



#### DLR at a glance

DLR is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space programme. DLR is also the umbrella organisation for the nation's largest project management agency.

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## GIP2China. Traffic and Environment Monitoring System

# GIP2China Project

German Innovation Package.

Traffic and Environment-Monitoring-System (TEMSys) goes to China

## Motivation

In the major cities of China, millions of new vehicles are now causing increasing traffic congestion, air pollution and a shortage of parking space. Similar challenges have also been faced by other large cities. In recent years DLR has carried out various research projects in Europe and China, which have produced the "German Innovation Package - Traffic and Environment Monitoring System (TEMSys)". The first implementation of TEMSys in a new Intelligent Transportation System (ITS) in the city of Huainan in the Anhui province (China), financed by a credit from the KfW-Bank. The Application includes an Integrated Monitoring Platform for the traffic operations control center in order to gain comprehensive knowledge of environment-friendly and sustainable urban traffic management. The GIP2China project would like to present TEMSys in other cities in China.

## Objectives

### Contribution to social challenges

- energy-efficient, environmentally-oriented, low-emission mobility
- using new technologies and intelligent transport and mobility systems

### Distribution and marketing of GIP (TEMSys)

- system solutions for traffic and environment in China
- TEMSys adaptations & extensions for other users, cities and provinces
- promotion of research services and results from Germany

### Expand the network

- find cooperation partners in industry, research and cities
- joint project development and implementation
- joint marketing of application system solutions

## Approach

Philosophy: from research to application



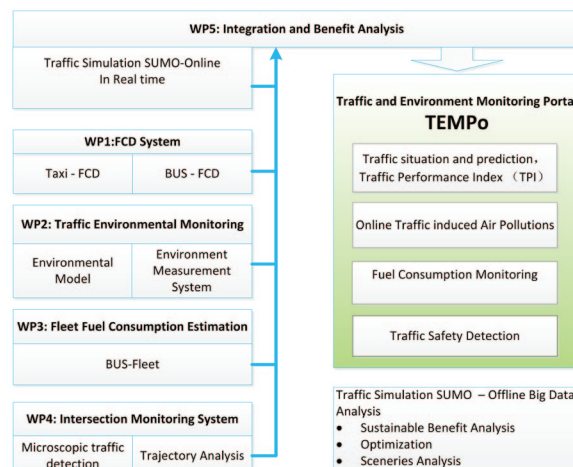
## TEMSys Technology

### Online: Real-time, green & safe Traffic Management

- traffic situation and prediction
- traffic environment monitoring (NOx, CO, SO2, PM2.5)
- fleet - fuel consumption optimization
- intersection monitoring (traffic safety and environment)

### Offline: Obtaining a long-term understanding of the traffic and environment

- sustainable benefit analysis using traffic simulation (SUMO <http://sumo.dlr.de>)
- szenario analysis: Impact on traffic and the environment,
- before and after analysis of traffic management measures
- support for decision-makers for environmentally friendly traffic management



## Cities of interest

Chengdu	14 mio. inhabitants
Hefei	7,6 mio. inhabitants
Bengbu	3,8 mio. inhabitants
Xuancheng	2,5 mio. inhabitants



## Our partners

T · Systems ·



T-Systems P.R. China Ltd.  
Beijing, China

EU Project Innovation  
Center (EUPIC)  
Chengdu, China



Fraunhofer Institute for  
Open Communication  
Systems (FOKUS)  
Berlin, Germany

Anhui Keli Information  
Industry CO. Ltd.  
Anhui, China

## Project Facts

Duration: 02/2017 – 08/2018

Coordinator: German Aerospace Center, Institute of  
Transportation Systems, Berlin, Germany

Website: [www.itsforasia.com/GIP2China](http://www.itsforasia.com/GIP2China)