



Intelligent solutions for modern traffic

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PromelProjekt is the first and the largest designing house in Croatia specialized in the area of traffic design, intelligence transport systems, systems of traffic control, monitoring and management combined with the traffic informational system that enables efficient and comprehensive traffic management.

In the process of designing such systems, PromelProjekt uses the latest information, video, control and measurement technologies including modern software and systems for traffic researching, planning, controlling, monitoring and managing. The main goal of each project we design is to harmonize the increased amount of traffic with safety requirements of traffic participants as well as with ecological requirements.

PromelProjekt actively cooperates with World and European Road Association, through ITS (Intelligent Transport Systems) association and ERTICO, and is the member of World Tunnel Association (ITA). The goal of such cooperation is the integrative usage of new European level technologies that consist of data and information flows as well as the creation of management connections at the institutional level.



PromelProjekt has, through cooperation with specialized institutions and partners, developed and implemented traffic informational systems to monitor, control, and manage the traffic at highways and tunnels, as well as urban traffic.

We ensured development and implementation of traffic technologies and traffic management through business-technical agreements with World, European and Croatian science and professional institutions, consultant firms and manufacturers, such as:

**Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia**  
**Traffic Institute Heusch/Boesefeldt, Aachen, Deutschland**  
**ISS corp., St. Paul, Minnesota, SAD**  
**Optelecom, Gaithersburg, Maryland, SAD**  
**Institute for Testing Fiber Optics in Traffic, Concern Schott, Mainz, Deutschland**

**Dalekovod d.d., Zagreb, Croatia**  
**Telegra d.d., Zagreb, Croatia**  
**IGH d.d., Zagreb, Croatia**  
**Faculty of Civil Engineering, Zagreb, Croatia**  
**IPSA, Sarajevo, Bosnia and Herzegovina**

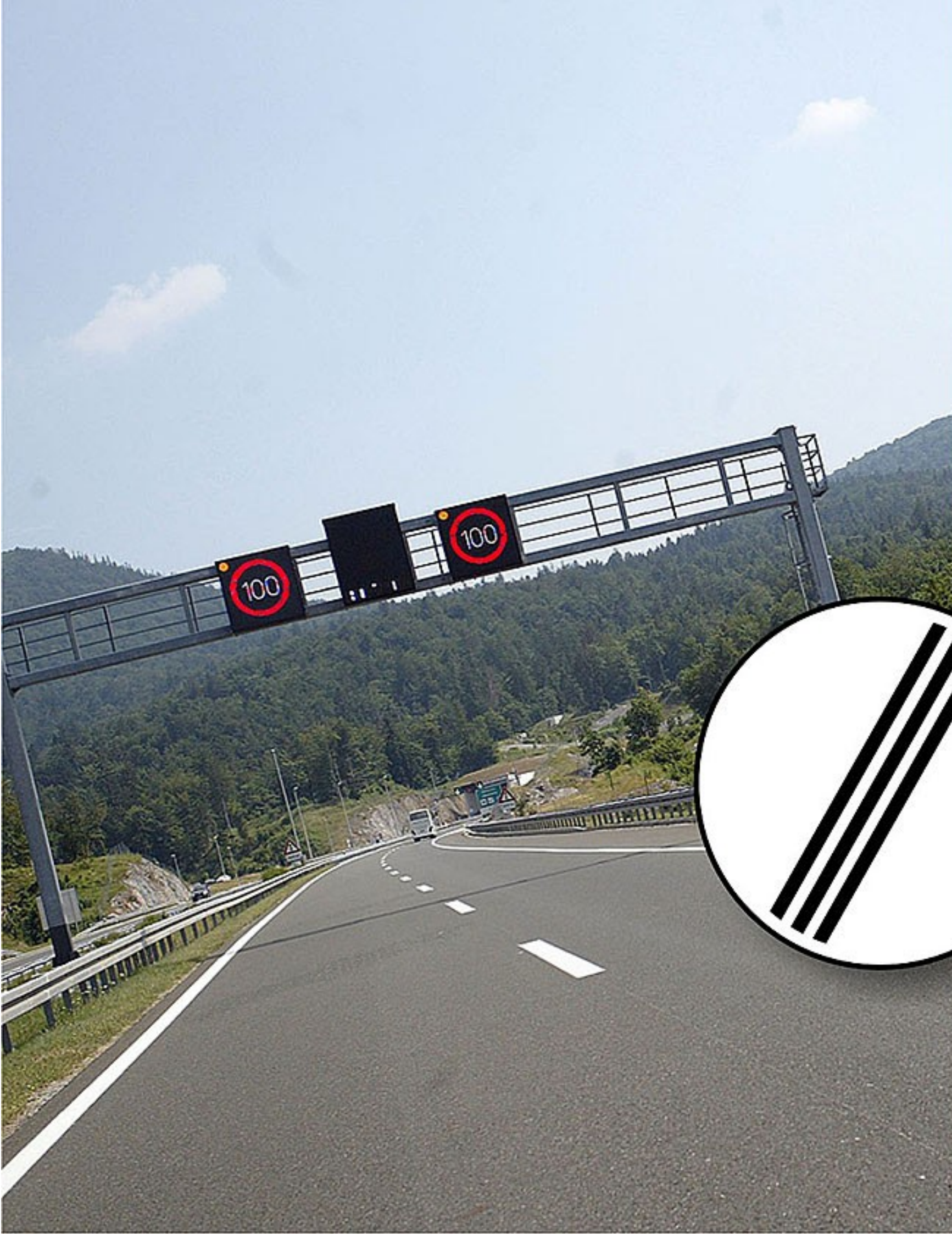
PromelProjekt has, through applied solutions of traffic-informational system for traffic management, video systems for traffic incident detection, and systems of variable message signaling, become reliable and experienced partner in tunnel designing and tunnel traffic management designing in Croatia and neighboring Bosnia and Herzegovina.

Ever increasing number of personal vehicles in cities has increased the need in intelligent organization of traffic, which, due to its complexity, requires highly skilled and professional engineers and specialized software for its micro- and macro analysis. Owing to this, traffic solutions of PromelProjekt utilize to maximum the permeability of roads thus reducing travel duration, the volume of the exhaust greenhouse gases and costs generated by traffic jams. As a consequence, they contribute to increasing the quality of life. PromelProjekt has become leading partner in development of modern traffic infrastructure in region of SE Europe. At the end, we wish to emphasize that in the area of traffic objects PromelProjekt has designed many roadside facilities, which include toll gates, traffic management and control centers, rest areas and stationary traffic solutions without which modern traffic is inconceivable.

**PromelProjekt** offers 5 basic services:







Our success and quality is based on constant investment and use of modern technology and professional traffic designing software in conjunction with human capital. This approach reflects our business goals:

- Improvement of traffic safety requirements
- Implementation of new technologies
- Constant quality management improvement
- Constant investment in education
- Employment of young experts
- Environmental sustainability and protection of sights of nature

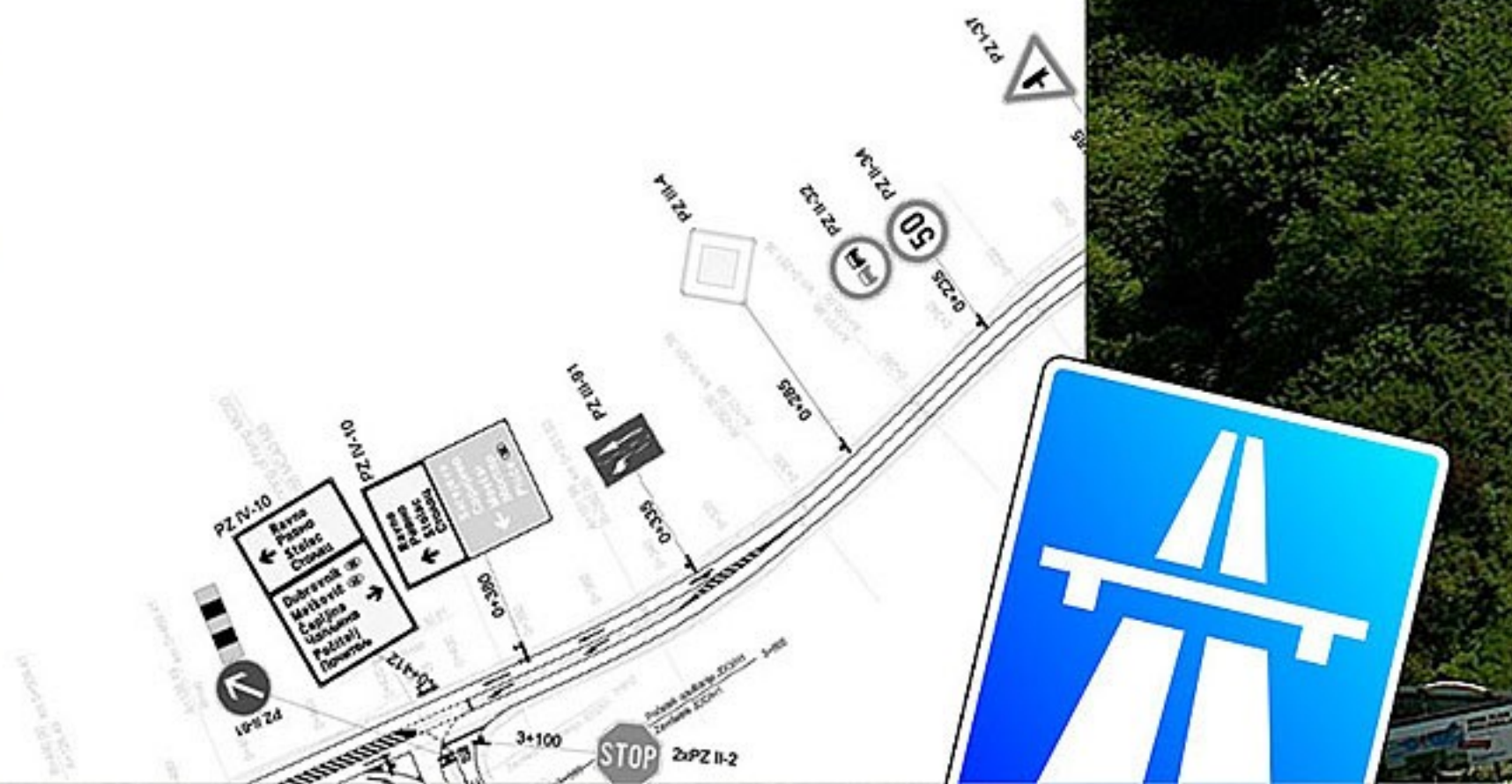




Transportation planning is a field involved with the evaluation, assessment, design and siting of transportation facilities. It is a continuing, comprehensive, and cooperative process to encourage and promote the development of a multimodal transportation system to ensure safe and efficient movement of people and goods while balancing environmental and community needs.

Our transportation planning service includes:

- Traffic studies and analysis
- Traffic infrastructure planning and geometric design
- Simulation models of traffic networks
- Toll collection models
- Traffic research
- Traffic demand analysis
- Traffic safety analysis
- Traffic safety consulting







In order to have a fully functional transportation system, the links that connect the various origins and destinations need to be designed to a level of quality that allows the safe and efficient movement of all vehicles that use them. The detailed work of design has made lifelong careers for many engineers in the past. Today, despite advances in computer software, the basic fundamental understanding of building a highway still needs to be understood in order to ensure that intuitive roads are built for the future.

Our designing service includes:

#### Signaling and equipment

- Horizontal
- Vertical
- Variable message signaling
- Road equipment
- Measuring and traffic control equipment

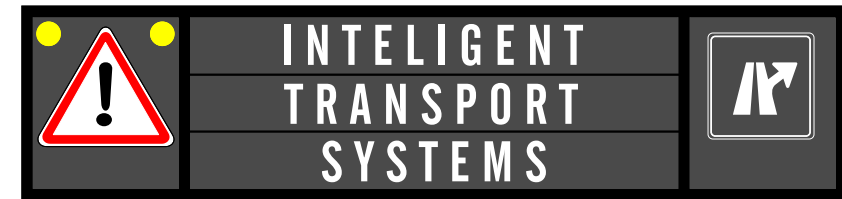
#### Transport infrastructure

- Bearing structure
- Electrical designs
- IT/communication solutions
- Surveillance systems

**Traffic simulation models**  
**Consulting services**







Intelligent Transport Systems are applied modern information technology to transport operations with goal to reduce operating costs, improve safety and maximise the capacity of existing infrastructure.

Our ITS service includes:

#### **Traffic surveillance systems**

- Law enforcement
- Automatic incident detection
- Oversize vehicles detection and monitoring
- Dangerous goods transport monitoring
- Automatic number plate recognition

#### **Automatic traffic management**

**Traffic management algorithms for emergency situations**

**Design and implementation of traffic control management centers**

**Education and training**





**PromelProjekt** has designed more than 17 traffic management and control centers through which more than 1500km highways are monitored, controlled and managed in Croatia, Bosnia and Herzegovina and Kazakhstan, including:



- Zagreb - Split - Dubrovnik Motorway
- Zagreb - Rijeka Motorway
- Zagreb - Macelj Motorway
- Zagreb - Goričan Motorway
- Zagreb - Lipovac Motorway
- Zagreb - Sisak Motorway
- Doboj – Banja Luka Motorway (Bosnia and Herzegovina)
- Vc corridor Motorway (Bosnia and Herzegovina)
- Astana - Schuchinsk Motorway (Kazakhstan)

Due to **PromelProjekt** solutions, applied on 48 km of designed tunnels in Croatia, Bosnia and Herzegovina, a traffic flow is monitored, controlled and managed, including the following tunnels:



- Učka Tunnel (5062 m, Croatia)
- Sv. Rok Tunnel (5680 m, Croatia)
- Mala Kapela Tunnel (5780 m, Croatia)
- Veliki Gložac Tunnel (1130 m, Croatia)
- Brinje Tunnel (1540 m, Croatia)
- Tuhobić Tunnel (2141 m, Croatia)
- Vijenac Tunnel (2912 m, Bosnia and Herzegovina)
- Oštri rat Tunnel (3370 m, Bosnia and Herzegovina)
- Kvanj Tunnel (2529 m, Bosnia and Herzegovina)

Even three tunnels from the above list were awarded by EuroTap - European Tunnel Assessment Program:

- Tunnel Brinje - The Safest European Tunnel in 2007
- Tunnel Veliki Gložac - Top 4 Safest European Tunnel in 2008
- Tunnel Sveti Rok - Top 3 Safest European Tunnel in 2010

**PromelProjekt** has designed more than 1000 projects of a temporary traffic regulation to follow a traffic infrastructures building or roads maintenance periods, including the following:

- Zagreb - Macelj Motorway
- Zagreb - Rijeka Motorway
- Detour around city of Rijeka
- Detour around city of Velika Gorica

In the area of urban traffic solutions of **PromelProjekt** are applied at more than 400 crossroads in cities throughout Croatia, including:


- Zagreb
- Dubrovnik
- Zadar
- Velika Gorica

In the field of roadside facilities **PromelProjekt** has designed many toll gates, traffic management and control centers, rest areas and stationary traffic solutions, including:

- Peščenica (Roadside service facility, Motorway Zagreb - Sisak)
- Krka (Roadside service facility, Motorway Zagreb - Split - Dubrovnik)
- Sv. Rok (Main centre for motorway maintenance and traffic control, Tunnel Sv. Rok, Motorway Zagreb - Split - Dubrovnik)
- Mala Kapela (Main centre for motorway maintenance and traffic control, Tunnel Mala Kapela, Motorway Zagreb - Split - Dubrovnik)
- Umag (Toll gate)





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