

# 3D technology for pothole repair

GPC has developed a system that uses 3D technology to accurately measure potholes and other road damage.

**C**urrently, the process of identifying and rectifying road damage relies on motorists and highway authorities reporting potholes to councils. In many cases, a manual inspection must then be conducted to assess the required level of repair work, before maintenance work can be scheduled and conducted.



The existing way of inspecting potholes can be time-consuming, ambiguous and inaccurate. Commonly used methods include rulers, pencils, levels, measuring tape and sometimes just guesses to establish the size of a pothole. It also involves the inspector walking in the middle of a road or even closing a road, and may require more than one person to make a reliable decision.

Swansea-based company GPC has developed a system that uses 3D technology to accurately measure the size and depth of a pothole, or other road damage, from a single picture taken on a mobile device such as a tablet or phone. Using a combination of AI and bespoke algorithms, a 3D model of the pothole is created. Then the edges of the pothole are automatically identified, enabling dimensions to be measured including maximum length and depth, which are used by councils to determine priority.

The system is available as a handheld device, on a tablet, on a phone, or mounted to a vehicle. Due to its accuracy, the technology ensures that maintenance teams can get a better understanding of the size of the problem, as well as what equipment and material is required to repair it, before they arrive at the scene. This means that resource costs can be saved, because the materials typically used to repair concrete are expensive. GPS coordinates also form part of the data, enabling teams to more quickly locate the damage. With litigations on the increase,

the system can also help councils to keep more accurate records and measurements which they can use to demonstrate how they adhere to statutory requirements.

GPC originally provided 3D wound care solutions for the medical industry, before the company started to think of other applications for their technology outside of healthcare. In addition to putting the technology to use in pothole repair and highway maintenance, it is now also being applied to logistics, as it can measure irregular items of cargo and freight for more efficient packing of aircraft, trucks and shipping containers.

A version of the system for members of the public will soon be made available, continuing to make the process of reporting potholes quicker, easier and more accurate. The company has also signed an international distribution contract that will see its technology deployed on the Las Vegas Motor Speedway, a NASCAR track where drivers reach speeds of nearly 200 miles per hour.



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