



---

Integrated  
Traffic Management  
Lower Saxony

---



Niedersachsen

## Impact Analysis

on of environmental data

assessment of traffic  
incident measures

reduction of emission savings

reduction of congestion loss reduction

potential regarding safety

traffic detection

traffic density measurement

classification

classification

management

## Detection Systems



### Main Objectives

Today high quality, reliable and sustainable services suffer from immature traffic data available to service providers and traffic managers. In order to cope with their requirements a new generation and approach for traffic data processing is being developed that combines network-oriented data acquisition, intelligent multi-source data fusion and seamless service provision in a scalable and customizable manner.

The approach allows versatile utilisation of regional traffic and mobility content for as different applications as traffic management and control, fleet management and mobility information services.

-  Innovative traffic data collection by means of CityFCD and data fusion with existing detection systems as well as the application for upcoming major events (Football World Cup)
-  Traffic information and mobility services including intermodal change information
-  Disposition support for fleet management allows commercial logistic services in compliance with urban development plans
-  Dynamic traffic management activating control measures ranging from intersection level to state-wide traffic distribution
-  Citizen-oriented mobility information services available through internet and broadcasting media (DAB, TMC)
-  Ecologic impact derives from equal traffic distribution, constant flow control and application of innovative emission reduction technologies and respective urban legislation



**Niedersachsen**

## Traffic Management & Control

- activation/deactivation of control measures
- analysis of roadside Level of Service
- LOS-oriented control optimisation
- adaptive signalling with variable message signs
- remote monitoring of main road sections

## Commercial Transport Services

- optimised disposition with actual traffic state
- dynamic fleet management support
- adaption of city logistics to current network control
- public transport optimisation
- incident indication for service providers

## Mobility Services

- public information services
- RDS-TMC data services for navi systems
- personalised location based services
- traffic state, routing and congestion warnings
- intermodal support through time table provision

## Impact Analysis

- aggregation of environmental data
- impact assessment of traffic management measures
- quantification of emission savings
- assessment of congestion loss reduction
- impact potential regarding safety indicators

## Data Fusion

- scheduling and timetable information
- travel time analysis and statistics
- dynamic traffic data generation
- optimised fleet control

- node capacity measurement
- inductive loop based classification
- daily and weekly profile assessment
- indicators of traffic characteristics

## Public Transport

## Traffic Content

- detection and acquisition of dynamic traffic data
- network-wide coverage of both metropolitan areas and highways operated with dedicated telematic units and commercial smart phones

## Floating Car Data


- incident detection
- traffic density measurement
- OD-tracing
- vehicle classification enforcement


## Video Detection Systems





**European transport and environment policies in accordance with regional development strategies are major drivers for ITS technological innovations reaching from vehicle design and operation to traffic control and intelligent traffic management:**

 an EU-wide e-safety initiative is addressing the targets from the whitebook transport policy concerning safety and security - IVN contributes to solving the issue with intelligent prognosis based congestion management on a large scale through network balancing as well as real-time information providing

 on a European level air pollution regulation are being updated implementing Kyoto protocol and best practices are currently being analysed for fulfillment on regional level - IVN addresses the issue with integration of public transport in the overall traffic management strategy: public transport services are generating real-time traffic data within the road network of the metropolitan area contributing to preemptive management and control and thus benefiting from reduced congestion delays and fuel consumption

 within the framework of Galileo programme a new generation of logistics management systems particularly for city logistics is under development: Hanover is a leading city for advanced logistics solution and its integration in local transport policies. IVN's intelligent traffic management implements dedicated route guidance for commercial services, which is in compliance with traffic, environmental and economic requirements.



**With these core issues being addressed by the consortium of IVN, the Federal State Ministry for Economics supports a flagship project, providing technological advanced solutions and best practice for implementation to the public.**



## cooperation partners



Signalbau Huber GmbH  
Klaus Graze  
Rotenburgstrasse 18  
D-30659 Hannover  
Phone: +49 (0)30 924 039 10  
e-mail: klaus.graze@signalbau-  
huber.de  
www.signalbau-huber.de

For more than fifty years, Signalbau Huber has been one of the most successful suppliers in traffic control and management. The company's long-time know-how facilitates the provision of optimal solutions for every traffic management requirement. Since 2001, Signalbau Huber has been active in the safety technology sector.



Fraunhofer IPK  
Werner Schönewolf  
Pascalstrasse 8 - 9  
D-10587 Berlin  
Phone: +49 (0)30 39006 145  
e-mail: schoenewolf@ipk.fhg.de  
www.fraunhofer.de

The Fraunhofer-Gesellschaft undertakes applied research of direct utility to private and public enterprise and of wide benefit to society. The Fraunhofer-Gesellschaft maintains roughly 80 research units, including 58 Fraunhofer Institutes, at over 40 different locations throughout Germany.



gedas Deutschland GmbH  
Ralf Willenbrock  
Pascalstrasse 11  
D-10587 Berlin  
Phone: +49 (0)30 3997 2665  
e-mail: ralf.willenbrock@gedas.de  
www.gedas.de

gedas is a global information technology service provider with strong business process expertise for selected market segments. With its unique brand of full service solutions, gedas has assumed a leading position in the automotive and manufacturing industries and in the field of logistics processes.



move Entwicklungs-, Infrastruktur  
und Servicegesellschaft mbH  
Erhard Klein  
Friedrich-Lehner-Weg 9  
D-30167 Hannover  
Phone: +49 (0)511 3535 4232  
e-mail: erhard.klein@move-info.de  
www.move-info.de

The traffic management center Move established by Lower Saxony and the Hanover region attends to the national and private-sector tasks of traffic guidance and traffic information. The benefits are the protection and extension of the business location as well as the economic benefits due to reduction of congestions and accidents.



üstra Hannoversche  
Verkehrsbetriebe AG  
Manfred Schmidt  
Am Hohen Ufer 6  
D-30159 Hannover  
Phone: +49 (0)511 1668- 2462  
manfred.schmidt@uestra.de  
www.uestra.de

Üstra pertains to the top group of German public transport operators. With 146 millions of passengers per year, the company is the most important public transport service provider in Lower Saxony. On an average week day, approximately 450,000 passengers use üstra services, 330,000 thereof use the 12 city tram routes and 120,000 go on the 63 bus lines.



VTCon GmbH  
Dr. Norbert Handke  
Lister Strasse 15  
D-30163 Hannover  
Phone: +49 (0)511 33699 760  
e-mail: norbert.handke@vtcon.de  
www.vtcon.de

VTCon offers consulting in respect of planning, implementation and operation of traffic telematic systems. The engineering company works closely together with research institutes in Lower Saxony, businesses, local authorities and provincial governments. As part of the province's initiative for telematics VTCon supports regional research and development.



Niedersachsen