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CONCEPT OF IMPLEMENTATION OF REAL-TIME TRAFFIC MANAGEMENT SYSTEMS ON NATIONAL ROADS

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Międzynarodowe
Seminarium

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2008

Generalna Dyrekcja Dróg Krajowych i Autostrad



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Motto:



- 100% of road traffic safety = 0% efficiency of road traffic
- 100% of road traffic efficiency = 0% road traffic safety
- Therefore the compromise is essential.

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Definition:



Traffic management is the complex of legislative, organizational and technical activities related to managing and controlling road traffic, especially in real time, carried out to achieve efficient, safe traffic for all its participants and reducing the inconveniences for natural environment and local communities.

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Current situation of traffic on national roads:



- National roads = 5% of public roads = over 40% of total traffic volume on public roads = over 50% of total number of vehicle - kilometers travelled on public roads.
- Mobility since 1989 – double increase in the number of vehicles, triple increase in the number of vehicle – kilometres travelled. – present number of vehicles over 17 million.
- Congestions and obstructions – common, especially at the entries to metropolies which paralyze the traffic at the rush hours.



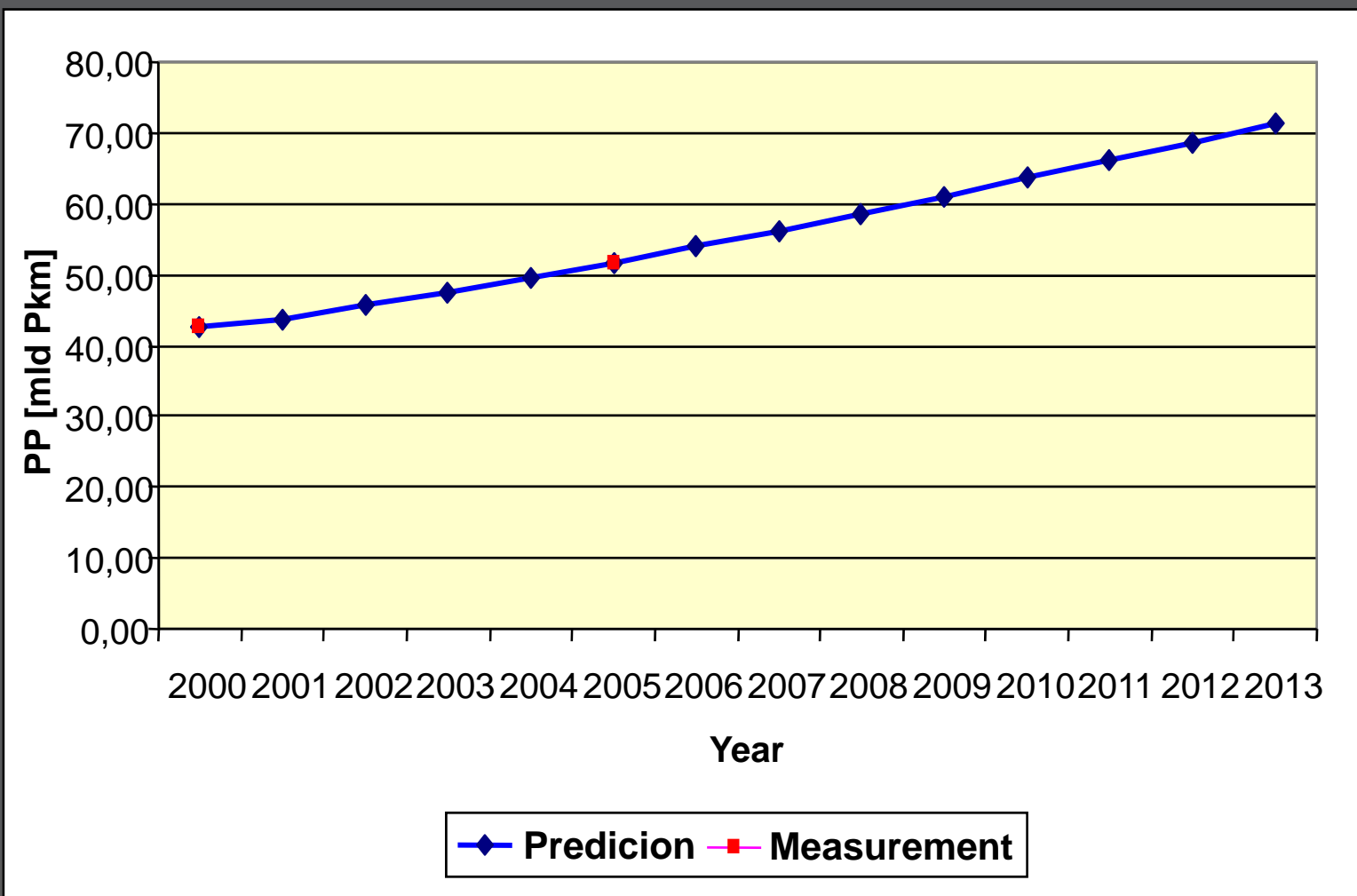
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Prediction for vehicle-kilometers travelled



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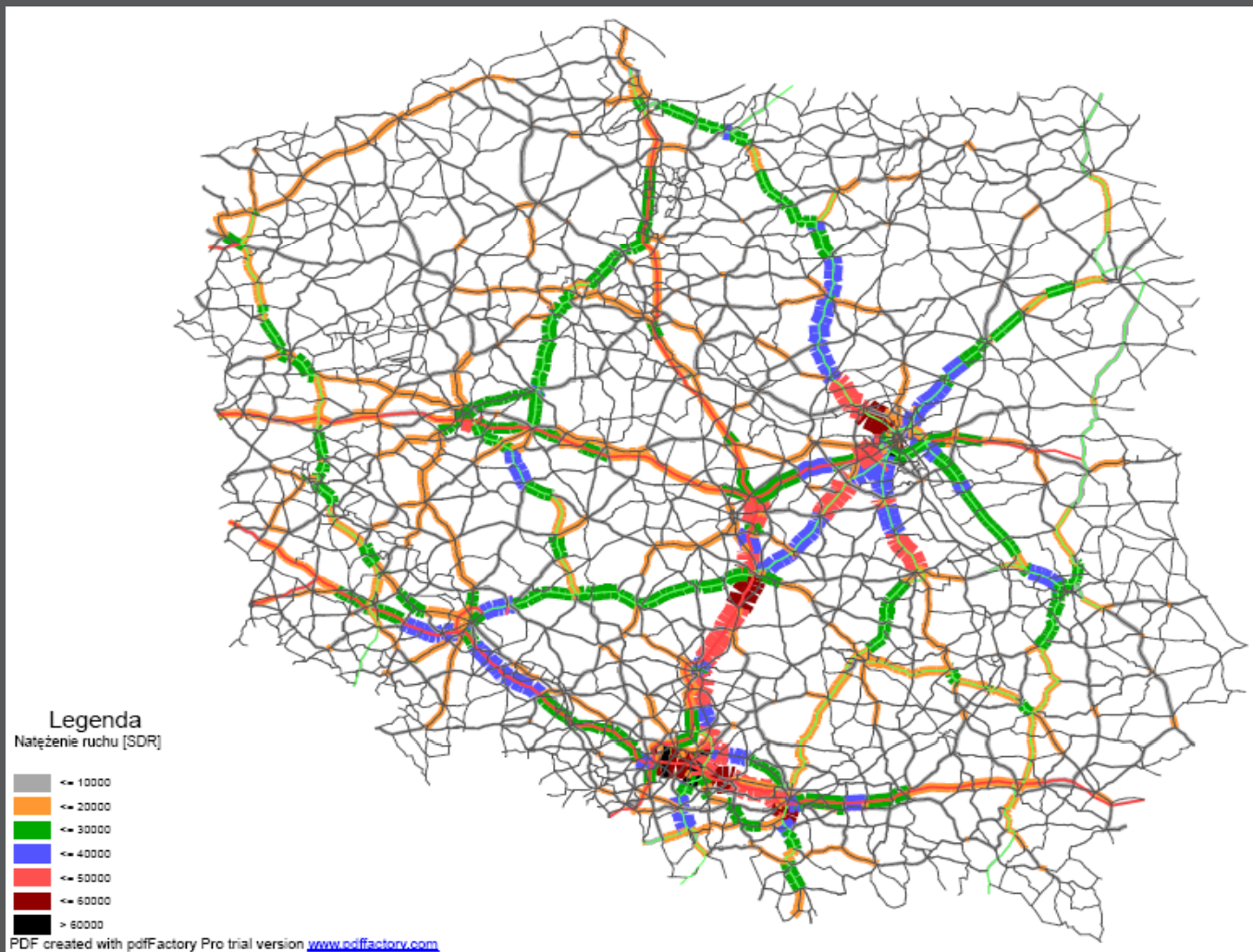
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Road traffic prediction 2013



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Current legal state of traffic management:



- Traffic management is understood first of all as the act of investigating and approving traffic organization and placing road signs and markings.
- In case of threat to traffic safety – the rejection of traffic organization obligatory. In case of inefficiency of traffic organization – the rejection only possible
- Lack of regulations enabling the road management controlling body to introduce the changes in traffic organization with the click of ENTER button
- Managing road traffic in real time is a policeman directing traffic at the junction



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Current legal state of traffic management:



General Directorate for National Roads and Motorways as a body managing national roads:

- maintains the existing road network
- constructs new national roads especially motorways and express roads

As GDDKiA is at the same time a managing body and the road traffic is increasing rapidly there are two other, extremely important tasks:

1. reduction of the number of fatalities in accidents on national roads by the year 2013 from over 2000 to 500
2. improvement in road traffic efficiency



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Objective:

To minimize social and economical loss caused by traffic congestions, time loss, increased fuel consumption, fuel fumes and noise and transport inflicted inconveniences to natural environment and local communities through the system of national roads real-time traffic management





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Assumption for real-time traffic management system:



Since VIII.2007 GDDKiA has started to develop real-time traffic management system based on the following assumptions:

1. Collecting the data on-line in real time with the use of modern equipment (GDDKiA services, wireless cameras, induction loops, police, drivers, radio) regarding significant for traffic events on roads (construction works, accidents, catastrophes), trafficability as well as existing and predicted weather conditions which may influence road traffic
2. Processing collected data into information useful for drivers on possible time loss during journey to enable them to choose different route



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Assumption for real-time traffic management system:



3. Creation of free, national, open for general use Internet platform, containing gathered and processed data, which will be equipped with detailed digital map of Poland and RSS channels, enabling every user to get connected and obtain the information

Data sharing with all private and institutional users as well as with all the media (radio, television, operators of GSM network and autonavigation systems),

4. Creation of the system and the centres for real time road traffic management through indication of traffic obstructions and the possible; and in the future agreed with other road administrators; suggested detours procedures.



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GDDKiA activities hitherto:



1. Submitting to the EU the project of 7 centres of traffic management in Poland for 7 metropolies and the eighth for the network of motorways,
2. Development of assumptions for road traffic management system in Poland,
3. Studies on traffic management system in Germany,
4. Signing the agreement between the President of Warsaw and General Director for National Roads and Motorways on implementation of common project of reducing congestions at the DK7 entry to Warsaw,
5. Developing the amendment project for the Act - The Law on Road Traffic



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GDDKiA activities hitherto:



6. Planning a centre of traffic management for outside built-up area sections of motorways and express roads in the new GDDKiA headquarter.

7. Cooperation with Westdeutsche Rundfunk and the initial offer of cooperation with the Polish Radio S.A. in introducing to Poland the national system of congestions data collection and providing information about them with the use of RDS and TMC functions,

8. Equipping Points of Road Information with the system of devices enabling traffic monitoring

9. Providing the GDDKiA website with the digital road map of Poland enabling route planning.



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GDDKiA activities hitherto:



10. Providing the GDDKiA website with the digital road map of Poland enabling route planning.

11. Development of the system providing roadworks sections with wireless cameras with GPRS which will allow for sending the data on obstructions via smartphones

12. Preparation of agreement between MSWiA (Ministry of Interior), MI and Polish Radio S.A. called EUROTRAFFIC 2012 on gathering and transferring the data on obstruction in road traffic and detours.



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On 26 March 2008 the agreement was accepted by the Board of Polish Radio S.A.

This fact as well as all the activities which are being carried out give the hope and bring closer the moment when the engineers of national roads traffic in traffic management centres will have opportunity to manage traffic in real time which will increase the efficiency and reduce the threat to road safety.



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Thank you for your attention

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