

CASE STUDY

TENNSMART INTELLIGENT MOBILITY PLATFORM WITH GOOGLE CLOUD

Client Background

TennSMART, a Tennessee-based consortium, brings leaders together from the public, private, and academic sectors to accelerate the development and deployment of intelligent mobility innovations. The company leads mobility research by providing information sharing platforms for organizations and individuals seeking to advance transportation technology and bring efficient new models to market.

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TennSMART functions as a collaborative forum for key stakeholders in the automotive and trucking industries, municipalities, universities, and research institutions to address intelligent mobility opportunities that organizations cannot accomplish on their own. Focus areas for research and development activities include:

- Connected and autonomous vehicles
- Electric vehicles
- Cybersecurity
- Freight efficiency
- Multimodal commuting

Business Challenge

TennSMART wanted to see how they can use new technologies to increase road efficiency and safety. One possibility, known as platooning, enables vehicles to travel very closely together, safely at high speed. However, platooning will only have an industry impact if the supporting technology is widely accepted. To accelerate adoption of this technology, TennSMART needed a platform to provide data visibility for different parties to have access to research, analysis and technology deployments.

As a first step, the consortium envisioned providing easy access to relevant, valuable data to stimulate broad truck platooning—linking two or more trucks in a convoy that use connectivity technology and automated driving support systems—deployments with a TennSMART data platform. When used at scale, truck platooning will:

- Improve road efficiency
- Increase road safety
- Reduce emissions
- Reduce fuel consumption

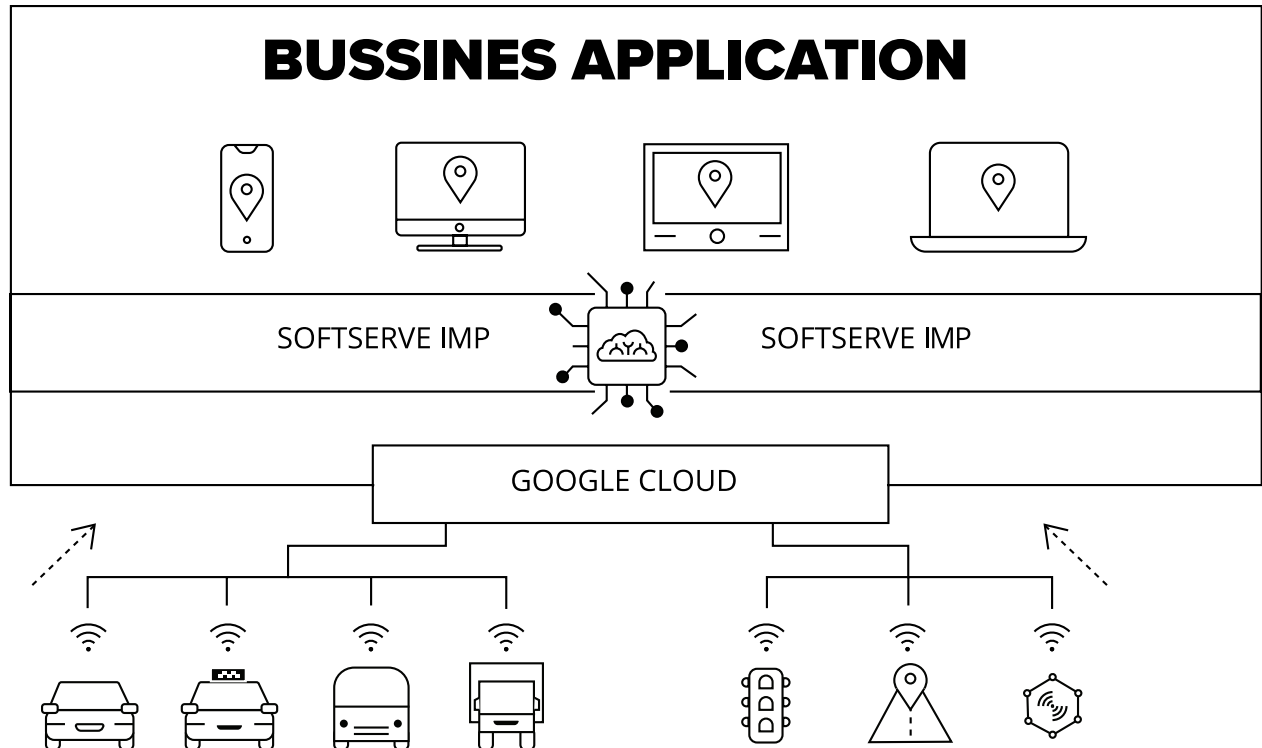
TennSMART needed a platform where autonomous vehicles could stream data and consortium members could access the sanitized data insights to help accelerate truck platooning across the state.

SoftServe developed a PoC that can be rolled up to MVP and prove that SoftServe's Intelligent Mobility Platform (IMP)—powered by Google Cloud—is a solid technical foundation for future TennSMART data platforms.

Project Description

TennSMART engaged SoftServe to create a data platform and clearinghouse that would demonstrate immediate business value to the consortium members. The proof of concept (PoC), proposed by SoftServe, outlined an approach that would give TennSMART the ability to gather, process, and disseminate relevant data and insights.

SoftServe recommended its Intelligent Mobility Platform (IMP)—powered by Google Cloud—as the foundation for the new data platform. This approach would give TennSMART the ability to monitor platooning trucks in real time and access data insights for optimal platooning parameters in order to make valuable, data-driven decisions.



SoftServe's IMP helps simplify transport systems by relaying helpful, real-time information back to users. This increase in productivity and time efficiency is a key differentiator for any business involved in or relying on transportation. Additionally, the IMP architecture is agnostic with respect to:

- How the truck connects to the system
- Format of the truck's data
- Business logic required to process the data

This gives platform users the ability to support any device, connection method, data format, and business logic by writing high-level IMP applications and deploying them to the platform without having to make modifications to the platform. Also, the platform was designed to handle future IoT devices, data formats, large data volumes, and security.

Value Delivered

Within a three-month time period, the SoftServe team:

- Delivered a PoC using SoftServe's IMP, which can be extended and operationalized as a solid foundation for future revisions of the TennSMART data platform.
- Presented the vision and developed a prototype that will support future platooning applications.

The prototype, which leveraged SoftServe's IMP, was exposed to a large audience—including the Tennessee Department of Transportation and the TennSMART consortium members—accelerating discussions about future mobility and commercial investments in mobility concepts and directions.

ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, media, financial services, software, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation—from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience are built on a foundation of empathetic, human-focused design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy—No matter where you are in your journey.

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