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DIGITALISATION OF THE WINTER ROAD MAINTENANCE SUPERVISION IN FINLAND

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Summary

In Finland, three different state offices are involved with winter road maintenance. The Finnish Transport Infrastructure Agency owns the road infrastructure and is responsible for its maintenance. The Centres for Economic Development, Transport and the Environment Office are in charge of the procurement and supervision of the road maintenance contractors. The Finnish Transport and Communication Agency Traficom both supervises road infrastructure offices and develops and elaborates the processes of the road maintenance. The Finnish road network consists of nine contract areas. Regional contractors are responsible for providing road maintenance in accordance with the service level defined by the Finnish Transport Infrastructure Agency. Moreover, the roads belong to different maintenance categories according to their level and type of use, with varying intervals for different maintenance measures, such as snow ploughing and antiskid treatment. At the moment, surveillance of the winter road maintenance is carried out by physically going to the roadside and verifying the level of snowfall and friction. This is not efficient and do not offer vast and punctual data of the level of maintenance. Traficom has digitalized the surveillance of the winter road maintenance by developing a tool that analyzes optical snowfall and friction data. Analyzed data is then compared with the service

levels to see whether the maintenance is adequate. The tool provides a way to allocate the surveillance resources timely and to use the resources more efficiently. This provides safer roads with lower costs and changes the surveillance to happen in real time. Additionally, the contractors can find out faster if the winter road maintenance actions should be carried out. Similar analysis could be used for other roads as well to make cycle paths and pavements safer cost efficiently.