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Winter Maintenance Management System goes mobile

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An efficient road network is the backbone of traffic and thereby also of the economy which is dependent on roads as an infrastructure element operational at all times. Therefore restraints during winter are becoming increasingly unacceptable. Major goals of road operations are safety, environmental protection, economics and the necessary optimization of these issues in delivering quality winter maintenance services. For increasing road safety and optimizing traffic flow the needs are high quality prediction and sensor technologies as well as appropriate winter service treatments at the right time. Because of the complexness of meteorological, traffic and winter service processes, winter service needs a comprehensive Winter Maintenance Management System.



Picture 1: RWIS station

Complex decision-making situations, such as those which occur in winter maintenance management, require supporting systems to detect dangerous road conditions and winter events early enough to plan and control road maintenance properly. But a differentiated knowledge about what is happening in the next future according to road conditions and winter service resources is necessary to organize an efficient, fast winter service. In the field of winter maintenance, the Winter Maintenance Management System like BORRMA-web is a comprehensive tool to monitor the weather and road conditions and control, manage and log the winter maintenance measures. With parallel view of RWIS, MDSS predictions and winter service vehicles on one screen, the responsible persons are able to manage winter service effectively and efficiently, which increase road safety and improve traffic flow.

On one side a comprehensive winter maintenance management system needs high quality inputs from weather services and Road Weather Information Systems, which shows the road manager the different situations of weather and road surface conditions in the road network (see picture 1).

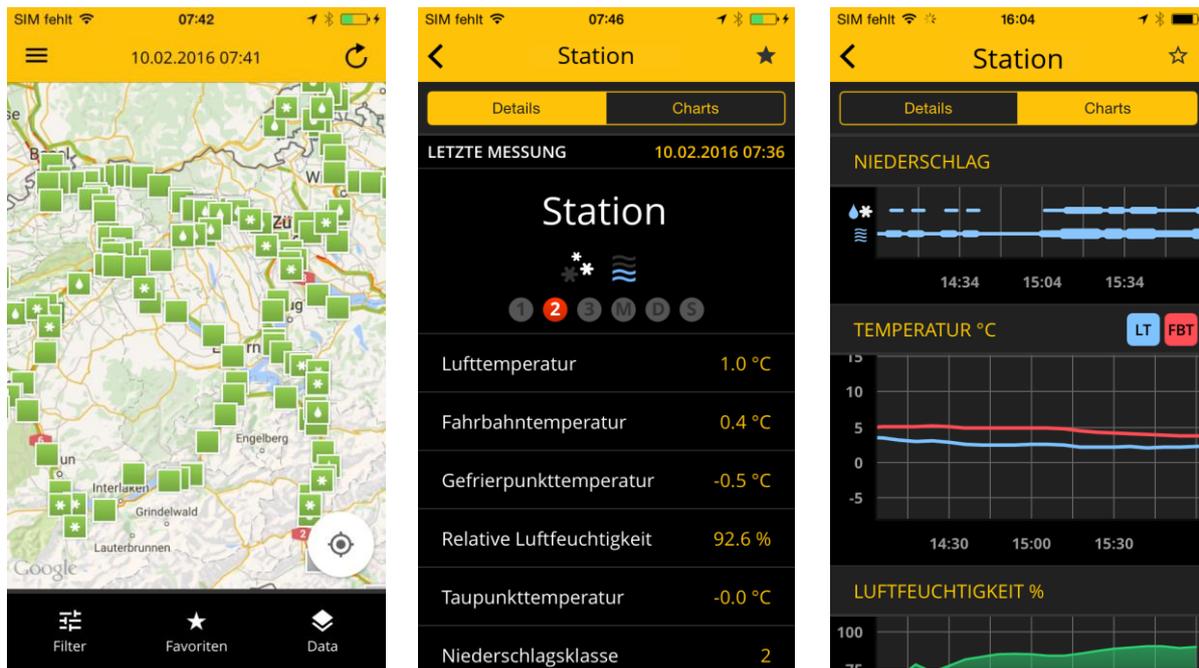


Picture 2: Winter service manager has to decide, when and with how many vehicles to start the necessary treatments (here a spreader with 22.000 l brine)

That gives on the other side the decision maker the possibility to plan the next winter service operations, to decide when and with how many vehicles to start the necessary treatments. Modern AVL systems show the road manager all vehicles in operation live on a map, visualize driven routes after and create reports as a proof for legal duty to maintain safety and for statistics.

Both together, RWIS and vehicle operation data are the basis of a comprehensive winter maintenance management system and to manage winter service in an efficient way, but nowadays there is more and more the need to be able to have access to the data everywhere and every time. Therefore it is necessary to visualize the most important data of RWIS and vehicles live on smartphones and tablets to gives the responsible persons the possibility to combine and control the actual situation and the measurement activities in an easy way.

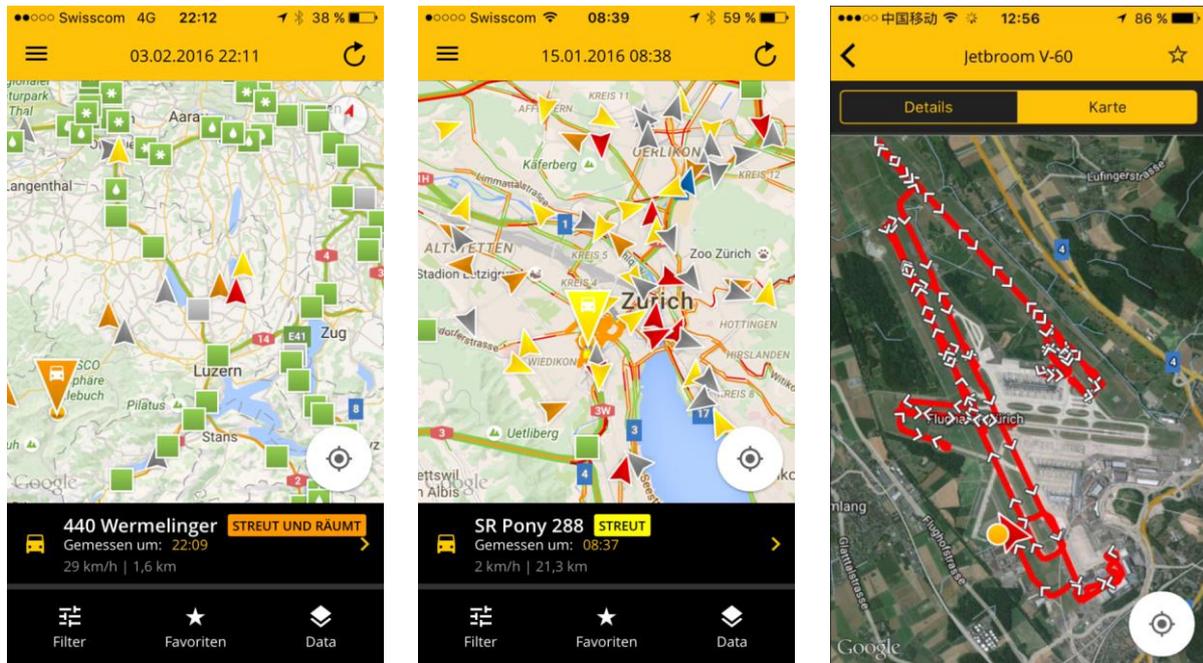
An efficient solution is the RWIS-App, which combines live data of RWIS station (private and published RWIS data) with an integrated graph of the last 2 hours and the service vehicles in operation, showing different treatments like spreading, plowing, mowing or sweeping on an interactive Google-Map.



Picture 3: RWIS App shows all data of RWIS stations on interactive Google-Map

That tool gives responsible staff in road service the possibility to have an overview about the actual situation in their road network wherever they are, on road, in office or travelling at all times and to manage necessary treatments. The RWIS App is used for operations on roadside as well as on airports and is very welcome by personnel as an additional tool next to the

standard winter maintenance management system. Additional functionalities like function with limitations by means of filters to select the desired weather station or vehicle, to save and call up weather stations or vehicles as favourites or the search function to select the desired weather station or vehicle improve the benefits and efficiency by using the RWIS App.



Picture 4: RWIS App shows next to RWIS stations live operations of service vehicles with different treatments

The feedback from users from roadside as well as from airport side is very positive because of improved combined data availability live on your smartphone to control and manage dynamically road and airport service treatments.

QR-Code for downloading RWIS App.

