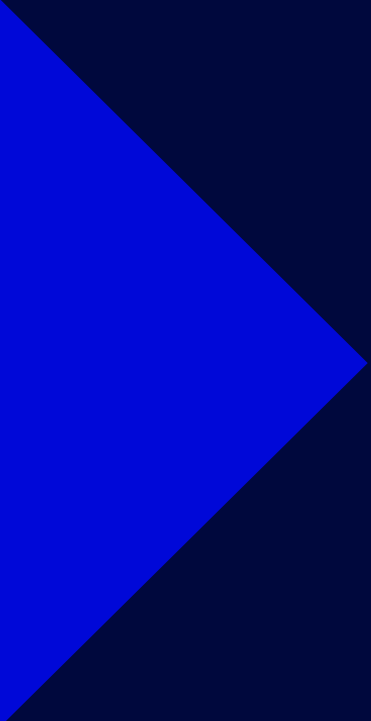ioki

Welcome to ioki
inspiring smart mobility

15. June 2020

Mobility today
and in the future

"People desire to move freely,
and it must be easy to do so"

"Mobility customized just to my needs –whenever I need to go from A to B."

Private ride-hailing ~~is~~ was crowding out public local, bicycle and foot pedestrian traffic.

Quelle: UNSUSTAINABLE? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City; Schaller Consulting, Februar 2017

Mobility of today: Challenges in urban and rural areas

The Status Quo of public transport
In cities traffic jams, massive environmental pollution and parking spaces also pose a problem. At the same time there is a lack of suitable mobility offers.

Individual public transport:
New services and advantages arise

Motorized individual transport

public transport

Individual public transport
demand responsive
transport services
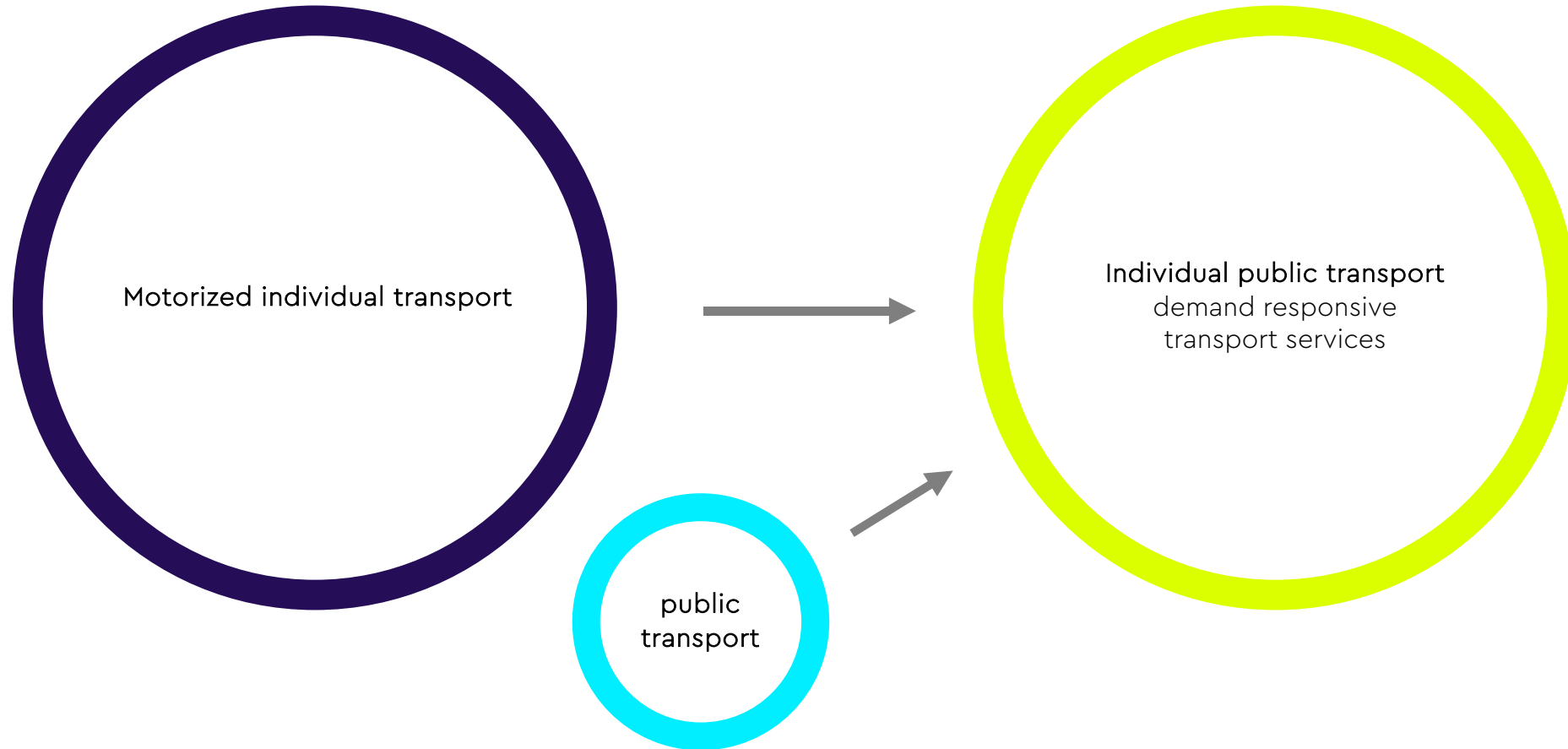
Mobility will drastically change until 2025

Shared rides

Shared rides will become an essential part of mobility in rural and urban areas.

Low-priced mobility

By establishing new mobility services prices will decrease.

Digital travel

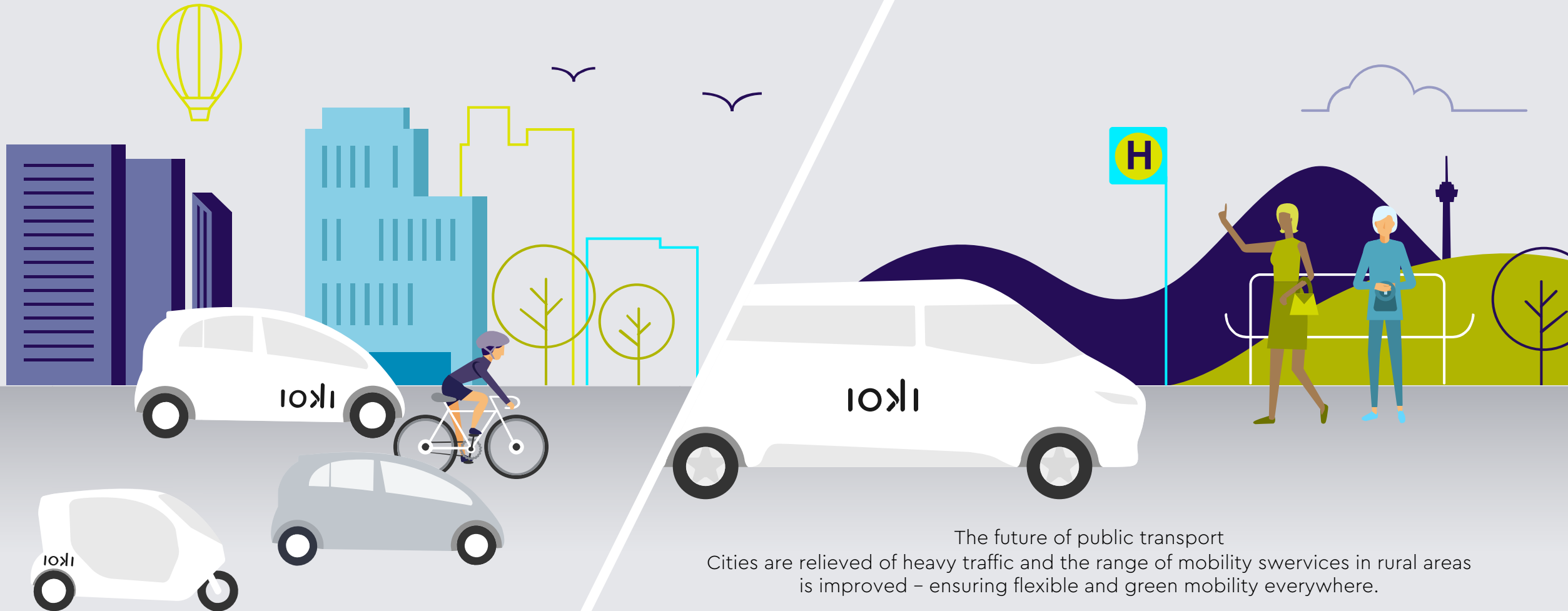Full transparency concerning mobility services.

Autonomous vehicles

The first autonomous vehicles will be in regular service every day.

# Mobility of Tomorrow: Urban and Rural Solutions

The future of public transport
Cities are relieved of heavy traffic and the range of mobility swervices in rural areas
is improved – ensuring flexible and green mobility everywhere.

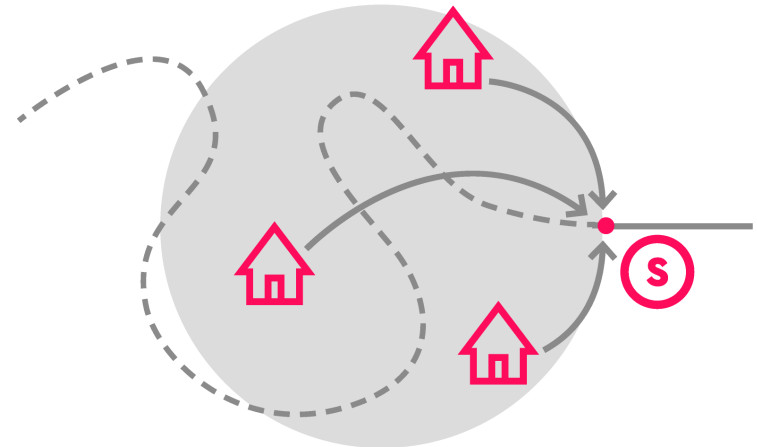# Approaches to Deep Public Transport Integration of On-Demand Shuttles
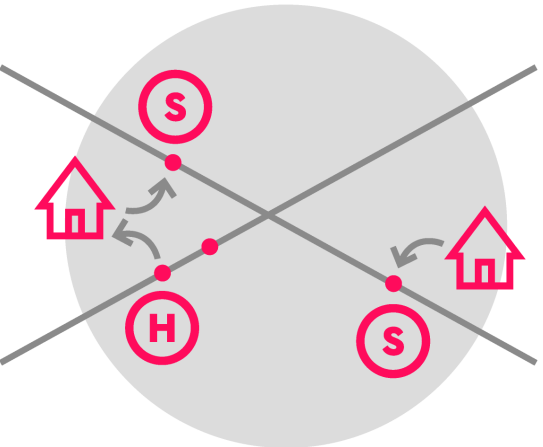
City feeder

Demand-responsive transportation services to connect areas between the existing public transport network
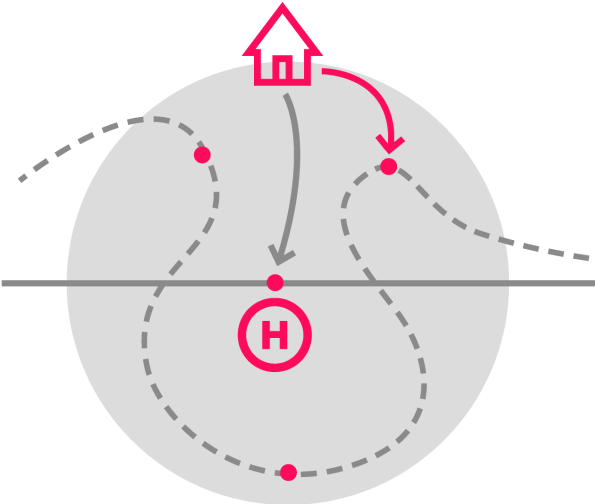
Bus feeder

Building connections with demand-responsive services for longer walking distances (e.g. from door-to-station).

Rural feeder

Replacing line ends of public transport with demand-responsive transport services.

- - - - - Public bus

——— An on-demand service bus to the next public transport station

→ Walking distance to the next public transport station

→ Shuttle-Integration into the public transport system

Our solution is to provide a meaningful supplementation and intelligently integrate it into existing public transport systems.

We create sustainable
Public Transport services.

On-Demand-Service
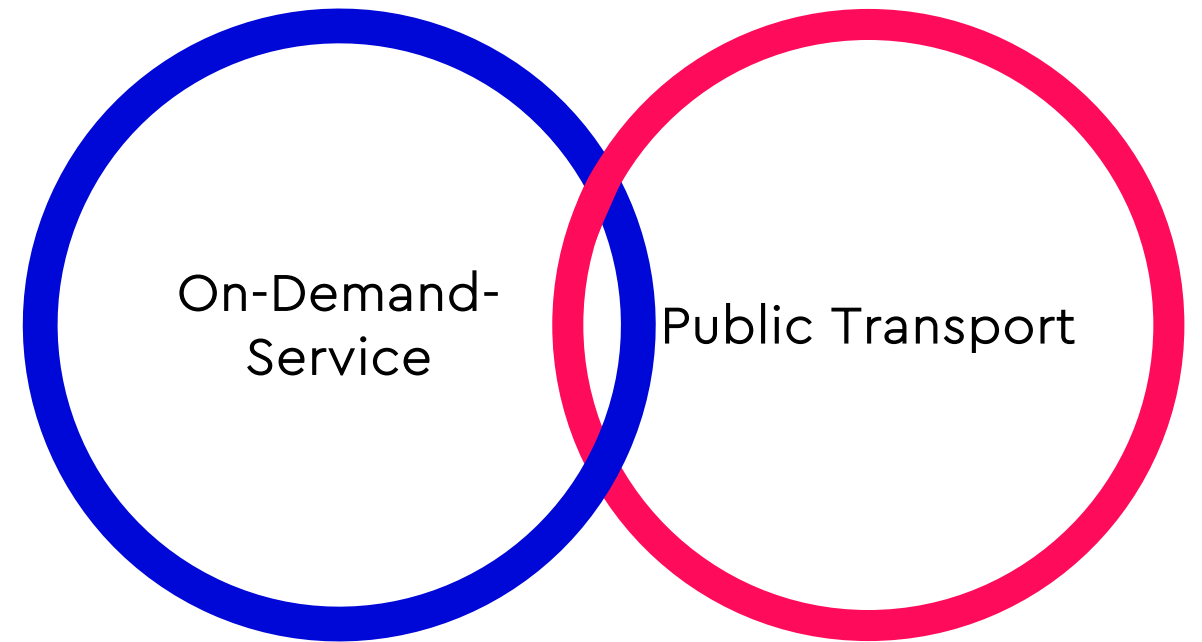
Public Transport

Clever and Integrated Connections
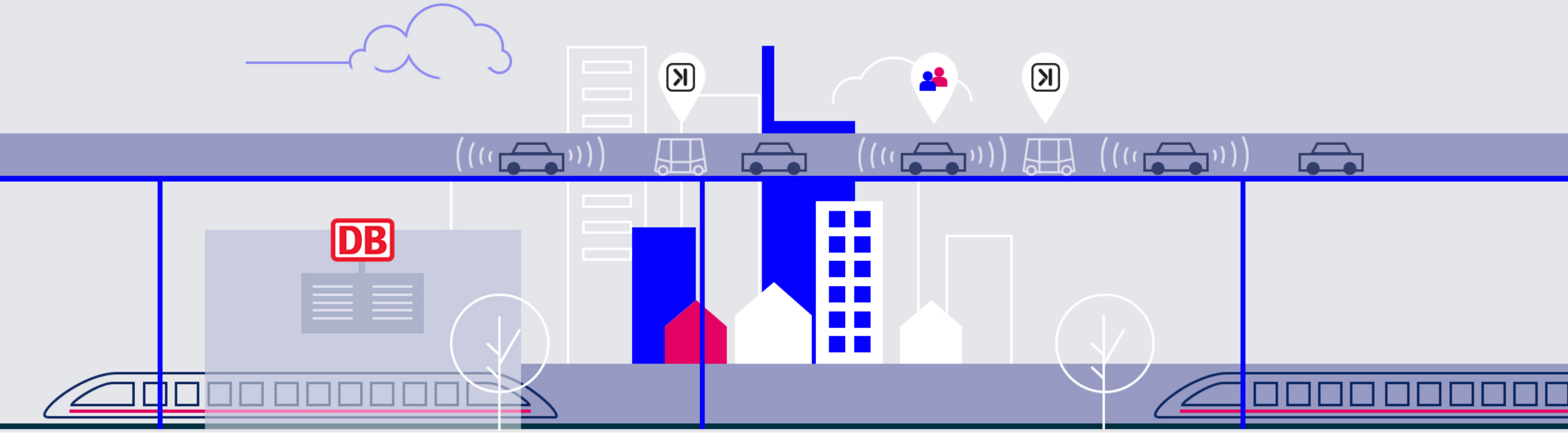
Integration and symbiosis of on-demand and line systems (public transport)

Efficiency

8:30 a.m.   5:30 p.m.

t/d

━━━ Regular
━━━ Integrated on-demand system
━━━ Overall system efficiency
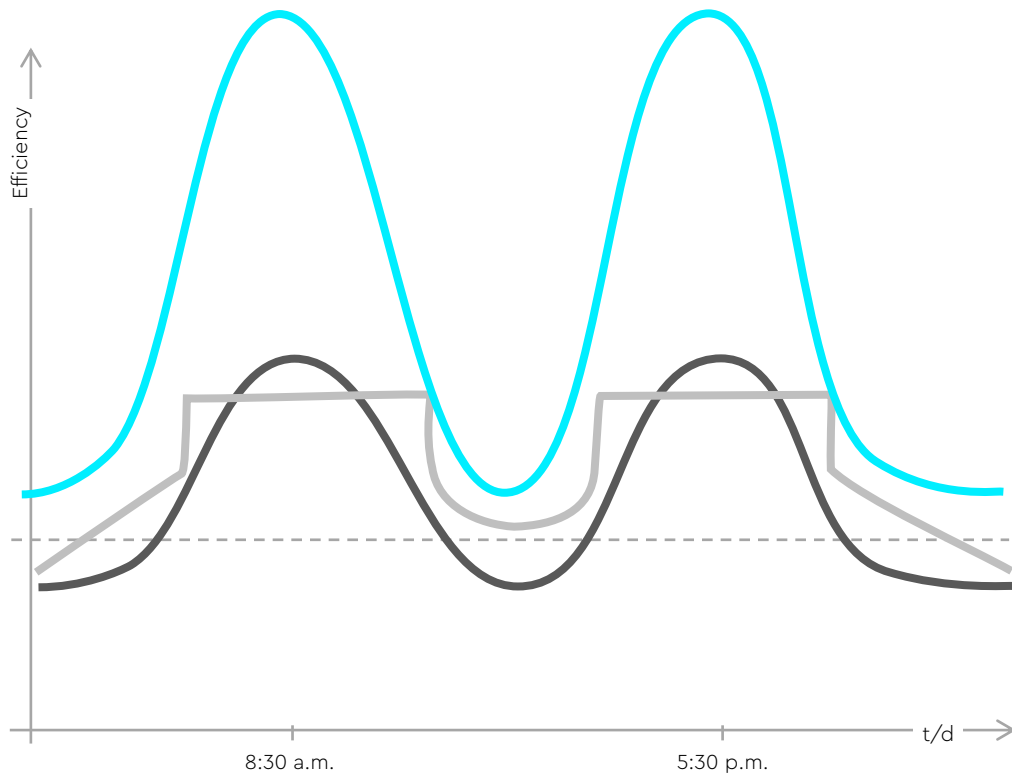
- Intelligent combination and integration of on-demand and line can greatly increase overall efficiency

- Permanent optimization possible through accurate prediction

- Good Practice: ioki Hamburg

We are ioki

Important for the success of
On-demand mobility:
Expertise in traffic planning.

Deutsche Bahn is part of our DNA

12.7 Passengers daily

Over 1 Mio. rail kilometers

Mobility concepts on the road

323 000 employees worldwide

Experts when it comes to public transport

Strategic traffic planning
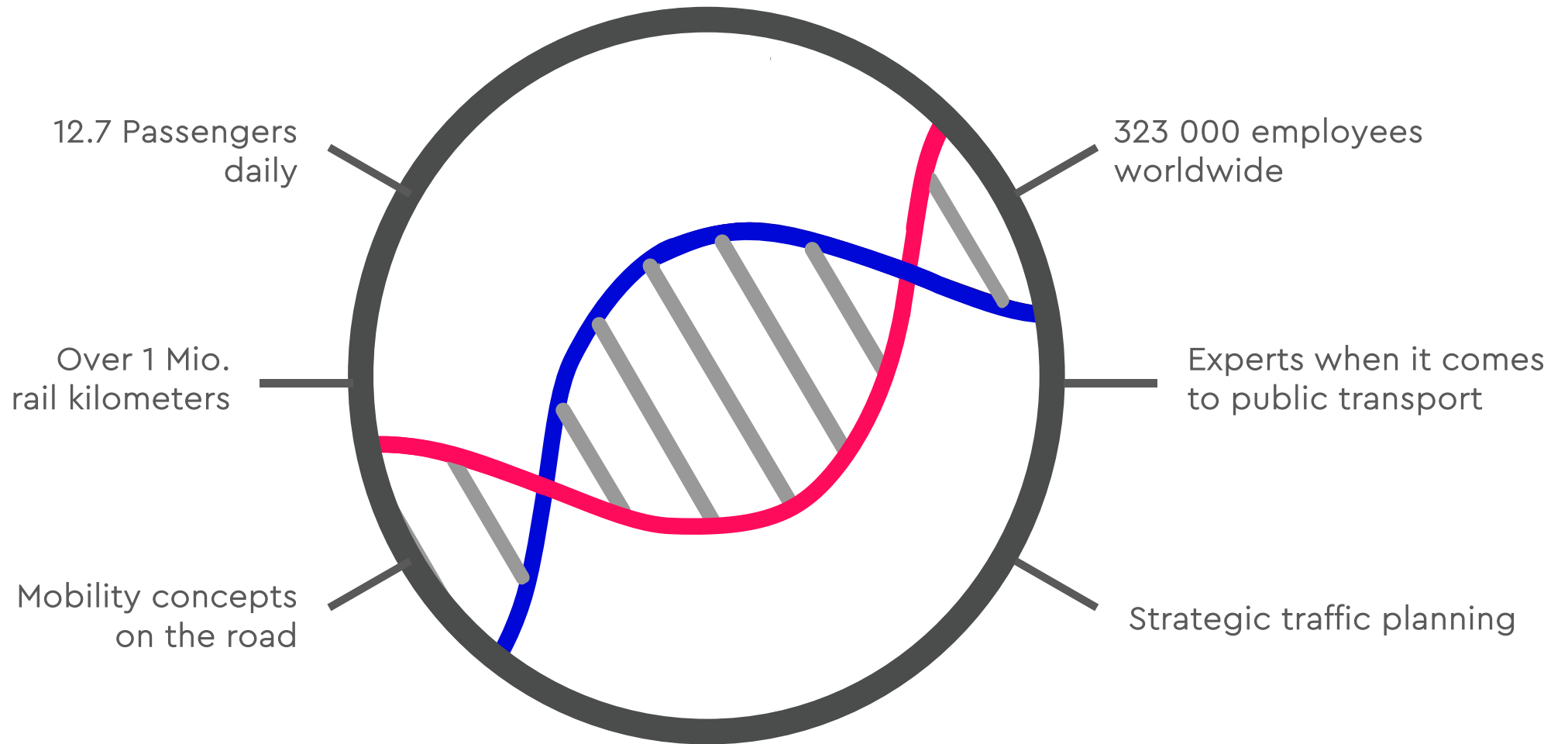
Our holistic mobility concept gets people moving wherever they are

ioʞi
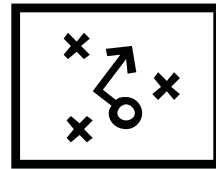
Mobility Analytics
& Consulting

On-Demand-
Plattform und
-Services

Autonomous
driving

Mobility Analytics & Consulting

Why Mobility Analytics?

1.
Mobility behavior

Detailed knowledge of the mobility behavior of the population

2.
Reachability

Detection of areas with accessibility deficits in different time windows
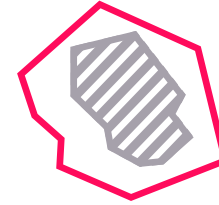
3.
Areas predestined for new mobility offers

Knowledge of ideal areas for efficient public transport-integrated operations of new forms of mobility

4.
Product design

Individually to the region tailored product design

5.
Economics

Overview of costs for various differing scenarios for public transport operations

6.
Public transportation systems

Transparency regarding operation and demand in existing public transport systems

Good planning is half the battle
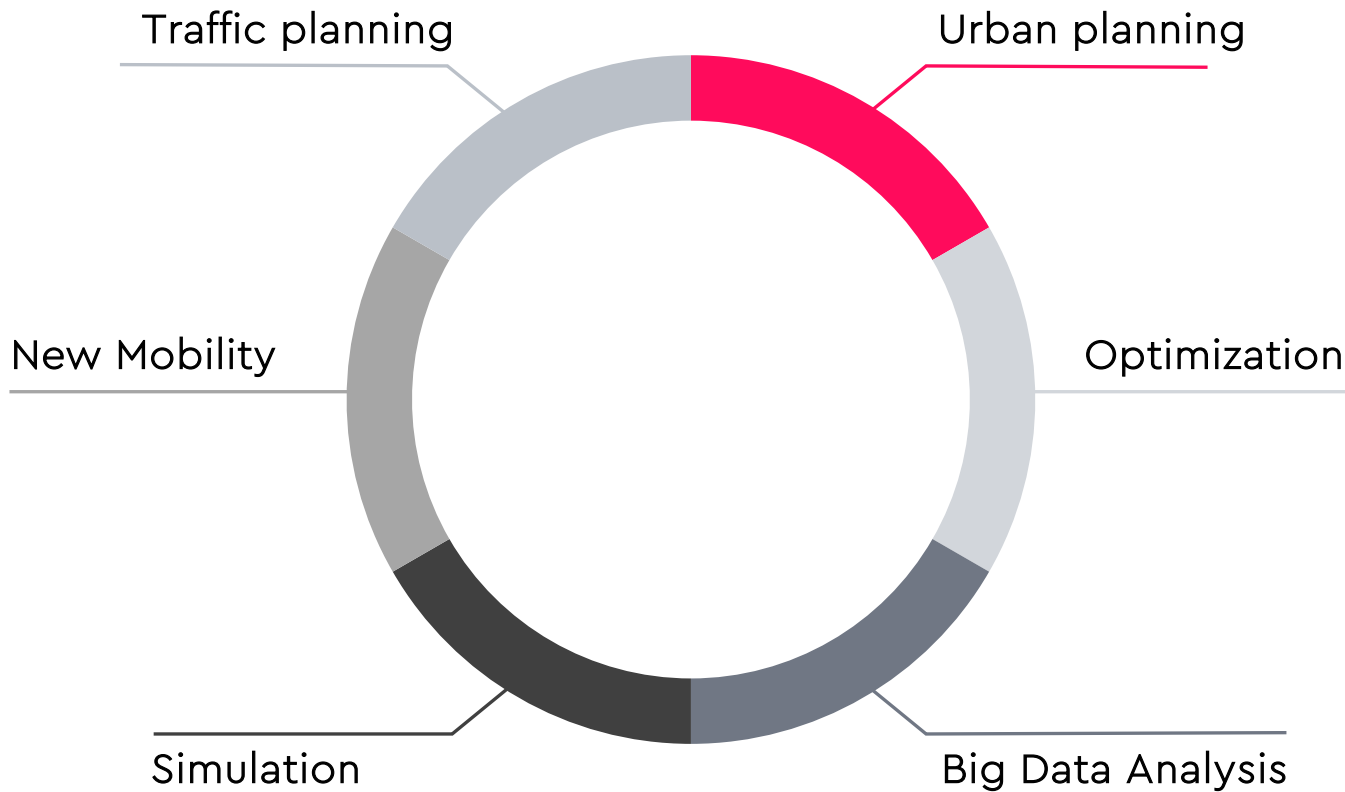ioki Mobility Analytics & Consulting portfolio at a glance

Traffic planning

Urban planning

New Mobility

Optimization

Simulation

Big Data Analysis

Our portfolio for your needs

Analysis of public transport systems

- Initial data-based analysis of your region
- Simulation of mobility demand
- Accessibility analysis of public transport
- Analysis of your traffic data
- Visualization of your traffic data

Intelligent solutions for public transport systems

- System comparison between area- and line-based services
- Modal split evaluation of changed public transport offers
- Ecological evaluation of new public transport offers
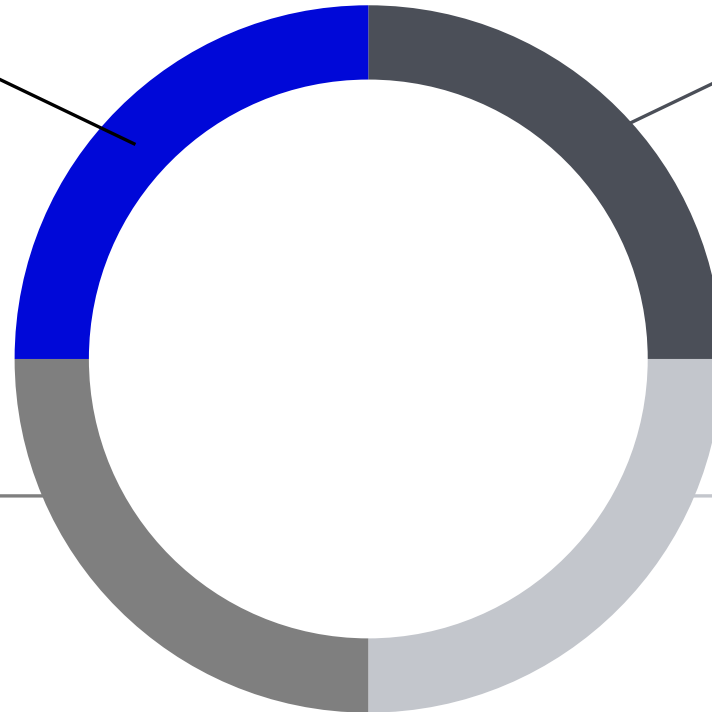
Planning of new mobility offers

- Identification of sensible operating areas
- Simulation of operational on-demand service
- Derive economics of on-demand traffic
- Planning of virtual stops
- Planning of micromobility offers

Planning of urban and regional infrastructure

- Location analysis
- Location optimization

Our Approach:

Comprehensive consulting and planning services in the areas of public transport, new mobility offers and infrastructure

DRT-platform

ioki On-demand platform

The Passenger App is very easy to
use and tailored to customer needs.

It has got an easy booking and
payment process, is integratable in
existing public transport systems
and customizable to one's
personal needs

The driver App is responsive
and driver-centric

It has got an integrated turn
by turn navigation system,
provides
fast reactions to ride requests
and
automations of procedures

ioki On-demand platform

The operator tool provides a clear and detailed operational planning, efficient control of the On-demand fleet and **Real-time monitoring**

The Smart Backend platform is easily adaptable to individual needs with intelligent pooling and routing. Our algorithm calculates the optimum vehicle utilisation
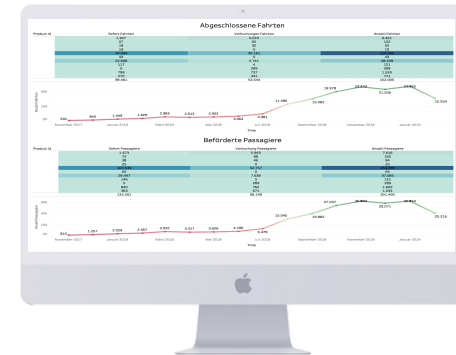
The Business Intelligence toolset offers divers reports ranging from KPI, via Revenue and Product to Operations reports

Autonomous driving

First German Autonomous Shuttle
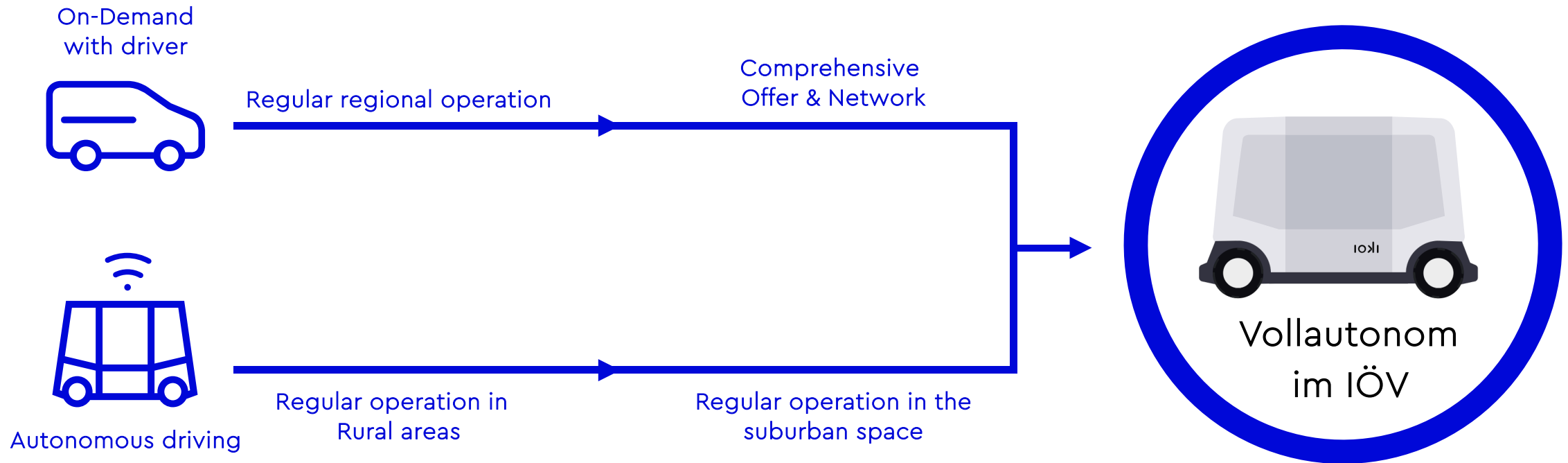
On-Demand
with driver

Regular regional operation

Comprehensive
Offer & Network

Regular operation in
Rural areas

Regular operation in the
suburban space

Autonomous driving

Vollautonom
im IÖV

ioki Autonomous Ready On-Demand Platform

ioki passenger app

Journey request

Operation monitoring Information

Intelligent backend
(Routing)

Autonomous control room

Passenger and route information

Telemetry and geo-information

Route information

Steward-App
(in the vehicle)

Passenger validation

Autonomous
Fleet vehicles
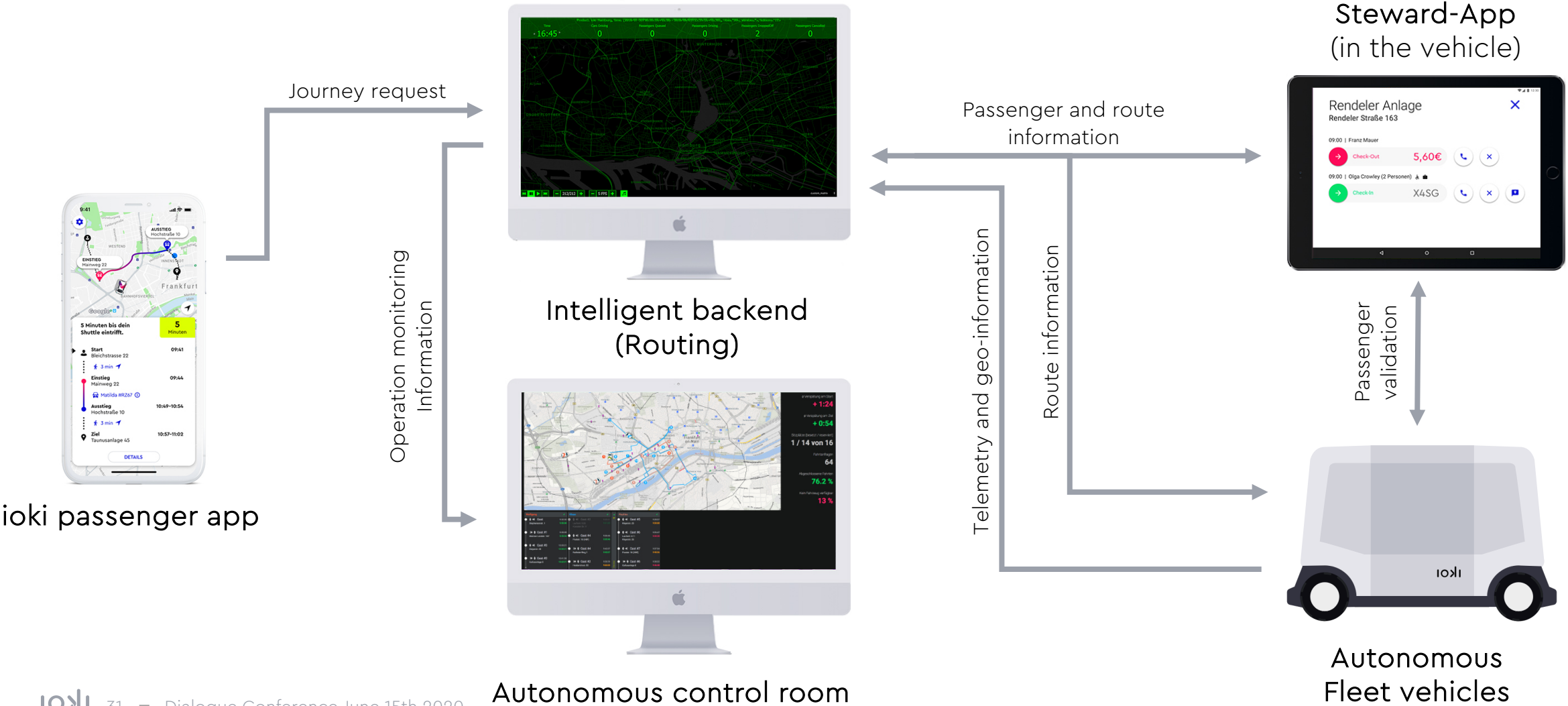
Case Study

ioki Hamburg in Kooperation mit der VHH

Mobility Analytics
Analysis of requirements and whitespots for optimal project planning

Project start
Project start in Lurup and Osdorf , barrier-free electric vehicles, 24/7 service

Introduction of comfort surcharge with the result of a increase of the service qualityto 93%

Extension of operating area to Billbrook

German Mobility Award
Winning the German Mobility Award

2018

2019

2020

First survey
ioki Hamburg Study

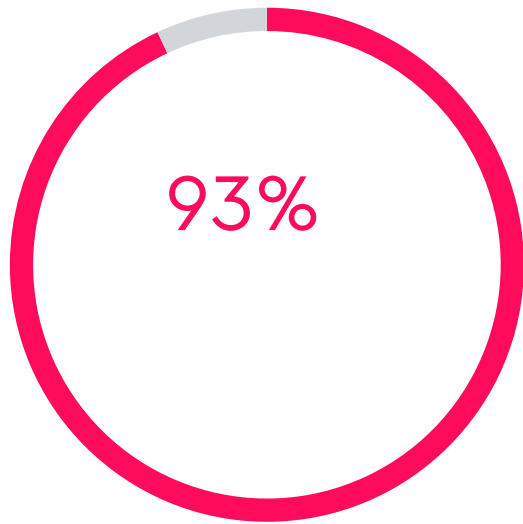**Second survey**
ioki Hamburg Study

ioki Hamburg in cooperation with the VHH

- Electric fleet
- 24/7
- More than **320.000 passengers**
- **More than 60%** of the inhabitants of the districts of the service area have **downloaded the ioki app**
- Simplifies access to public transport for people with **reduced mobility**

93%

Reliable and Safe

- 93% Quality of Service rate
- Independent Survey reveals Service regarded as
- **Reliable** inter alia by handicaped paasengers
- **Safe** - especially by women
- **25%** of the users would have used a privat vehicle

Loyality & Safety

- More than 87% recurring users
- less decrease of demand by corona than in bus operations

87,3%
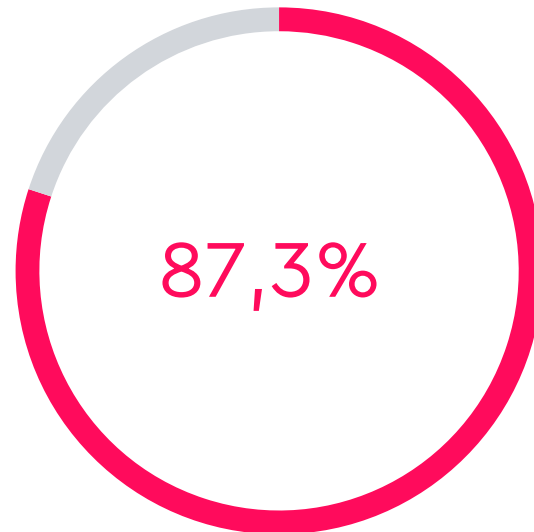
PT Feeder

- **More than 50 %** of all passengers use ioki Hamburg to **reach a feeder public transport station**
- The Service **is fully integrated** into the regional HVV pricing system
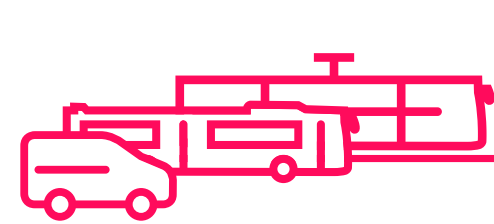- **Public Transport** connection feature

Summary

ioki a Public Transport specialist
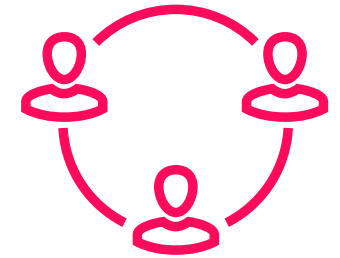## Key functions of the ioki platform

- Scheduling tool for planning vehicle circuits and lines

- Real adhoc and pre-booking functionality

- Real-time data display of Public Transport services directly displayed within the customer App for each stop within the operating area

- Arrival based search

- Public Transport Ticket integration

- Mix of schedule and linebased operations and On-Demand operations in one area possible

- Timetable integration via convenient import function, e.g. for ALT traffic

- Highly flexible price adapter (prices can be adjusted automatically according to time of day)

- Anonymous contact between driver and customer before starting the journey

- Business Intelligence with divers KPI, Product and Operations reports

- Barrier-free customer App (e.g. contrast, VoiceOver)

- Telephone booking

Theses

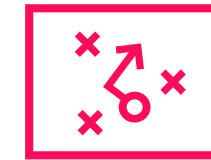No1 - Ridepooling should be an integral part of public transport

No2 - Data-based analysis of the entire public transport network for optimal planning

No3 - Agile traffic planning under public responsibility

Interaction with public transport

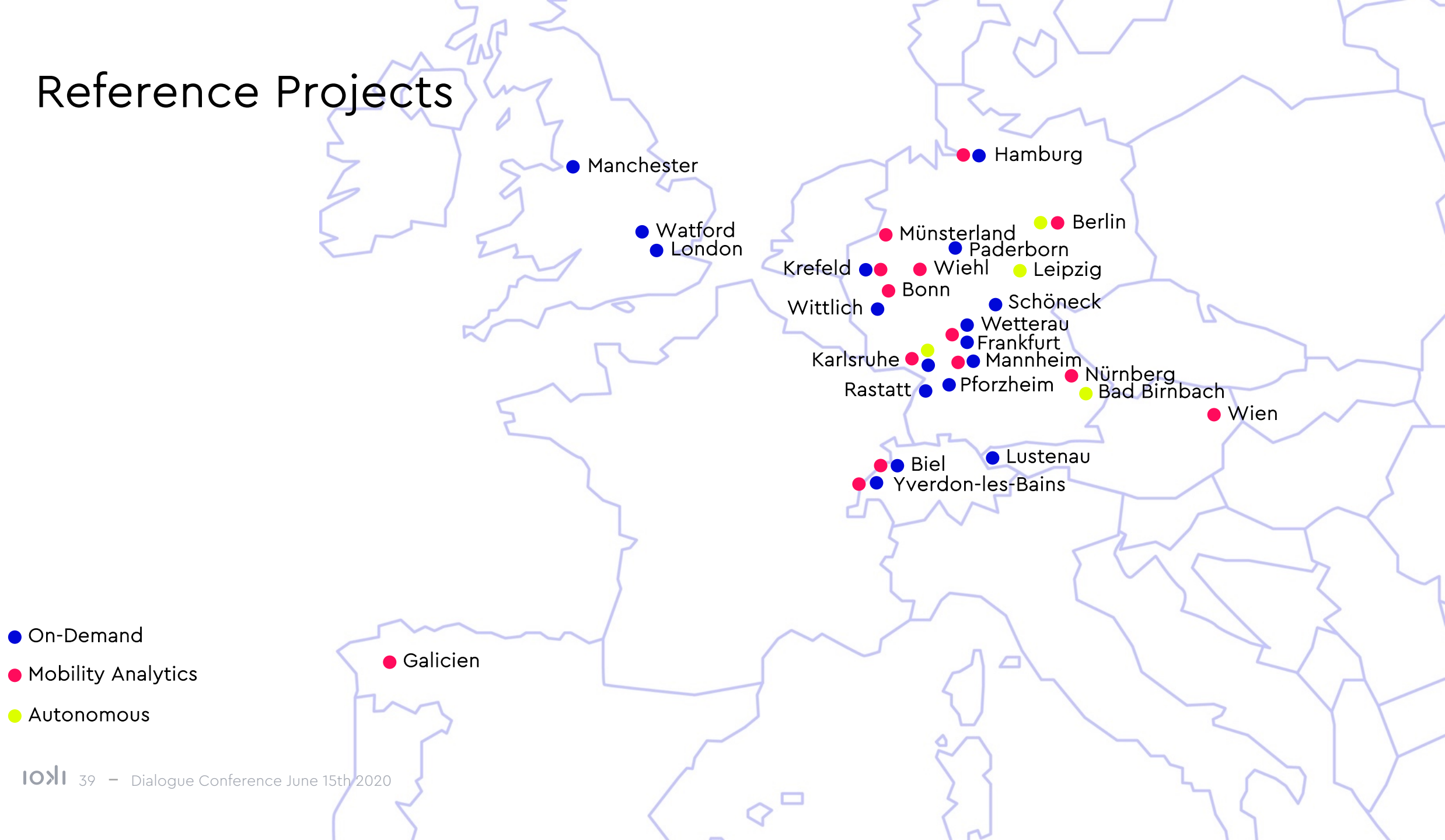Ridepooling fills gaps

Using existing data correctly

Analyzing potentials
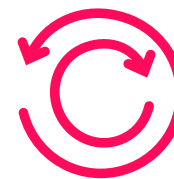
Fast cycles

Digitisation

Mobility mix

Reference Projects

Manchester

Watford
London

Hamburg

Münsterland

Berlin

Paderborn

Krefeld   Wiehl   Leipzig

Bonn

Wittlich   Schöneck

Wetterau

Frankfurt

Karlsruhe   Mannheim

Nürnberg

Rastatt   Pforzheim   Bad Birnbach

Wien

Biel   Lustenau

Yverdon-les-Bains

● On-Demand

● Mobility Analytics

● Autonomous

● Galicien

Thank You