



tsia

STAR Awards

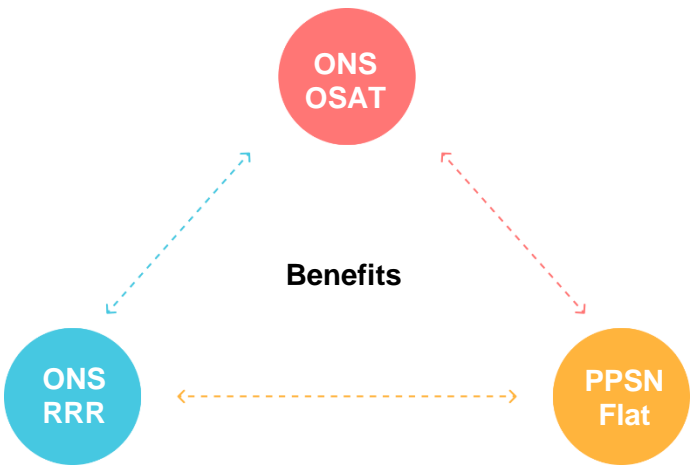
2023

2023 TSIA STAR Awards
Featured Application

Lenovo Effortless Field Services – Powered by Predictive and AI Tools

Overview

As Lenovo continues to innovate and transform Lenovo’s processes, systems, and tools (via “Play to Win” and “Good to Great” Top projects programs), and as its onsite repair volume increases, repeat repair and parts usage metrics have also seen a substantial increase. Lenovo Field Services took on the challenge to review and adopt new AI tools and analytical machine learning (proactive/predictive) technology to enhance Lenovo’s onsite Work Order (WO) end-to-end (e2e) processes and make it effortless for its call center agents / dispatchers to save time, improve their skills, and reduce the effort needed to effectively dispatch replacement hardware parts by using its new parts recommended tool. In addition, Lenovo provided a new real-time system to allow partners better management of all WO/FSEs status on screen vs manually via spreadsheet or preexisting CRM. Finally, using the new AI tools, Lenovo Field Services Engineers /FSEs can more easily execute onsite repair via fully integrated tools/systems, with relevant information at their fingertip by using the new Mobile Resolve App.



A comprehensive four-part AI solution (codename “Warrior”) was developed and rolled out over twelve months to achieve Lenovo’s goal of improving onsite experiences and address key challenges. The innovative part of the solution includes **FSE-level (Tech/ Soft skills) mapping to customer persona (profile)** and **the ‘know before you go’ AI tool** that delivers an exemplary onsite experience for both customers and FSEs. It also helps call center agents and dispatchers identify and send the correct number of parts for specific projects using **Symptom Based Parts Recommender AI tool**. This intelligent, analytics-based solution is trained on historical data and outcomes to help reduce repair time and improve uptime of Lenovo solutions at customer sites.

FSE Tech + Soft Skill
Core, Advanced, Elite & Master Levels, Soft skills, **Auto WO Mapping - Customer Persona/EPV**

RRR Reduction/Parts Recommender Tool
Analytics based on pre-diction tool, enhanced diagnostic tools, checklist

Know before you go
Case Info
W/Diagnostic, results, Repair History/tips, AI based PD Code, LEAP Videos, Failure symptoms

Customer touch point experience
New Mobile Resolve App/FSE Profile / Identifications, OTP Generations, WO closure with happy code

Challenges

Success of this project meant overcoming four key challenges:

- **Make the repair process more intelligent.** Lenovo needed to augment the repair process to increase resolution speed, reduce repeat case follow up and improve the productivity of its engineers.
- **Increase engineer support.** Lenovo’s engineering teams are a key part of its customer service infrastructure and need additional support to allow them to offer higher levels of services and support.
- **Provide better customer experiences.** To better support customers onsite, Lenovo needed to prioritize more intelligent mapping of customer needs and repair demand.
- **Improve cost efficiency.** While services and support are an important part of Lenovo’s value proposition to its customers, company leadership needed to find ways to improve cost-efficiency of this part of the business by adopting new automation technology that could assist individual engineers over the course of their jobs.

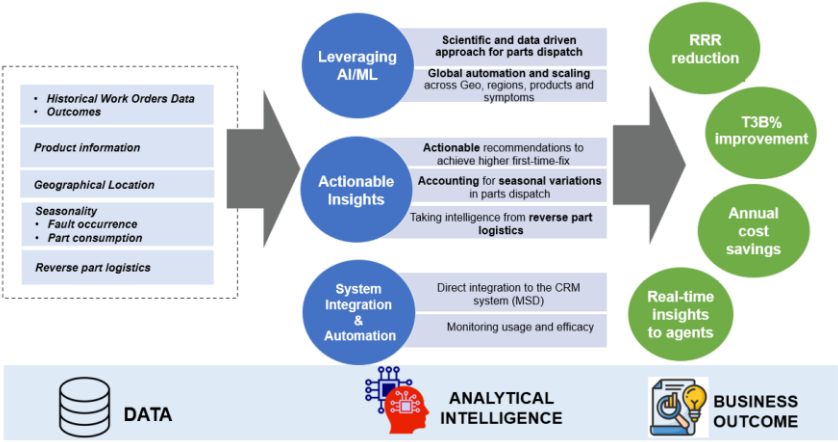
What We Have Done

1. **FSE Tech/Soft Skill for Customer Persona Mapping:** Auto work order mapping in Microsoft Dynamics (MSD) using FSE tech/soft skill to map with Customer persona (profile) using the new **Escalation Prediction Value AI tool**(EPV benefit = reduce escalation, improve CX, reduce cost). It is supported by the re-structuring and rollout of four FSE certification levels (Core/Advance/ Elite/Master) with FSE Tech ID assigned plus Personality Psychometric test & results (in10 languages) as input for the mapping.

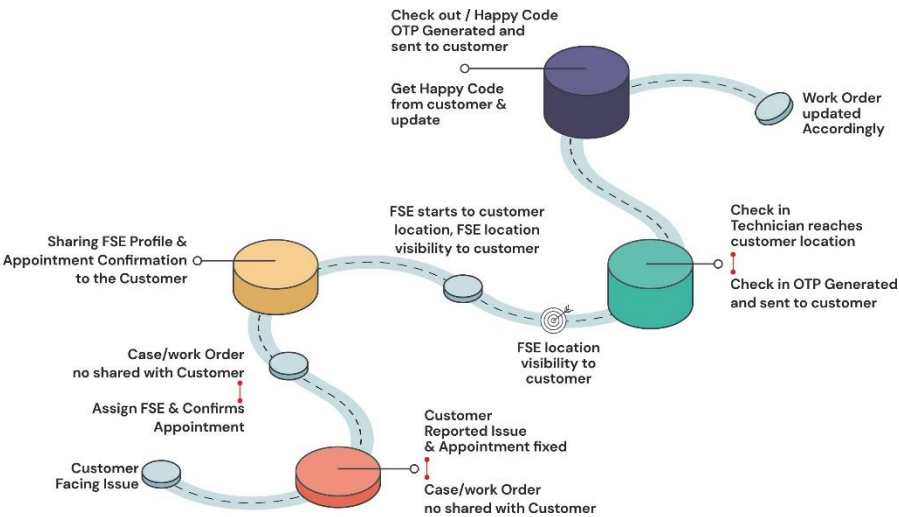
Sr	FSE Name	FSE Level (after Psychometric Test)	Customer Personas				
			Basic	Tech	Elite/ PCPS	EPV (Low)	EPV (Medium, High, Critical)
1	FSE A	Elite (Favorable - must)	✓	✓	✓	✓	✓
2	FSE B	Advanced (Favorable)	✓	✓	✓	✓	✓
3	FSE C	Advanced (Less Favorable)	✓	✓	✗	✓	✗
4	FSE D	Core (Favorable)	✓	✓	✗	✓	✗
5	FSE E	Core (Less Favorable)	✓	✗	✗	✓	✗

3 **“Know Before You Go”** (or Digital Assistance): Rollout of the FSE new Mobile Field Service App (named the Resolve App) allowed better access to the **AI base PD code tool** and other consolidated tools that help FSEs better understand their work orders, connect them with previous repair findings, and recommend specific resolutions for customer issues onsite.

2 **Part Recommender Tool:** Using **Analytical Machine Learning tool** with data repository of similar historical repair cases **(with machine sub-series, symptoms observed/diagnosed, parts dispatched, parts used, geographical details, temporal details, reverse parts logistics details)**. This tool is able to make part recommendations to the Call Center Agent, who can then improve the accuracy of each WO (based on projected successful closure % of using 1 part vs 2 or 3 right parts). This capability also improves the productivity of FSEs, ensuring that they carry the right part/s during work orders to avoid additional repair cycles and reduce customer downtime.



4 **Final Touch Point:** Lenovo released its Resolve App Portal to improve ASPs management of their WOs/FSEs in real-time to help address any issues as they arise. In addition, with the new and enhanced Mobile Resolve App (**fully integrated with MSD with real-time data transfer between the two systems**) FSEs can process their work orders e2e with full transparency at every step of the way. Customer can now know ahead of time which FSE they will be working with and can view their progress onsite. This additional customer touchpoint gives the FSE a better understanding of customer needs and repair parts availability (**via the Part Recommender tool used by Lenovo Call Center agents for all WOs**). It also helps them deliver a better onsite experience for their customers and improve overall quality of their repairs via AI tools, skill mapping, and more transparent communications during and after the repair is completed and the WO is closed.



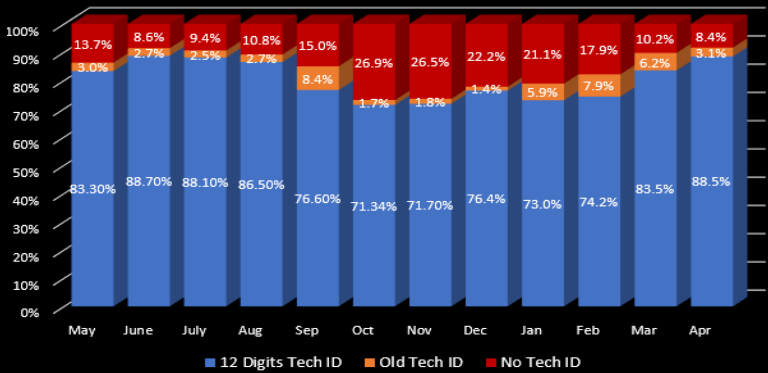
Field Services Engineer Manager comments

“ The Resolve App streamlines our operations by allowing engineers to update the CRM system directly. This eliminates duplicated effort and manual processes, resulting in increased accuracy, efficiency, and productivity.”

Field Services Engineer comments:

“The new Mobile Resolve App helps me to read the case background and known cases information before starting trip, it increases my repair accuracy and confidence in managing repair orders”

FSE - Tech ID Usage



Customer comments:

*“Similar to other food ordering apps, we can easily track the location of the engineer approaching. This user-friendly feature allows us to prepare ourself before the engineer knock my door.”
“Also, the Elite engineer's jacket and lanyard present a clean and tidy image, indicative of their exceptional skills and professionalism. We greatly appreciate Lenovo service. Thank you!”*

Customer Impact

- **2.5 points** (approx. 12%) RRR / repeat repair improvement
- **3.0 points** (approx. 4%) T3B / top 3 Box improvement
- **2,380 FSEs certified & 1,872 FSEs** completed psychometric test (to-date)
- 2.0 points (approx. 2.2%) overall Customer Satisfaction improvement
- **Improve serviceability and quality of repair** – no second trip as Engineer came well prepared with more than 1 Part to fix other related issues
- **Improve customer experience** via visibility of Engineer moving in Google Map approaching and can also use WhatsApp/SMS/Email to communicate. Get a copy of completion report immediately via mobile

Business Impact

- **Fy2223 \$850K** Actual Cost Saving (initial rollout)
- **88.5%** - FSEs Tech ID usage
- **1.0 point** (2%) Improved partner survey participation rate; survey overall average results is **92%**

Future Steps

Building on the success of this project, Lenovo plans to continue leveraging latest technology to deliver next generation support capabilities and enhanced experience to our customers, Thus, the next step is to evaluate using **ChatGPT** for Call Center agents/Dispatcher (e.g., auto dispatch parts) and Onsite FSEs (e.g., on 'know before you go' to determine right repair solution and with on-site data input to ChatGPT to help resolve customer issue faster). In Lenovo, innovation never stops. Powered by predictive and AI technology, effortless field services will continue to improve Lenovo's services and the Lenovo Brand.





tsia

STAR Awards

2023

For more information, visit the
TSIA STAR Awards Winners Page