Weather information in transportation

Road network of Czechia
- Highways: 776 km
- Expressways: 442 km
- Class I roads: 5798 km
- Class II roads: 14558 km
- Class III roads: 34167 km
- Road weather stations: 420
- Maintenance centres for highways: 18
- Maintenance centres for class I roads: 97

Standardization of winter maintenance
The legislative framework for winter road maintenance is stipulated in Act No. 13/1997 Coll., on roads, and the Ministry of Transport Decree No. 104/1997 Coll., implementing above stated Act on roads.

New financial model is tested:
- Old model: 6 EUR per km
- New model: monthly fee + 2 EUR per km

Maintenance decision support
METIS is a nationwide road weather information system since 2003. It provides the dispatchers with the real-time data from weather stations as well as with the road weather forecast (using SSWM model) and other weather information sources. In short future it will feature also a treatment recommendation module to fully support the decision making.

Safety
Limited budget
Quality of maintenance

New financial model is tested:
- Old model: 6 EUR per km
- New model: monthly fee + 2 EUR per km

Maintenance decision support
- GPS-based activity tracking of spreaders
- Weekly adequacy check using Winter maintenance index
- Occasional local inspections

WM operators training
The dispatcher is a key person in the management of maintenance operations.
Annual training:
- Basics of road meteorology
- Hazardous weather phenomena for winter road maintenance
- Road weather stations and data interpretation
- Interpretation of other weather information sources
- Winter maintenance manual
- Best available technologies
- Dispatcher’s decision diagram

About the company
CROSS Zlín is a joint-stock company based in the Czech Republic. CROSS is proud to be a technology company, offering wide range of products, components and turn-key solutions for road traffic since 1994.
- Road Weather and Winter Maintenance
- Traffic Control and Data Fusion
- Weigh-in-Motion

About the author
David KONEČNÝ has studied geoinformatics, cartography and geography at Palacký University in Olomouc and graduated in 2008. From this time, he works in CROSS Zlín as a software engineer and analyst. David is experienced in road weather and winter road maintenance decision support which is the main part of his work. For his versatility, he participates in hardware projects, software development and recently also in a standardization of the winter road maintenance on the countrywide level.

Key players in WM decision support
Ministry of Transport of the Czech Republic, www.mdcr.cz
Road and Motorway Directorate of the Czech Republic, www.rsd.cz
Czech Hydrometeorological Institute, www.chmi.cz
CROSS Zlín, www.cross.cz
Klimator, www.klimator.se

We believe that through the assessment of the adequacy and usage of RWIS and MDSS systems it is possible to optimize the winter maintenance and reduce its overall costs while maintaining quality.