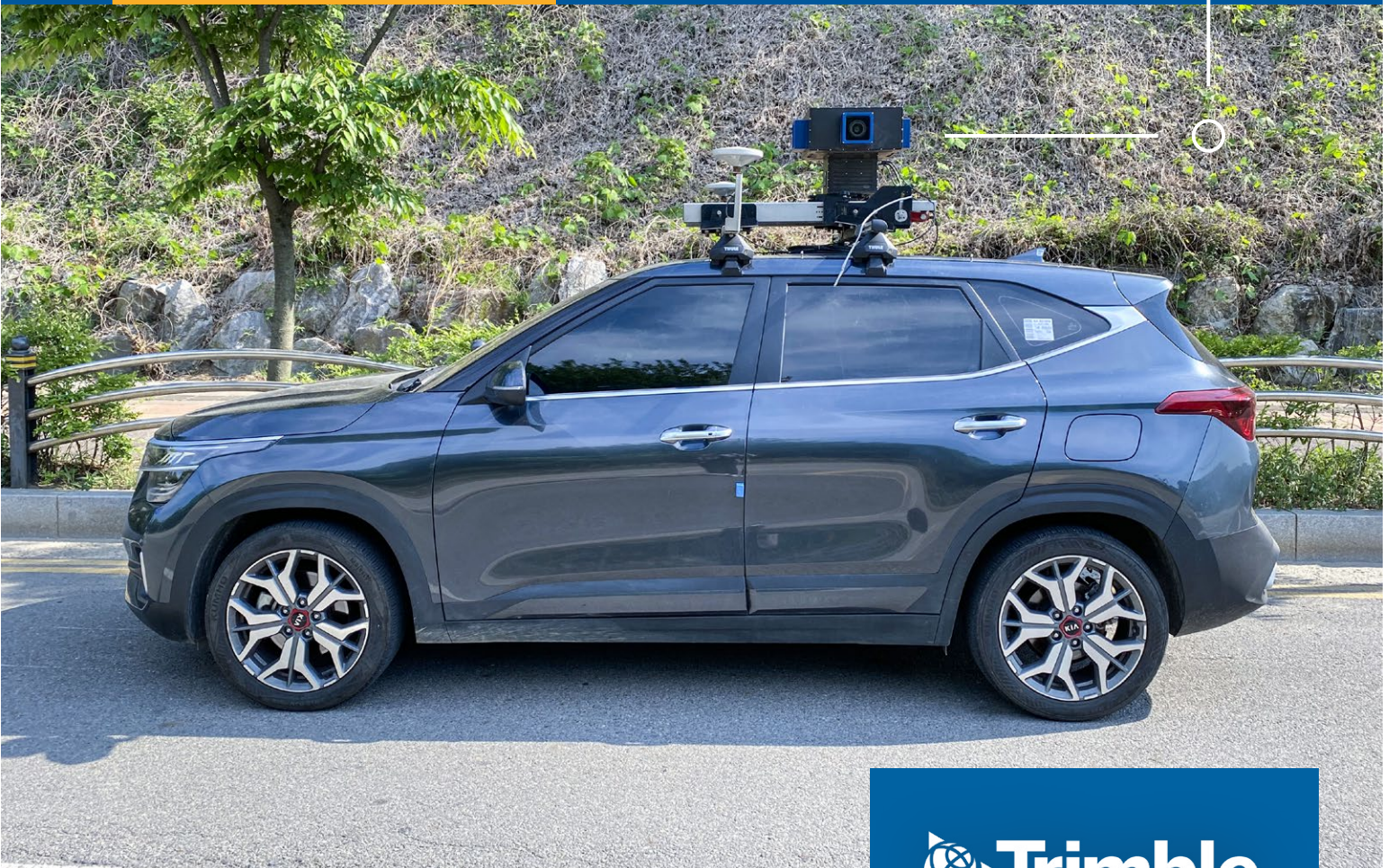




Customer Story

# Highly Accurate Positioning Data Delivers Results

Trimble Mobile Mapping



# Overview

C2L Equipment is a mobile mapping system (MMS) consultant in Korea, with expertise in 2- and 3-D data collection, navigation and image processing. They work with their customers to collect geographical and facility data of construction sites, civil engineering projects and disaster areas. Their primary business is within conversion software development.



## Challenge

As an MMS-based consultant and solution provider, C2L Equipment relies on real-world data collection via land, sea and air. They provide geospatial data collection, processing and classification to their clients. C2L Equipment utilizes a navigation structure with a vehicle-mounted camera system to quickly and accurately capture real-world road conditions. C2L Equipment's customers want even more accurate data for use in advanced driver assistance systems (ADAS). These customers want to apply machine learning to the data to replace traditional manual operations.

In order to achieve this goal, the camera systems need high-accuracy and reliable navigation devices.

C2L Equipment's customer TMap Mobility, Korea's leading ADAS and HD map service provider, sought help in applying machine learning to the analysis of road data. They came to C2L Equipment to create a camera system for collecting road data where they could apply an inertial navigation system (INS) to the system in order to determine its precise position.

## Approach

C2L Equipment explored a range of INS options to determine exact positioning of the vehicle and the mapping details for pavement inspection. Initially, C2L Equipment utilized existing RLG and FOG-type INS but found that was not a cost-effective solution.

## Solution

C2L Equipment first integrated their high-resolution camera solution with the Applanix POS LV and later with the Trimble® Applanix AP+ Land direct georeferencing solution, forming a camera system in a single rugged enclosure that can be mounted on the roof of a vehicle. The system is able to output images of road facilities, capture image log values and real-time coordinates and determine altitude values for equipment operation software. As a result, they are able to integrate Trimble AP+ Land and can automatically achieve high-accuracy mapping data without any additional requirements in the operation process.

## Results

C2L Equipment has delivered a new camera system utilizing Trimble AP+ Land solution for their customer, TMap Mobility. The integration of Trimble AP+ Land delivered significant benefits to C2L Equipment, including ease of integration, reduced costs with comparable accuracy to a FOG or RLG IMU based system. Their customer is pleased with the result, and currently all nine of their systems are up and running to collect road data.

The integration of the Applanix POS LV allows us to apply MEMS-based INS on the ground. The result is significant cost-savings without sacrificing quality.



Contact your local Authorized Distribution Partner for more information.

**Trimble Applanix**  
85 Leek Crescent  
Richmond Hill, Ontario  
L4B 3B3 Canada  
T +1-289-695-6000  
[www.applanix.com](http://www.applanix.com)