CHALLENGES AND OPPORTUNITIES ON THE PATH FOR ITS DEPLOYMENT

Geneva, 04 December 2018
“REAL PROGRESS HAPPENS ONLY WHEN ADVANTAGES OF A NEW TECHNOLOGY BECOME AVAILABLE TO EVERYBODY”
HENRY FORD

- 1914: first three-colored traffic signal
- 1920s: the number of passenger cars registered in the United States nearly tripled
- 1935: the first parking meter
- 1939: General Motors launches Futurama

Can we already mark this milestone for ITS?
BARRIERS TO ITS DEPLOYMENT
NON TECHNICAL

Economical
- Lack of funding
- Old business models

Institutional
- Political prioritisation
- Policy

Legal
- Legal framework (Data Ownership, Ethical issues)

Organizational
- Lack of cooperation among stakeholders

Social
- User awareness
- User acceptance
BARRIERS TO ITS DEPLOYMENT

TECHNICAL

«SILOS» APPROACH

➤ Separate applications for different market segments
➤ Fragmentation of solutions up to "isolated" urban areas even within the same City
  (duplication and weaknesses of technological solutions)
➤ Legacy solutions, limited application of standard interfaces

UPCOMING TRENDS ASK FOR ADAPTATION OF EXISTING SYSTEMS

➤ Autonomous driving
➤ Big data
➤ Cloud computing
➤ Social networking
INTEGRATION IS THE KEY WORD
OMNIA
TRAFFIC MANAGEMENT AT YOUR FINGERTIPS

SUPPORTING THE INTEGRATED ROAD TRANSPORT ENVIRONMENT

- Urban Traffic Management
- Strategic Traffic Management
- CCTV and Video Analytics
- Public Transport
- E-Mobility
- Highways & Tunnels
- Parking Guidance & Access Control
- Street Lighting Management
- Infomobility
- V2X Communication
- Service & Maintenance
- Third party system integration

excellent safety and “green” credentials
solutions with high operational efficiency
easy to use, easy to extend, adaptability to evolving technologies
an open architecture for simple integration with other systems

HIGH LEVEL INTEGRATION PLATFORM

omnia
MOSCOW, RUSSIA

Traffic Control

463 centralised intersections

Exploitation of private-public framework agreements
KUWAIT CITY, KUWAIT

Urban and Interurban Traffic Management
VIP Route

300 centralised intersections
800 CCTV (VBID)
40 VMS
100 Radar sensors

From Pilot showcase to full scale implementation
ASTANA, KAZAKHSTAN

Public Transport Fleet Management
Traffic Control

900 PT Vehicles
155 centralised intersections

Interagency cooperation across market sectors
MONTEVIDEO URUGUAY

Traffic Control
Strategic Traffic Management

135 centralised intersections
4 variable message signs
48 video surveillance cameras
21 LPR cameras
50 AID cameras

Modern equipment as a door opener for Innovative Traffic Management solutions
TIMISOARA, ROMANIA

Integrated Mobility Management Solution

230 CCTVs
10 Enforcement Cameras
150 Intersections
43 VMS
160 PT Vehicles

Contagious willingness to transform
A COMPLETELY CONNECTED ENVIRONMENT: NEW OPPORTUNITIES
How can you control what you cannot fully measure?

**Added Value, Hi-Resolution Information exploiting all available Data Sources**

- Geospatial analytics
  - Data collection and normalization
  - Data geo-referencing

- Descriptive analytics
  - Data validation and fusion

- Predictive analytics
  - Data short and mid-term forecasts

- Prescriptive analytics
  - Real-time response plans
NEW APPLICATIONS

Greenlight Optimal Speed Advisory (GLOSA)
- Show the driver at which speed the next intersection can be passed
- Drive without need to rush for green

Time to green (TTG)
- Show the driver when green is back
- Take a relax at red / be prepared for green in time
- Start-stop engine ignites just before green
- drive-train / energy management and vehicle comfort functions
- ACC/ Gear-shift et al. energy functions adapt to traffic flow
NEW BUSINESS MODELS

TMAAS

SYSTEMS
• Flexible deployment options
• Browser-based user interfaces with easy workflows
• Suited for the modern work environment
• Pay-per-use (only the features needed)

OPERATION
• System maintenance
• Server hosting
• Communication

SERVICES
• Service and support center
• Traffic engineering
• Advisory services
Sharing data and traffic management plans exploiting the connected vehicle environment:

- Vehicles share data and travel needs
- Traffic control shares accurate traffic forecast and control strategies with vehicles
- Navigation systems consider and support the control strategy
- Community and individual objectives converge in a win-win scenario
CONVERGENCE OF MAAS AND TRAFFIC MANAGEMENT

Traffic Management as an enabler of MaaS

TM evolves through MaaS: from traditional to cross-modal interactive mobility management

TM enables MaaS: involves car as part of MaaS but promotes modal shift & facilitates seamless usage of urban and interurban road network while preserving quality of service
HOW WILL ALL THIS IMPACT OUR LIVES?

- Real choice between travel alternatives
- Personalised response to needs:
  - Professional drivers
  - Commuters and frequent trips
  - Business travellers
  - Tourists
- Planning and payment for travel in the easiest way
- Match between the right mode of transport for the needs of the journey
- Cost effective travel
SWARCO responds to the needs of society with its technological know-how and innovative mobility solutions to make your travel experience quicker, safer, more convenient, and environmentally sound, improving the quality of life.

THANK YOU FOR YOUR ATTENTION!

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