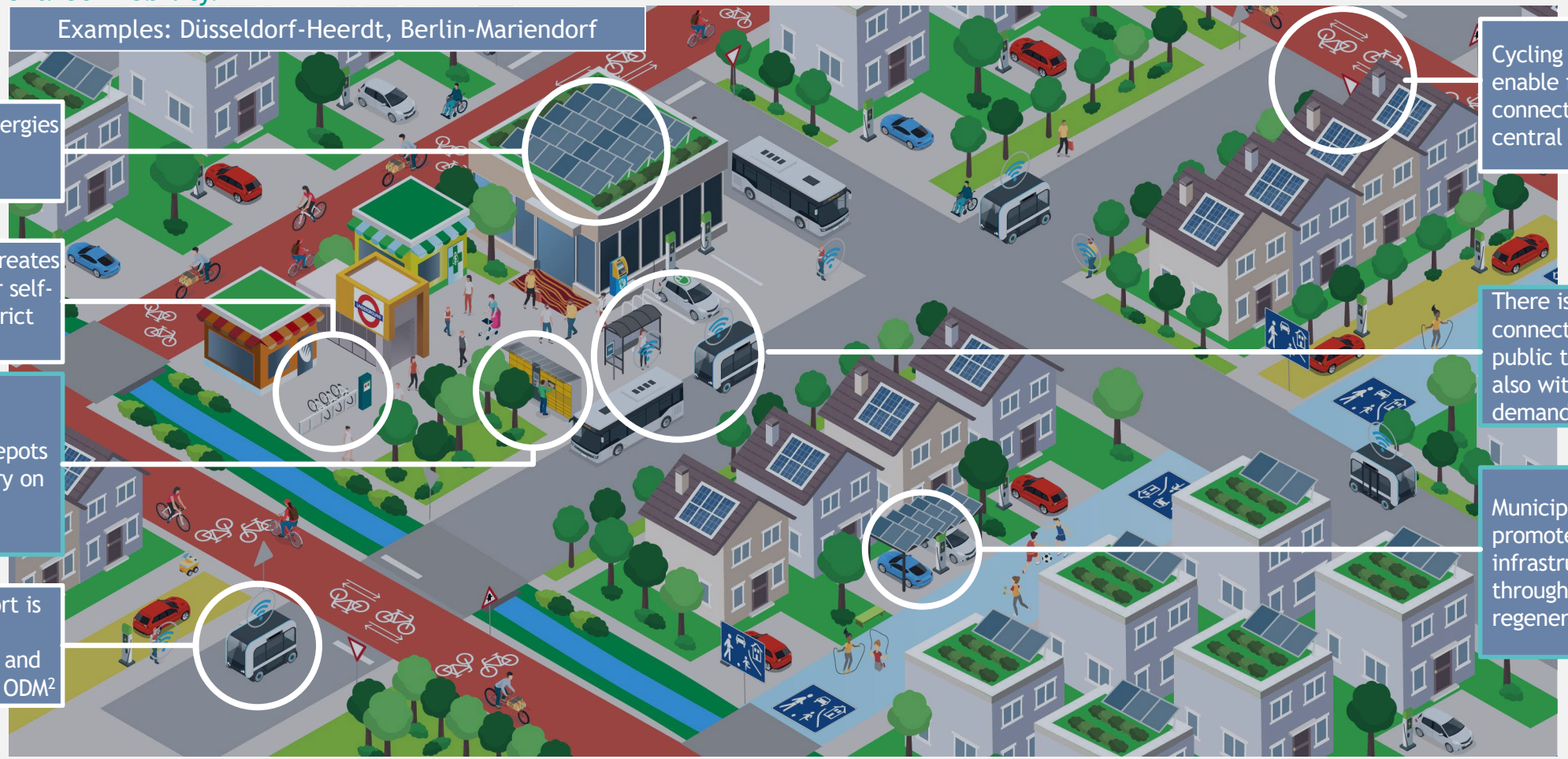


- Quick-charging hub available in every apartment block
- Concept of 15 - minute city realized
- Charging also available in public space
- District becomes a social meeting place
- Free space attractive for citizens
- Parking spaces are intended for various uses (e.g. charging, delivery zone, sharing meeting point) and have LIS2
- Prioritized cycling routes; Parking possibilities for bike & ride and cargo bikes are safe and with connection to public transport
- Parking garages with charging are attractive and safe and are operated commercially
- District-wide coverage of public transport & mobility hubs. On-demand services and pooling are seamlessly connected
- Charging and parking & charging in supermarket parking spaces possible

D Suburban residential areas (terraced houses)

The suburban residential quarters in 2035 provide a good mix of urban offers and open spaces for the production of renewable energies. They have a seamless public transport connection and at the same time a high e-car density. For this purpose, private individuals generate green energy in private areas and thus ensure the required charging infrastructure. At the same time, last mile delivery is made possible by decentralized logistics hubs. The municipality creates incentives for renewable energy production and shared mobility.

Examples: Düsseldorf-Heerdt, Berlin-Mariendorf



Renewable energies are generated locally

Municipality creates framework for self-organized district mobility

Decentralized hubs/micro-depots enable delivery on the last mile

Public transport is organized autonomously and supported by ODM²

Cycling highways enable fast connection to central districts

There is a seamless connection to public transport, also with on-demand offers

Municipality promotes charging infrastructure through regenerative energy

E Industrial parks (outer ring)

The industrial parks optimally connected to public transport in 2035. Freight transport is organized on a sustainable basis, i.e. by rail or by fully electrified fleets. This is made possible by the demand-driven charging infrastructure. Mobility management for employees, e.g. via carpools or joint public transport offers, is organized across all companies. This exploits the maximum synergy effects between the local companies.

- Goods transport is fully electrified incl. specific.
- Fast and safe cycling
- Public transport connection is available
- Mobility for entire area, Parking is organized centrally in conjunction with carpool transport
- Connection mobility facilitates public transport/decentralized parking
- Autonomous ODM² facilitates individual and quarter-internal mobility
- Freight transport is sustainably managed by rail
- Energy production is decentralized and regenerative
- Company vehicles have priority
- Charging offers for employees provided by employers

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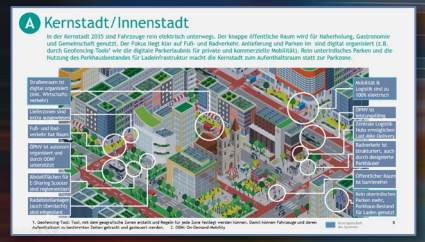

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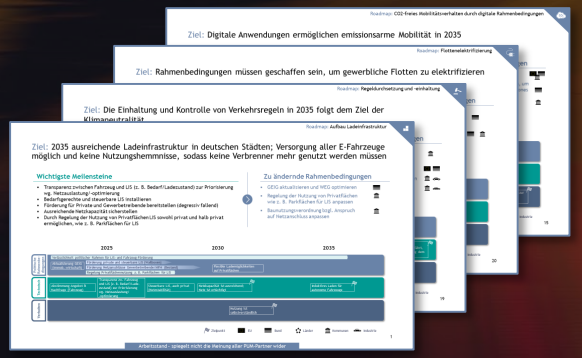

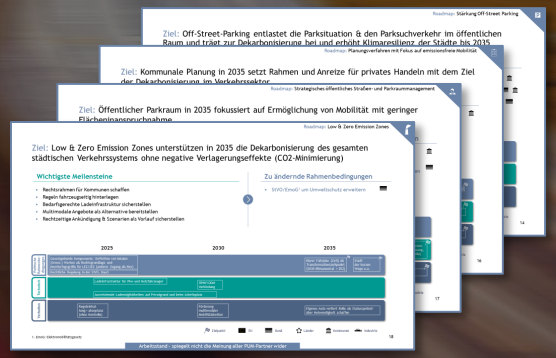

Roadmaps and most important milestones for achieving the objectives by 2035

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Decarbonization of urban mobility:
Parallel procedure for vision and measures roadmap

PUM measures roadmaps and visualization of objectives → Identification of gaps and requirements → Positioning of the PUM in Federal and State Policy and the public, including visions

Measures roadmaps
"Our path to CO_2-free urban mobility"

Roadmap: Design of charging infrastructure

Roadmap: Fleet electrification

Roadmap: Strategic public road and parking management

Roadmap: Digitization for sustainable mobility behavior

Roadmap: Compliance with rules and regulations

Roadmap: Strategic private parking management

Roadmap: Planning procedure with a focus on emission-free mobility

Roadmap: Low & zero emission zones

Objectives
"Our positive vision of urban mobility in 2035"

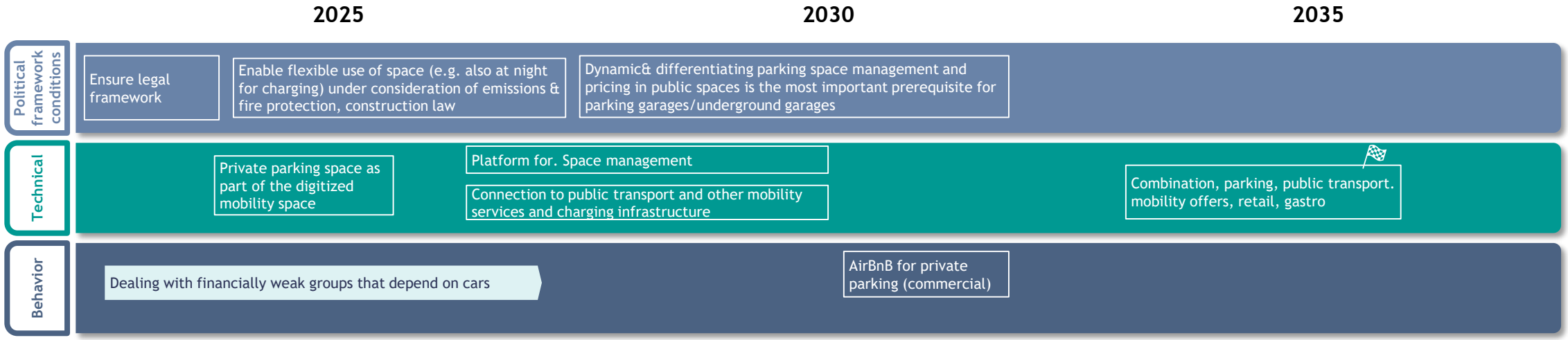
Objective: Off-street parking relieves the parking situation & search traffic in public areas and contributes to decarbonization and increases climate resilience in cities by 2035

Most important milestones

- Introduce dynamic and differentiating pricing, i.e. the price changes depending on the demand-this applies to private and public spaces
- Connection to public transport for easy changeover and other mobility services (e.g. P & R) through digital applications
- Enable flexible use of space on private and commercial premises so that, for example, private individuals can also share/rent out their areas

Framework conditions to be changed

- Modification of development plans via national/federal building regulations
- Modification of federal laws and regulations
- Modification of German Traffic Law



PUM partner projects offer important insights into mobility transformation

Hamburg / FREENOW
- Future taxi

Freie Hansestadt Bremen
- ULaaDS
- Car-sharing action plan
- Environmental zone fleet contract

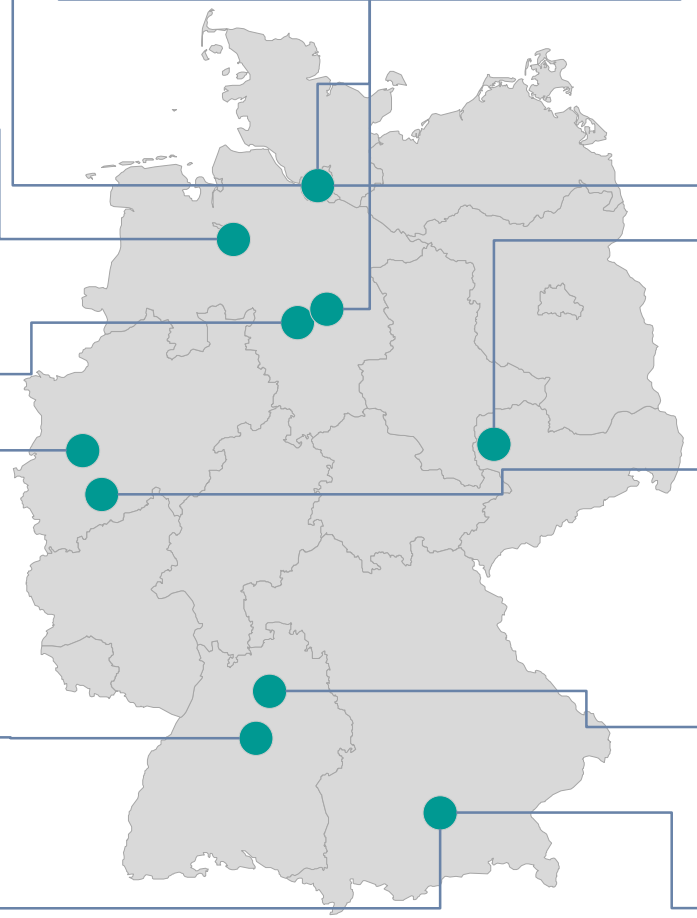
Hannover
- Urban logistics initiative
- E-mobility implementation concept
- SmartCity Partnership with DB

Ford / Stadt Köln
- Geofencing pilot

Mercedes-Benz
- Automated valet parking
- Road safety NL

BMW GROUP / Landeshauptstadt München
- Mobile future Munich

MOIA
- Moia Hamburg/Hanover



Hamburg
- Aut test track. Driving
- GeoNet control units
- SmaLa Hamburg
- Mobility partnerships
- MoU with Carsharer

Stadt Leipzig
- Leipzig moves
- Flexa

Stadt Köln
- ESlot
- Geofencing& blockchain technology
- Digitization of municipal MAP files-DiMAP
- Digital city of the future Cologne
- Automatic construction site registration

STUTTGART
- Emobil Stuttgart region
- Stuttgart drives along
- Roadside Assistance Units

Audi
- Traffic light information online

Rule compliance and enforcement · Design of charging infrastructure · Planning procedure with a focus on emission-free mobility · Strategic public road & parking management

Fleet electrification · CO_2-free behavior due to digital boundary conditions · Low/zero emission zones · Reinforcement of off-street parking

Conclusions:

1. Don‘t think that different organizations have totally different goals

2. You have to respect differences between political an commercial sector, be open for new points of view

3. Define common positions and targets

4. Establish a good culture and spirit of work

5. Strategy is important, but you have to be visible through common projects

Elke Piepenbring

Senior Manager External Affairs Sustainability | Mercedes Benz Group | Germany

Elke Piepenbring is an experienced communicator in the field of sustainability, circular economy and change management. As External Affairs expert for Mercedes Benz Group she is deeply engaged in a wide range of topics related to the future of urban mobility. Elke has more than 15 years of experience in the automobile industry and is particularly passionate about initiating sustainable projects and new partnerships.

Contact: elke.piepenbring@mercedes-benz.com

Wolfgang Forderer

Head of Urban Mobility Department | City of Stuttgart | Germany

Wolfgang Forderer leads the department for urban mobility which is part of a strategic unit for Climate, Mobility and Housing directly assigned to the Mayor of Stuttgart. He is coordinating the overall strategy as well as the activities of the municipal departments. By working for the European Commission, Wolfgang created the European–LatinAmerican Network „Control of urban Mobility“ which was the nucleus of Cities for Mobility. For six years, he was the manager of the Urban Mobility Committee of UCLG and was also involved in many European and national projects, As Wolfgang does most of his daily trips by walking, his heart beats for the recognition of walking as an important mode of transport.

Contact: wolfgang.forderer@stuttgart.de