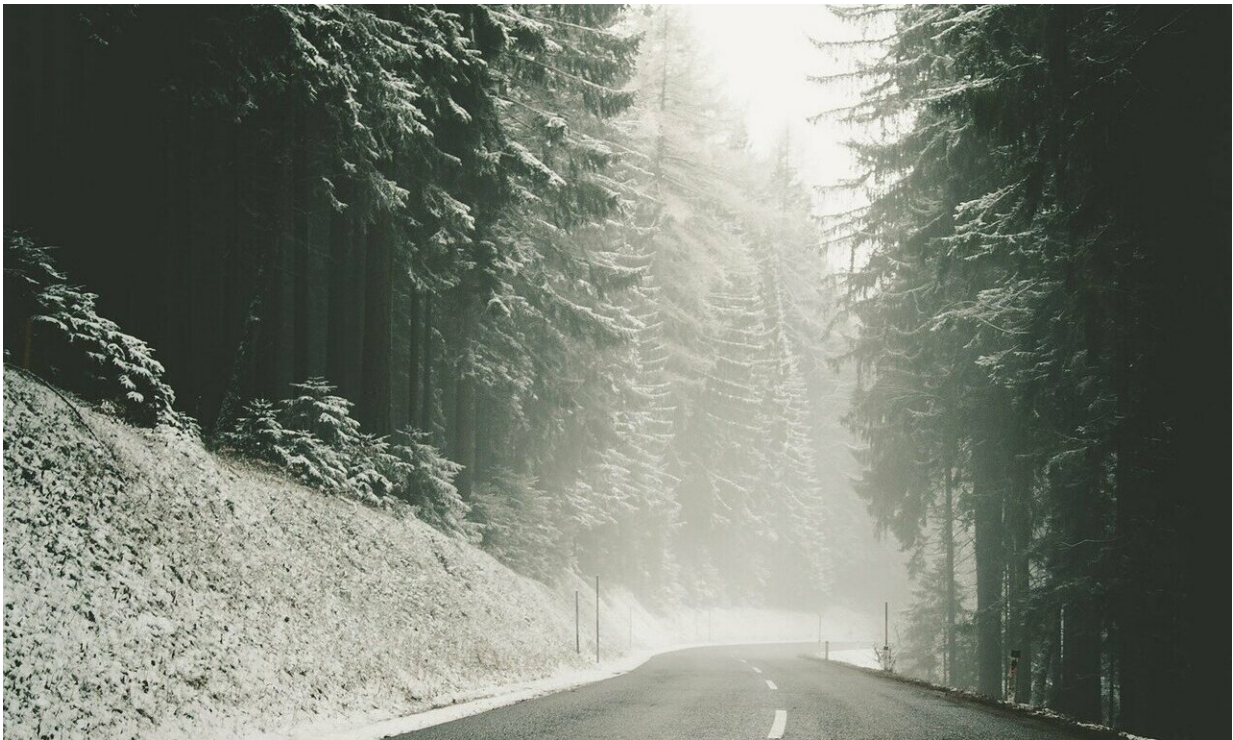


Smart technology could hold key to safer winter roads

January 28 2019



Credit: CC0 Public Domain

A Heriot-Watt spin-out company is using smart technology to help safeguard Scotland's roads and possibly bring an end to pot-holes.

Gritting lorries are a familiar sight at this time of year but maintaining adequate salt supplies remains an ongoing battle for local authorities. In

the UK alone, it costs around £150m to spread more than 2 million tonnes of grit onto the UK's motorways, trunk roads and main roads.

Now the award-winning MicroSense Technologies Ltd (MTL) has developed a state-of-the-art sensing system to ensure an equal spread of grit across road surfaces. Measuring at around the size of the average mobile phone, the device can be fitted to a gritter and uses advanced data analysis and bespoke radar sensing to detect how much de-icer salt is already on the road.

This information is instantly fed-back to an on-board computer, allowing the vehicle to automatically adjust the amounts of grit required, whilst also recording the condition of the road surface.

MTL co-founder Professor David Flynn explains: "At present, when gritters spread salt over multiple days, no account is taken as to how much de-icer salt is left on the road.

"We have created an affordable and robust means of assessing the road surface conditions and accurately determine how much salt, if any, a stretch of road needs.

"This holds obvious advantages to local authorities but also to road users, helping ensure conditions are as safe as they possibly can be. In addition, during our preliminary trials we have also discovered that through subtle adaptations of our system we can actually scan the internal road condition. This ability to evaluate the tarmac allows us to identify early signs of pot-hole formation before they start."

MTL is now working in partnership with the UK's largest importer of salt products, Peacock Salt, on the pioneering technology.

Gregorie Marshall, Managing Director at Peacock Salt, said: "We are

excited about the early results from this collaboration and the possibilities it has beyond residual salt measurement.

"We believe that this product would allow the reduction of salt being spread on the roads which will help to reduce costs as well as reducing the amount of [salt](#) that ends up in the watercourses."

The technology could be installed onto gritters and highway maintenance vehicles within the next few months.

MTL was formed in 2017 by Professor Marc Desmulliez, Professor David Flynn and Dr. Sumanth Pavuluri from Heriot-Watt's School of Engineering & Physical Sciences (EPS).

The company has developed revolutionary new sensor [technology](#) that help companies to reduce waste, improve asset integrity inspection, increase production efficiency and meet environmental standards.

Provided by Heriot-Watt University

Citation: Smart technology could hold key to safer winter roads (2019, January 28) retrieved 23 April 2024 from <https://phys.org/news/2019-01-smart-technology-key-safer-winter.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.