

# VARS BRNO a.s. YOUR WAY TO SMART SOLUTIONS







#### Innovation in transportation, asset management and GIS

20 years on the market - leading supplier of bespoke solutions in:

- Asset management and maintenance on roads and waterways.
- Intelligent systems for traffic supervision and control.
- Application implementations of graphical information systems.





- We use most up-to-date technologies.
- We build open solutions.
- We realize projects of science and research.

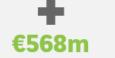


- VINCI Energies works to help public authorities and business clients roll out, equip, operate and optimize their energy, transport and communication infrastructure, industrial facilities and buildings
- Decentralized organization shared values
- Operating in 51 countries worldwide, 1,600 business units intervene in infrastructure, industry, service sector and information and communications technology (ICT).
- The strength derived from being part of the VINCI group

   a world player in the construction and concession
   sectors.







Operating profit from ordinary activities



Net profit attributable to equity holders of the parent





### SOLUTION FOR CLEVER MANAGEMENT OF ROADS

#### Our advantages:

- The latest technology and methods
- Use of expert modules for pavement management system
- SW support of entire life-cycle of maintenance and management
- Cloud solution







We have two decades of experience, we are the supplier for R&M Directorate CR, regions and communities.





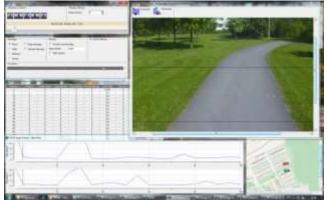


#### SOLUTION FOR CLEVER MANAGEMENT OF ROADS

#### CleveRA Car:

- Most up-to-date technologies
- High precision in compact solution
- High speed data collection
- Simultaneous collection of diverse data-sets
- Quick data processing



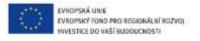




CleveRA system and CleveRA Car vehicle - result of three year long VARS Innovation Centre project.



This project was co-financed by the Operational Programme for "Enterprise and Innovations for Competitiveness".









# SOLUTION FOR CLEVER MANAGEMENT OF ROADS

We process collected data for Pavement Management Systems usage:

- Evaluate the state of a road in compliance with required standards.
- Repeated measuring of variable parameters to predict the future state of a road network.
- Identify and evaluate road defects.





- Design maintenance and repair plans in the worldwide professional dTIMS SW
- Road digital inventory for asset management.
- Measured and evaluated data as well as manager reports are published using CleveRa web modules.



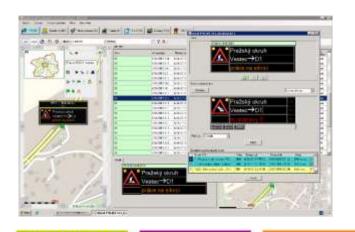


### TRAFFIC INFORMATION AND CONTROL CENTRES

Complex solution for surveillance, traffic control and traffic information dissemination.

#### **Innovations:**

- Solution based on traffic models
- Use of traffic predictions
- Open platform replaces earlier proprietary systems





#### System is widely proven in operation:

- National Traffic Information Center CR since 2005.
- Main Traffic Control Center of city of Prague since 2007.



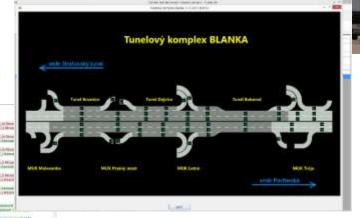


# SMART EC

### TRAFFIC INFORMATION AND CONTROL CENTRES

- We include data from all sources
- We create the image of the traffic situation

 Using the scenarios we generate traffic measures



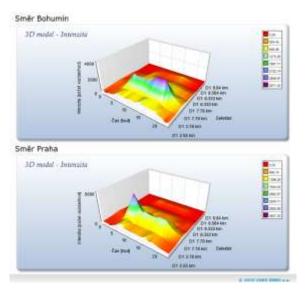
- We control the technical stage of traffic equipment
- We deliver turnkey traffic control centers



### SMART EC

### TRAFFIC INFORMATION AND CONTROL CENTRES

We create tools for traffic engineers





Particular and property of the second state of

We provide traffic information to registered customers and the public via:

- web services
- RDS-TMC
- web applications
- mobile applications







#### INFORMATION SOLUTION FOR SMART CITIES

Complex solution for supervision of mobility in the cities

We provide clearly the online status of the

- Traffic in the city
- Parking
- Public transport
- Car sharing and bike sharing
- Charging stations...





- Medium-and long-term statistics and evaluation of efficiency of individual aspects of mobility
- Mobile applications to facilitate the movement of people in the city



# SMART I C CITY

### INFORMATION FOR SMART CITIES

Solutions for efficient use of information from the all resources of the city and external providers

- Better information for asset management of city
- Better information for management decision making
- Better communication with city residents



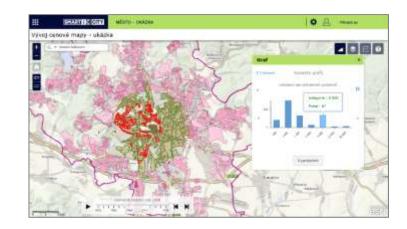


- Understandable interactive mapping applications
- Geographic and geo-statistical analysis
- Reports and dashboards



### INFORMATION FOR SMART CITIES

- Cross views at the data kept in a separate agendas - transport, economy, environment, health, safety and culture
  - brings new information
- Tracking changes in data over time reveals trends





- Applications that allow residents to participate in the care of their city
- Well-timed distribution of information on the planned traffic restrictions, cultural and sporting events around the residence

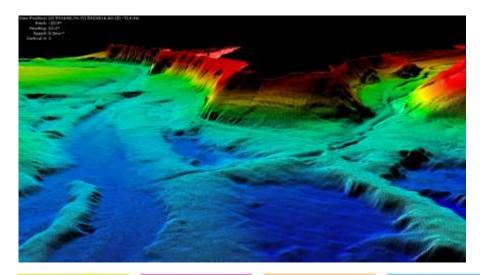


#### BATHYMETRY AND SEDIMENT MEASURING SYSTEM FOR WATERCOURSES AND RESERVOIRS

#### Our advantages:

- Most up-to-date technologies for watercourses and reservoirs.
- High precision measurement.
- Operating flexibility.
- Quick data processing.





#### Long-term experience:

- System for creation of digital river navigation maps since 2003.
- Implementation and equipment of measuring ship for Elbe River Authority since 2009.





#### Our way

- We want to further develop our solutions to better support business activities and processes of our customers.
- We do not limit ourselves on the IT aspects, we want to change and improve the processes as such.
- We are focused on international cooperation, we are a part of VINCI Energies group.
- We welcome new partnerships with companies of similar attitudes.