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Transform field service operations with Generative AI

Leverage GenAI-powered field service framework to reduce technician assist calls and dispatch costs by 50%

Credits

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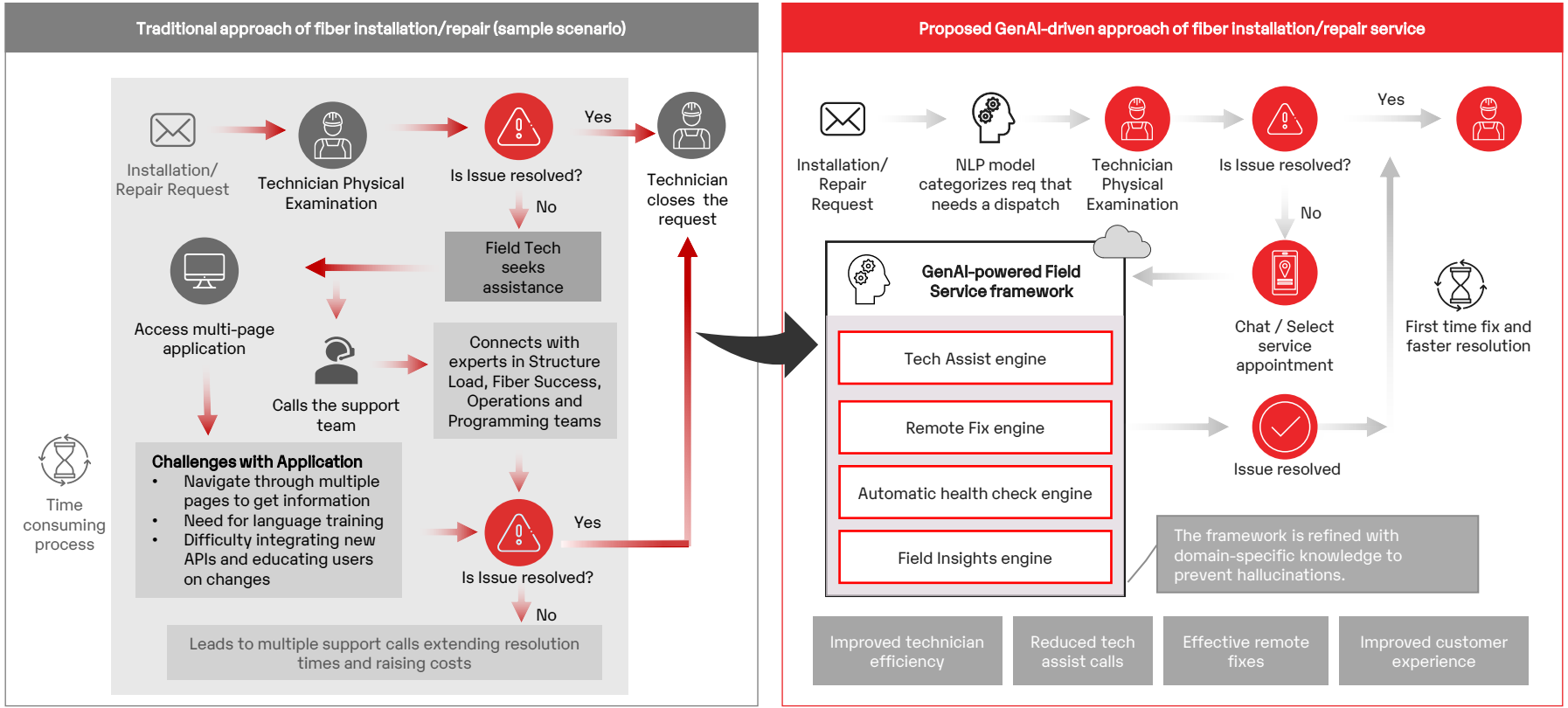
Current state of field service operations in the Connectedness industry

- Around **20-30%** of all field service dispatches are **repeat visits** (costing $100-140 per dispatch) due to unresolved issues during the first attempt. This is often due to a lack of adequate information during the initial visit-*Aberdeen report*
- Most technicians are dispatched to the field without any insight into the service request, the nature of the problem, or solution recommendations. This results in high MTTR (Mean Time To Resolve) and low FTFR (First-Time Fix Rate)
- Field technicians rely more on support centers for installation/repair fixes, leading to an increase in calls for guidance, diagnostics, or additional information
- Support agents charge an average of $20-30 per call, thus increasing the cost for enterprises

Shift to **GenAI-powered field service** to boost onsite technician efficiency and installation/repair services by 40%



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Key levers of GenAI-powered Field Service framework to boost onsite field technician efficiency and customer satisfaction

1

Tech Assist Engine

Provides accelerated support to resolve the issue, thus reducing on-site time for the field technicians

2

Remote Fix engine

Triggers appropriate APIs to provide remote fixes and effective issue resolution

4 key enablers to reduce on-site time, support calls and repeat dispatches

3

Automatic Health Check engine

Performs automatic health check of devices by pulling various parameters like speed, transmission power, etc., from multiple source systems

4

Field Insight engine

Facilitates field technicians and supervisors with insights and recommendations to boost the service efficiency

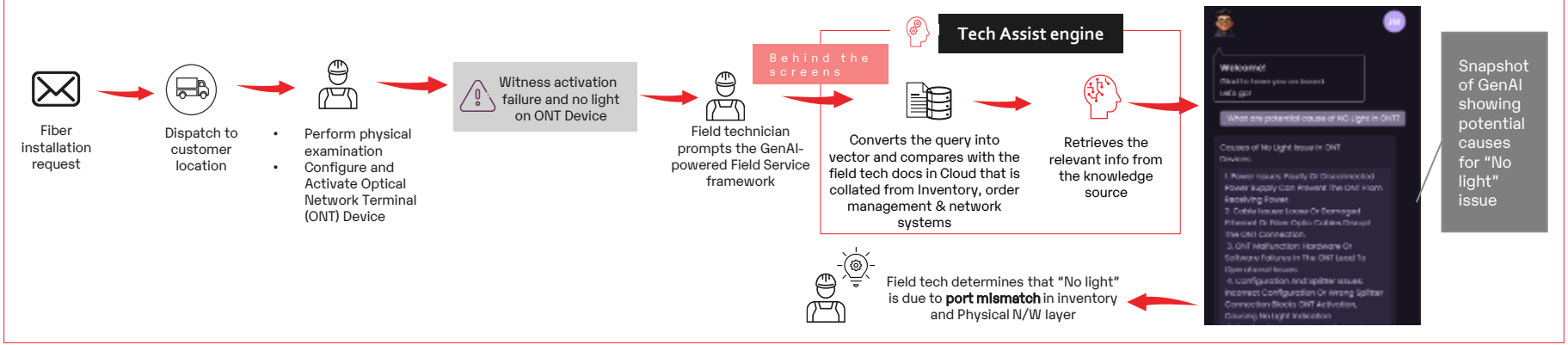
The following slides dive deep into the four key enablers for successful implementation of GenAI-powered field service framework.

Tech Assist Engine: Accelerate support by 2x and reduce assist calls for the field technicians

1 2 3 4

Field technicians often lack key information, relying on support centers for guidance, which increases costs and delays. A Tech Assist engine powered by GenAI delivers real-time insights and recommendations, reducing dependency on support teams, speeding up resolutions, and lowering operational costs.

Sample scenario: Providing insights for an on-site field technician through GenAI



Recommendations

- Implement a **Retrieval-Augmented Generation (RAG)** framework to fetch the relevant field service documents and provide quick support to the technicians
- Integrate AI similarity search tools like **FAISS (Facebook AI Similarity Search)** to empower on-site field technicians with relevant insights for intelligent issue resolution
- Store the FAISS indexing in **cloud storage** to enable **fast, scalable, and real-time access** to relevant insights for field technicians
- Enhance the Tech Assist engine with Augmented Reality (AR) for step-by-step visual guidance, improving accuracy and speeding up repairs

A Tech Assist engine provides field technicians with real-time support, enabling them to resolve issues twice as quickly, thereby reducing on-site time and support calls. Quicker resolutions also improve the First-Time Fix Rate (FTFR) and enhance customer satisfaction.

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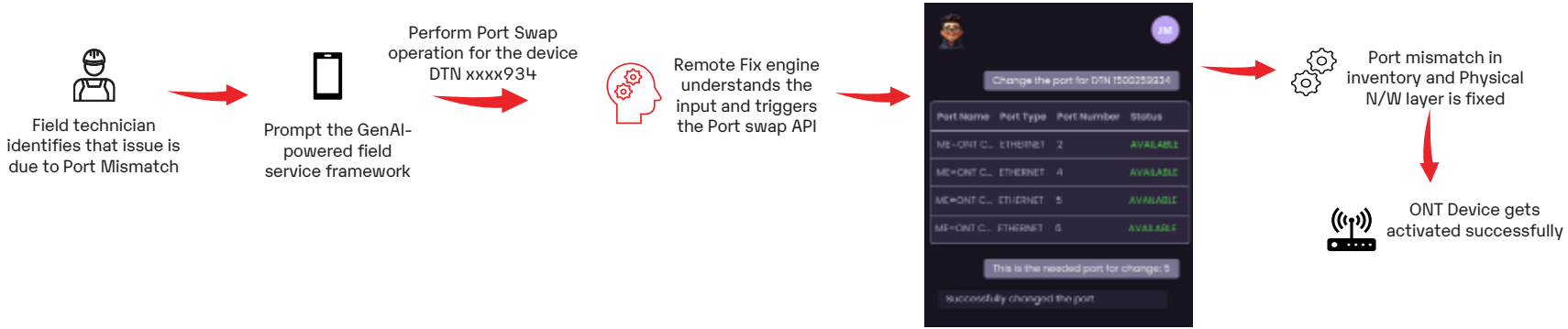
Remote Fix engine: Trigger APIs to provide remote fixes and improve installation/repair services by 40%

1 2 3 4

Field technicians often require multiple site visits for installation or repair tasks, as resolving issues on the first attempt can be challenging. This results in repeated dispatches, increased time, and cost. Also, prolonged service interruptions can lead to customer dissatisfaction. Implementing a Remote Fix engine enables technicians to perform remote fixes by triggering APIs through prompts, reducing unnecessary support calls and costs.

Sample scenario: Performing port swap using Remote Fix engine



Recommendations

- Integrate a machine learning model with the remote fix engine to analyze data from field operations, proactively detect and fix issues before they escalate. This would further reduce the need for site visits and minimize downtime
- Enhance the Remote Fix Engine by expanding its API capabilities to cover a broader range of repair and configuration scenarios, as well as various geographies, thereby making it more scalable. It helps technicians to address more complex problems remotely and reduce overall intervention time
- Implement an automated system for repair/installation calls, resolving issues via API prompts for automated and quick resolution

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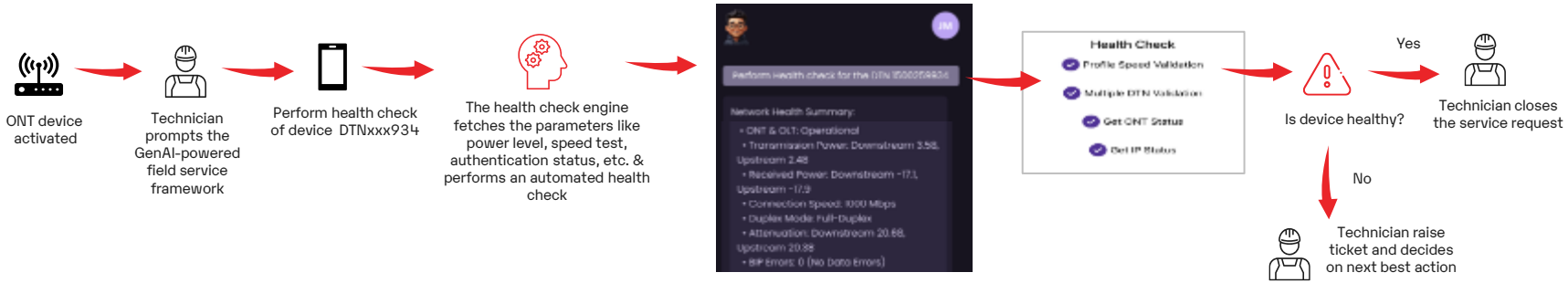
Automatic Health Check Engine: Perform a health check for successful completion of installation/repair

1 2 3 4

Monitoring and diagnosing network issues often rely on manual checks and health assessments, which can delay detection of issues and increase the likelihood of problems being missed until they escalate, leading to more significant service interruptions. An automated health check engine monitors network devices and collects performance indicators, such as signal strength and connectivity status. Once the installation is completed, it helps detect potential failures, if any, thus minimizing downtime and service interruptions.

Sample scenario: Perform automatic health check of ONT device using GenAI



Recommendations

- Gather ONT device data like signal strength, error rates, and connection stability directly from network management systems and feed the health check engine for proactive monitoring and pattern recognition for common failure points
- Implement real-time monitoring with AI-driven insights to provide continuous updates on ONT device health. This enables instant anomaly detection, faster resolution, and enhanced network reliability

By automating device health checks with GenAI, service can achieve faster diagnostics, reduce repeat dispatches, and increase network reliability, leading to greater customer satisfaction.

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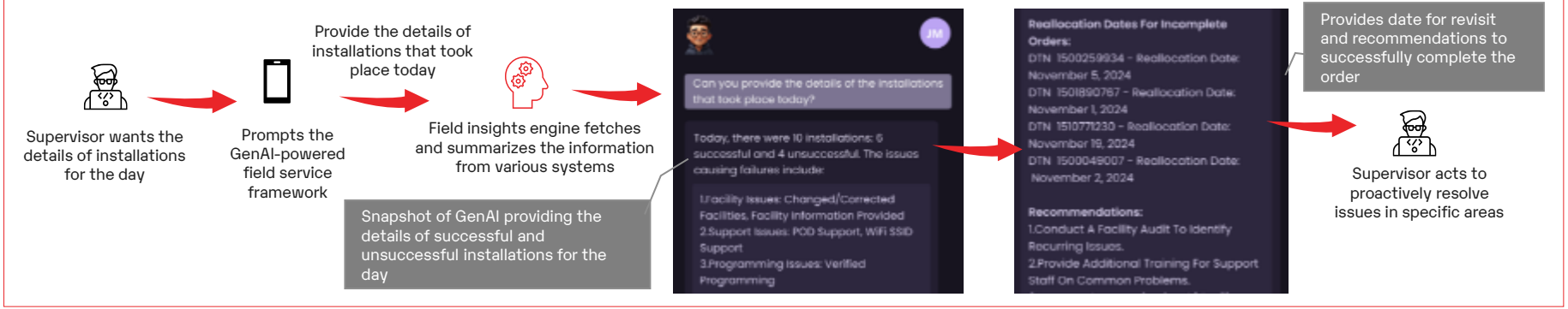
Field Insights engine: Facilitate technicians and supervisors with insights, boosting service efficiency by 50%

1 2 3 4

Data related to customers, facilities, dispatches, and order fallouts in field service operations is often fragmented across various systems, making it difficult to access and retrieve efficiently. A Field Insights engine addresses this by transforming user prompts into SQL queries through natural language processing. This enables technicians and supervisors to make faster, data-driven decisions by instantly summarizing customer, facility, and dispatch data, reducing **data retrieval time** by up to **60%.**

Sample scenario: Supervisor analyzing the installations per day using Field Insights engine



Recommendations

- Enhance the Field Insights engine with advanced NLP capabilities, allowing supervisors and technicians to create complex and **customized data queries**. This will make data retrieval more intuitive, thus improving efficiency
- Implement predictive analytics to forecast order fallout categories. This will help supervisors make proactive decisions and allocate resources more effectively based on predicted trends

By leveraging field insights engine, enterprises can cut the data retrieval time by **60%** and boost service efficiency by **50%** with quick access to customer and facility data.

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Business benefits achieved by a leading service provider after successful implementation of GenAI-powered field service framework

Implementing the key enablers as discussed in this insight resulted in the following benefits

2x acceleration in providing assistance for field technicians

50% reduction in dispatch costs

50% improvement in efficiency with quick and easy access to customer and facility data

40% improvement in installation/repair services

Thank you

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