Peace Photographics

Drive. Detect. Determine.

Case Study

Dawson Creek, BC

Overview

1. Dawson Creek collaborated with Visual Defence to use the ROVER technology to improve the city's service level standards for its residents.
2. The city was able to gather accurate data regarding pothole quantity and severity, allowing staff to actively assess and plan repairs.
3. Due to a noticeable increase in the efficiency of road maintenance procedures, the city has transitioned the use of ROVER from a pilot stage to operational use.

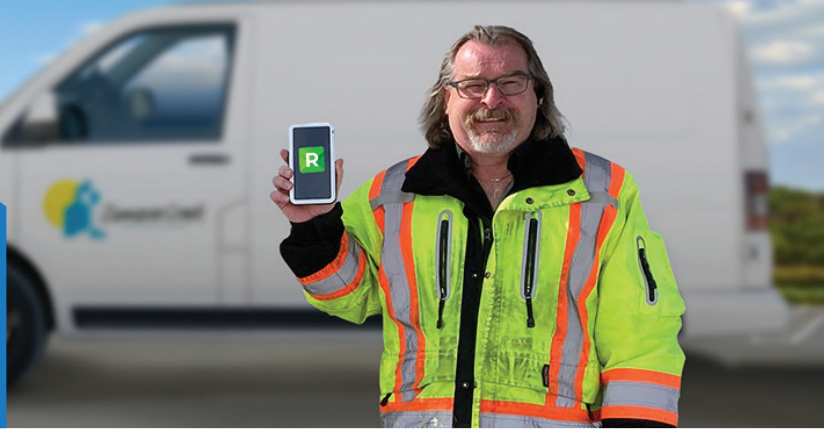
Problems

Prior to the implementation of the ROVER AI, the road maintenance system relied heavily on manual reporting by the city of Dawson Creek's staff and residents. The process was tedious, as staff members were required to manually record and organize each deficiency before creating a report that would then be distributed among staff to repair. Human error was a factor, as staff members were required to keep track of the many distinct types of issues, with some deficiencies going unnoticed or forgotten until reported by residents.

Challenges

Road conditions are a constant cause of concern for the residents of Dawson Creek, especially with the large number of naturally recurring potholes the city experiences annually. With the goals to better serve the community and to help staff manage its assets more efficiently,
the city began searching for new solutions to assist in improved road maintenance.

1. Before ROVER's implementation, the city's pothole repair process was prone to error, as it was reliant on reports made by inspectors on patrol as well as Dawson Creek residents.
2. Staff were required to manually organize each case and patch deficiencies individually.
3. This resulted not only in slower repair times, but also the occasional duplicate work being sent to multiple teams, resulting a waste of time for all involved.



Solution

In June 2020, the city of Dawson Creek initiated a pilot project, collaborating with Visual Defence on ROVER. The ROVER device utilizes an artificial intelligence application that makes use of the a smartphone device to detect a variety of road deficiencies, including potholes.

To use ROVER, the user simply attaches the provided smartphone to the patrol vehicle's windshield using the included mounting kit before driving.

While the vehicle is in motion, the AI identifies deficiencies and uploads the incidents to the cloud. This provides the city staff with almost immediate access to the data.

City staff are then equipped to quantify the number of potholes and prepare efficient repair plans based on severity and priority, as they are able to target high priority areas and multiple detections at once rather than working on one incident at a time.

- After discovering the ROVER technology and learning more about its features, the city of Dawson Creek initiated a pilot program with Visual Defence.
- The ROVER device was installed on a patrol vehicle and the city staff were trained on its usage.
- The city noticed a number of improvements in their maintenance processes, including repair time and more efficient repair plans, resulting in the city making the decision to use ROVER in operational settings.

Results

Improved Efficiency

The ROVER pilot was deemed a success, and the city continues to utilize ROVER to assist in road maintenance needs. Dawson Creek has seen an increase in efficiency with their pothole repair process, and can now better manage incidents due to the easily accessible, quantifiable data the device provides.

Location Data

Because of the ability to easily organize different detections by severity, the city staff are now able to provide information to repair crews for high priority areas, allowing them to focus on "patching areas rather than driving from one pothole to the next."

Budget Friendly

Staff members can take a more proactive approach with repairs, ensuring that they are completed in a timely manner for their residents' convenience and budget.

"Leveraging technology in this way helps us to be more efficient as well as provides us metrics. You can't manage what you don't measure. I am able to report out regularly how much effort we are putting into asphalt road repair when, in the past, we were only able to say that we were simply just out everyday. Being able to show that we are being productive and knowing that we are actively working to increase our level of service has been a win-win for us."

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