CASE STUDY

Reducing Pothole Complaints through Early Detection

Seoul Metropolitan Government, South Korea

Customer Situation

Home to approximately 9.6 million residents, Seoul, the capital of South Korea, manages a road network of approximately 5,160 miles (8,300 kilometers). In a fast-paced, highly connected megacity, residents expect road conditions to be safe, comfortable, and well maintained. As a result, citizens are quick to report road defects and demand immediate repairs, especially for potholes.

The Seoul Metropolitan Government (SMG) had already tested several solutions to detect and repair potholes before residents reported them. However, the detection accuracy of existing solutions was too low, making it difficult for the city to shift from complaint-based response to proactive road management.

Challenges

- **High volume of pothole complaints**

  Seoul Metropolitan Government (SMG) faced continued pressure from resident-reported pothole complaints and needed a more proactive solution to detect and respond to potholes before complaints were submitted.

- **Strict response mandate**

  The city is required to respond to citizen complaints within 24 hours, making real-time awareness and rapid response to road hazards critical.

- **Unsatisfactory detection accuracy**

  Although SMG had tested multiple solutions for proactive management, they were not satisfied with the detection performance or reliability.

> **"It is truly innovative to be able to detect road hazards like potholes in real time through AI. RiaaS has improved our road maintenance system dramatically "**
>
> **Jong-eun Baek**
> (Road Management Division, Seoul Metropolitan Government)

Client
Seoul Metropolitan Government

Project Duration
May 2023 - Current

Service Type
RiaaS (API)

Project Location
Seoul (South Korea)

Solution

To proactively manage potholes, Seoul Metropolitan Government (SMG) deployed 300 AI Road Analyzers (ARA-20SE) on public buses and taxis starting in 2025. The devices detect potholes in real time and transfer detection data to Seoul's management system via API. The solution also classifies potholes by severity level, enabling the city to prioritize and respond immediately to high-risk hazards.

Of Seoul's 5,160 miles (8,300 kilometers) of roads, SMG directly manages and responds to detections across 774 miles (1,246 kilometers). Detection results for the remaining 4,386 miles (7,054 kilometers) are shared with Seoul's 25 district offices, allowing each district to respond to road hazards under its own jurisdiction.

Results

On March 14th, the Mayor of Seoul, Oh Se-hoon, conducted an in-person inspection of Dareesoft's RiaaS (Road-information-as-a-Service). During the three-year implementation period from 2023 to 2025, Seoul gradually shifted from citizen complaint-based pothole repair to proactive, system-based detection.

The proportion of pothole repairs initiated by citizen reports decreased from 25.6% to 19.9%, while repairs based on automated detection increased from 15.1% to 22.2%. This demonstrated the role of RiaaS in enabling SMG's transition toward a more proactive and data-driven road maintenance model.

Following the successful completion of the three-year project, SMG renewed its contract with Dareesoft in 2026. In addition to potholes, SMG is now using RiaaS to monitor damaged delineators and guardrails across the city.

Schedule a demo to see how DareeSoft can help you:

- Identify roadway defects
- Assess pavement conditions
- Monitor roadway assets
- Improve maintenance decisions

Detections

- Potholes
- Debris
- Damaged Delineators
- Damaged Guardrails

Impact

- **93%** detection accuracy
- **5.7%** decrease of repairs based on citizen complaints
- **7.1%** increase of repairs based on automated detection
- Enabled **proactive maintenance**

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