Experience with data collection and PMS implementation for Czech regions
VARS BRNO

• Provides services in
  • Data collection on roads and rivers
  • SW development
  • ITS SW systems
  • ITS complex deliveries
  • GIS and Asset Management systems
  • Smart City solutions
Regions in the Czech republic – new customers in 2016
Data collection

- Front cameras
- GPS antenna
- Inertial measurement unit
- Back camera
- Laser crack measurement system
- Lasers and accelerometers
- Odometer
User needs and expectations

- Reliable data collection
- Localized interactive browsing of collected data
- View of the geographical context
- Rich map view of processed values
- Interactive work with maintenance strategies
- Colorful reports
- Data sources for money holders
- Interconnection with other maintenance tools
- Complementary work with inventory data
Automated or visual defect assessment
Interactive browsing tools
Inventory mining
Inventory browsing, editing and mobile tools
Proposed schemes browsing
Presentation of maintenance strategy
Colorful interactive reports
Interactive work with maintenance plan
Link with other maintenance tools
Portal integration, cloud services
Structure of the typical offer

- Cloud accessible set of interactive tools
- Detailed data collection
- Automated or visual defect assessment
- Interactive data browsing tools
- Inventory mining
- Inventory browsing, editing and mobile tools
- Maintenance strategy and schemes proposal
- Interactive reporting and presentation tools
- Complementary linked operational tools
Micro-cracks detection
Needs for Micro-cracks detection

- Speed of detection
- Accuracy of detection
- Safety of detection
LCMS for MicroCracks detection

- Longitudinal resolution 1.7 mm x Transversal resolution 1 mm
- Images 2x4 m
- Images collected by 80 km/h
- MicroCrack class detected on every image in office
Evaluation on 50 m sections

Breakdown lane

Slow lane

Fast lane
Evaluation on 50 m sections

Breakdown lane

Slow lane

Fast lane

50 m
# Evaluation

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<th></th>
<th>BDL</th>
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### Legend

- **MC – class 0**
- **MC – class 1**
- **MC – class 2**
- **MC – class 3**
- **(X) MC – rare occurrence of class X**