



 TechSee

The 2025 Guide to AI in Field Service

Driving Performance and Sustainability

Executive Summary

Field service operations face unprecedented challenges: rising costs, a growing skills gap, escalating customer expectations, and the need for strict compliance.

A key cost driver with significant environmental impact is **unnecessary truck rolls**. Compounding these challenges is the loss of tribal knowledge due to an aging workforce and the lack of practical knowledge transfer at scale.

This white paper explores how TechSee's Sophie AI platform transforms field service performance by addressing these challenges, focusing on minimizing truck rolls and their associated carbon footprint **and capturing and scaling tribal knowledge**.

By leveraging AR, AI, and remote visual guidance, TechSee empowers enterprises to virtualize operations, drastically reduce truck rolls and emissions, **preserve and expand institutional knowledge**, and elevate customer experiences, driving significant ROI.

Utilizing state-of-the-art Agentic AI, Sophie AI delivers actionable intelligence and guidance at scaling, helping leading enterprises enhance customer experience and deliver measurable ROI.

Built on the principle that a picture is worth a thousand words, Sophie AI leverages images and visuals to simplify the complex, delivering real-world impact across nearly every touchpoint in field service.



Key Highlights:

1.

PreDispatch

Virtual site audits and virtual visual remote visits directly prevent unnecessary truck rolls and their associated carbon emissions, resulting in substantial cost savings while improving your customer experience.

2.

On-Site Optimization

Real-time remote visual support boosts first-time fix rates, time on site, service quality, and customer experience. Furthermore, this approach reduces costly, carbon-emitting truck rolls and is critical to automating and scaling both tribal knowledge capture, and customizing AI for near-term automation.

3.

Post Dispatch Automation

AI-driven verification ensures service performance and accuracy, minimizing repeat truck rolls and their environmental impact while enhancing compliance and visibility for job close-out processing.



This white paper demonstrates the critical role of visual service tools in achieving unparalleled field service performance, minimizing operational costs and environmental impact, **and maximizing the value of institutional knowledge.** By integrating TechSee's AI-powered solutions, enterprises can contribute to a more sustainable future, gain a significant competitive advantage, and **build a more resilient and knowledgeable workforce.**

The Field Service Challenge

Field service operations are plagued by challenges impacting efficiency, customer satisfaction, and the environment. The "truck roll" – often unnecessary – increases costs and carbon emissions.

These challenges necessitate innovative solutions that enhance productivity, **capture and scale tribal knowledge**, reduce truck rolls and their associated carbon emissions, contribute to a more sustainable future, and deliver strong ROI. While there are dozens of AI providers promising theoretical value, we will now explore how Sophie AI's unique approach to Agentic AI simplifies complexity, delivering real-world performance.



Key Challenges Include:

Rising Operational Costs

Truck rolls drive up costs due to travel, resources, and fuel consumption, impacting budgets and the environment. This is reflected in KPIs such as MTTR and technician utilization.

Tribal Knowledge Loss

As experienced technicians retire, organizations risk losing invaluable tribal knowledge—the accumulated expertise and best practices that are often undocumented and difficult to transfer. This leads to inefficiencies, inconsistent service quality, and increased reliance on truck rolls. Sophie AI addresses this critical challenge by capturing knowledge from service transcripts and making it accessible to all.

Skills Gap

This can lead to repeat truck rolls, further increasing costs and emissions and negatively impacting FTFR.

Escalating Customer Expectations

Unnecessary truck rolls lead to dissatisfaction and a larger carbon footprint, impacting CSAT and NPS.

Dependence on In-Person Visits

This is the root cause of many avoidable truck rolls and their associated emissions.

Ensuring Compliance and Quality

Errors can result in return truck rolls, which increase costs and environmental impact, and potentially breach SLAs.

TechSee's Visual Service Toolkit: Key Capabilities

1. PreDispatch



Virtual Site Assessment

TechSee's virtual tools enable organizations to conduct site audits without requiring physical travel. Using visual technology, enterprises can assess issues and determine service requirements remotely.

For example, one of the largest homebuilders in the world now performs a visual site audit to determine which technician, hardware and skills are required for each job before dispatching the technician. This approach significantly saves time, reduces repeat dispatches, and improves resolution time, improving the customer experience.

Field Service Virtualization with Remote Visual Service

Often, field service dispatches can be prevented altogether by conducting virtual remote service calls. Technology like TechSee Live makes it easy for remote technicians to see what the customer sees, and remotely guide them to resolution. The customer can simply click a link from an email or SMS, and provide the remote technicians with live visuals of their issue via their smartphone. Remote technicians can then use TechSee Live's integrated augmented reality tools to guide the customer to full, easy issue resolution visually.

This is a clear win-win, providing faster service and issue resolution to the customer, while allowing technicians to reduce travel time and truck rolls – reducing costs and carbon emissions.

One of the world's largest home security providers has successfully virtualized 40% of their dispatches, reducing their truck rolls and carbon emissions by 40%, while saving tens of millions in overhead. reduced their truck rolls by 40% for large enterprises

Furthermore, the visuals and transcripts of these remote service calls are used to train customized Sophie AI models that will be used to augment or automate service calls.

2. In the Field

Remote Expert Consultation

While on the job site, TechSee facilitates real-time visual support from expert technicians, enabling seamless collaboration between remote experts and on-site technicians, regardless of their respective locations. Experts can guide on-site personnel through troubleshooting and repairs by sharing live video feeds and annotations, ensuring faster resolution and preserving critical tribal knowledge by transferring expertise in real-time.

This resolves issues remotely, avoiding carbon-emitting dispatches and improving MTTR by up to 50%. Crucially, these consultations generate valuable service transcripts that Sophie AI uses to learn and improve.

Remote Visual Augmented Reality (AR) Guidance

With integrated augmented reality capabilities, technicians and customers receive step-by-step visual instructions overlaid on their physical environment right from their smartphone or smart glasses.

This empowers less experienced technicians to perform complex tasks confidently and allows customers to self-service simple issues, reducing the need for technician dispatches and the associated costs and carbon emissions.

Field Service Augmentation through Sophie AI

Sophie AI enhances field service operations with predictive, automated workflows and advanced decision-making capabilities. By learning from historical data such as transcripts and visuals, and on-site inputs such as visuals and technicians queries, Sophie AI helps technicians anticipate issues, streamline resolutions, and improve overall efficiency.

Essentially, Sophie AI becomes a virtual expert technician, available on-demand via the technician's smartphone or smart glasses. Sophie AI's virtual experts can automate everything from troubleshooting to visual job confirmation, ensuring that every task is performed correctly, the first time.



Automate Tribal Knowledge Capture

Sophie's Cognitive Engine captures and analyzes tribal knowledge from experienced technicians, converting transcripts, audio and visuals into AI-driven guidance and processes that scale across teams. Sophie AI's unique reasoning capabilities automatically create, refine and scale tribal knowledge capture, processes and service flows across teams. This ensures operational continuity and empowers the next generation of field service professionals with powerful, automated coaching, training and expert guidance.

Sophie AI

integrates seamlessly with leading CRM (e.g., Salesforce), ERP, and FSM systems, for seamless deployment and full end-to-end visibility.

3. Post Service



Automated Visual Job Verification

Sophie AI's visual verification tools analyze images or video of completed tasks to confirm accuracy and compliance with quality standards.

This automation eliminates the need for manual inspections, reduces human error, and ensures consistent documentation, preserving knowledge for future use. Furthermore,

While preventing return truck rolls and their environmental impact, automated job verification has helped improve repeat dispatches for a leading Telecom by over 80%.

Automating Job Close-Out Processing

With automated visual job verification, job close-out processing becomes easier, faster, and more efficient than ever. Once Sophie AI automatically visually verifies that all steps have been completed successfully, the images and AI-generated information are automatically logged in the relevant CRM or FSM systems.

Real-World Impact: TechSee in Action

TechSee's solutions have delivered transformative results across various field service scenarios. By addressing core challenges and leveraging cutting-edge technology, enterprises have achieved measurable improvements in key performance areas.

Real-world examples and hypothetical scenarios that highlight the impact of TechSee's tools:

1.

Technician Productivity & Efficiency

A leading telecommunications provider reduced technician training time by 30% by integrating augmented reality guidance into their onboarding process. Less experienced technicians now resolve complex issues faster, supported by remote expert consultation and AR tools.

2.

Reduced Operational Costs and Carbon Footprint

An energy company implemented virtual site audits, cutting down the need for 40% of on-site visits. This resulted in significant cost savings and a measurable reduction in CO2 emissions associated with travel.

3.

Enhanced Customer Satisfaction and Loyalty

A global appliance manufacturer increased its first-time resolution rate by 25% through automated visual job verification and remote guidance. Customers now experience quicker resolutions, driving a 15% boost in Net Promoter Scores (NPS).

4.

Reduction in Site Visits and Resolution Time

In a hypothetical scenario, a field service organization used TechSee's Sophie AI to predict equipment failures, dispatching technicians with precise guidance. This reduced resolution time by 50% and minimized equipment downtime, resulting in higher client retention rates. Inspired by Salesforce's success with ADT, TechSee's AI solutions have similarly empowered enterprises to standardize and scale operations by turning complex on-the-ground knowledge into actionable AI processes.

Case Studies

Case Study 1: Telecommunications

A leading telecommunications provider substantially reduced truck rolls and fiber rollout overhead by visually automating job verification, and customer self-installation of fiber internet. With a strong reliance on third-party contractors, this telecom leader struggled with improperly installed home fiber ONTs (optical network terminals). By having Sophie AI automatically verify that each installation was successfully and properly completed, field service leadership reduced their **40% ONT setup failure rate to below 2%**. Furthermore, by having Sophie AI visually, and automatically guide users through self-setup, the telecom leader successfully transitioned over **90% of customers from technician-led to customer self-service installation**.

Overall, this resulted in a cost reduction of over \$200M, millions of tons of carbon saved, and an improvement in their CSAT of over 15%.

These examples illustrate how TechSee's visual service platform delivers tangible benefits, from optimizing operational efficiency to enhancing the customer experience. With proven outcomes, enterprises can confidently adopt these solutions to address their unique challenges and achieve sustainable growth.

Case Study 2: Home Security

This home security leader previously maintained a network of thousands of home technicians, both employees and contractors. As a heavily hardware-oriented business, nearly all service calls required a field service dispatch.

Adopting Sophie AI led to a dramatic improvement in their field service efficiency and customer experience. Their first step was to virtualize **over 40% of their truck rolls**, replacing them with remote visual service calls. Field service technicians opened instant video calls with customers, so they could easily identify the hardware in question, understand the issue and visually guide the customer to full resolution. At the same time, Sophie AI learned from each of these virtual, visual service calls, developing unique, proprietary knowledge about the security leader's hardware, processes and best next action. Once validated by their internal experts, this knowledge was integrated into their Sophie AI Assistant for their remote and field service agents, further improving their first-time resolution rate, and further reducing their dispatch rates.

Now that they have validated this knowledge internally, they have begun testing and rolling out their first fully automated Sophie AI Agents to fully virtualize and scale their field service automation.

- **Methodology:** all figures presented in the above case studies were reported directly by the customer or by their GSI partners.

Conclusions

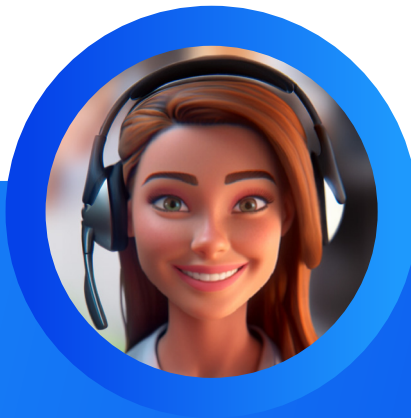
The key to unlocking your full field service potential lies in the adoption of innovative, visual-first AI. TechSee's Sophie AI is a visual service platform built on Agentic AI that empowers enterprises to overcome long-standing operational challenges, from addressing the skills gap and preserving tribal knowledge to reducing costs and enhancing customer satisfaction.

By leveraging capabilities such as virtual site audits, remote AR guidance, expert consultation, automated job verification, and AI-driven field service augmentation, enterprises are achieving incredible, measurable improvements in both performance and efficiency. In this complex

landscape, TechSee's Sophie AI stands out as a transformative force, capturing critical tribal knowledge and scaling it into AI-driven guidance and processes that empower both current and future teams.

TechSee stands at the forefront of this technological transformation, offering solutions that redefine the field service experience for both technicians and customers.

We invite you to explore how TechSee's cutting-edge tools can revolutionize your field service operations. Schedule a consultation or demo today to discover the impact of visual service solutions tailored to your organization's needs.



Contact a TechSee expert today to understand how Sophie AI can transform your CX operations.

Book a meeting