How can the city reduce traffic and,
with it, also noise and environmental pollution?
How can we enable sustainable mobility?

SMART WAY

CHALLENGE / HOW MIGHT WE?

Reconciling the needs of the city and the citizens in traffic planning.

The city wants
- to enable environmentally-friendly mobility.
- to be capable of acting in traffic management.
- to create transparency in air pollution.
- to drive the economy and local offerings

The road users want
- unlimited mobility and to be able to reach places easily.
- to have access to all mobility offerings.
- to connect mobility with sustainability.

- **How can we use the city data to create environmentally-friendly mobility for the citizens?**
- **How can we integrate efficiency and environmental aspects into the mobility of the citizens?**
- **How can we influence traffic in an environmentally-oriented manner and in real-time?**

BENEFIT

The city receives action-relevant data.

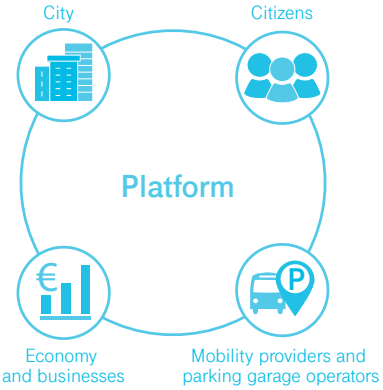
The system provides the **traffic planner and the city planner** with important information such as: Traffic flows, capacity utilization, passenger volume, mobility behavior in neighborhoods, potential for route management, citizen preferences, congestion information, analyses and forecasts.

The system supports the **environmental authority** with monitoring the city's environmental situation: It measures traffic and environmental conditions in real-time in neighborhoods.

The system provides **city marketing** with analysis results for the promotion and incentive of environmentally-friendly behavior: Environmental programs can be set up for citizens and companies, the objectives of the community are promoted.

THE SOLUTION APPROACH

Data platform as management and business model



Data platform
All traffic and environment-relevant data
All city mobility offerings
Intelligent signaling and traffic influence
Analysis and forecast of data for optimization.

Multi-modal routing
Individual environmentally-friendly mobility of citizens
Inclusion of environmental data and real-time traffic data Calculation of alternative ecological route
Ecopoint account and individual footprint

Business model
Integrative business model as ecosystem of the city
Incentivizing sustainability through local partners
Inter-modal ticketing with the mobility service providers

BENEFIT

The citizen is guided towards sustainable and relaxed mobility.

Intelligent route planner
Based on an individual profile with preferences and booked services (e.g. car sharing), the SMART WAY App calculates the optimal route to a selected destination for the user. The app calculates the most sustainable, the fastest and the personally optimized route (e.g. car and then public transport). The user also receives information on weather, air quality, traffic situation and current position.

Real-time navigation
The intelligent digital assistant accompanies users on their journey. They can use the application to book travel tickets and parking spaces. The SMART WAY App is also used to register for mobility services. The assistant supports them in changing the mobility offer and they automatically collect ecopoints in the background.

Ecological balance and points system
User can then rate the route covered. In their personal life cycle assessment, they see offers from local traders and municipal institutions. The more environmentally friendly their mobility, the more points they receive. They can redeem points they have collected, book a bonus or see how many points they still need to earn for a bonus.

SMART WAY
FINDINGS AND NEXT STEPS

FINDINGS FROM CO-CREATION

By knowing the exact situation and the relevant influencing variables, the city becomes more flexible in the design of urban mobility. Therefore, beyond the legally prescribed measurement values, further real-time indicators are needed which are as granular and as up-to-date as possible.

In interviews, citizens expressed a high degree of willingness to behave in an environmentally conscious manner, but also that they often lack the information to align their own behavior accordingly.

This is a central requirement for the preparation of and access to information: From the information on the current situation, it must be possible to jump seamlessly to corresponding environmentally compatible mobility offers.

OUTLOOK AND NEXT STEPS

A pilot project derived from the prototype pursues the approach of deriving more reliable statements on noise mapping from traffic volume data in the city using a calculation model. The advantages of this approach compared to existing noise maps are the higher detail resolution – in terms of both space and time – and the additional focus on noise emission in particularly sensitive locations such as hospitals, day-care centers and schools. Cities such as Pforzheim, which collaborated on the prototype, are supporting the pilot with resources and urban data, providing regular feedback on the project direction and testing the solution.

»Co-innovation provided new ideas and thought-provoking impulses, as well as a comprehensive learning effect.«

PFORZHEIM