LTIMindtree

Lights On: How a Utility Giant Improved Response Times and Customer Satisfaction

Leading utility firm cuts costs and enhances performance using data and AI

About client:

The client is a 135-year-old American utility giant, generating ~3,500 MW power for 900,000 customers across northern and central California. As the network has grown and equipment modernized, the back-end systems for customer response in both outage and service situations wasn't ideal. Working together with the client, LTIMindtree teams identified inadequate and ineffective crew response systems. This was largely due to a lack of a 360-degree view and defined user personas.

This led to lower customer satisfaction. To address this, LTIMindtree partnered with the client to modernize their tech stack, improve system adoption, and reduce costs through a persona-driven UX platform.
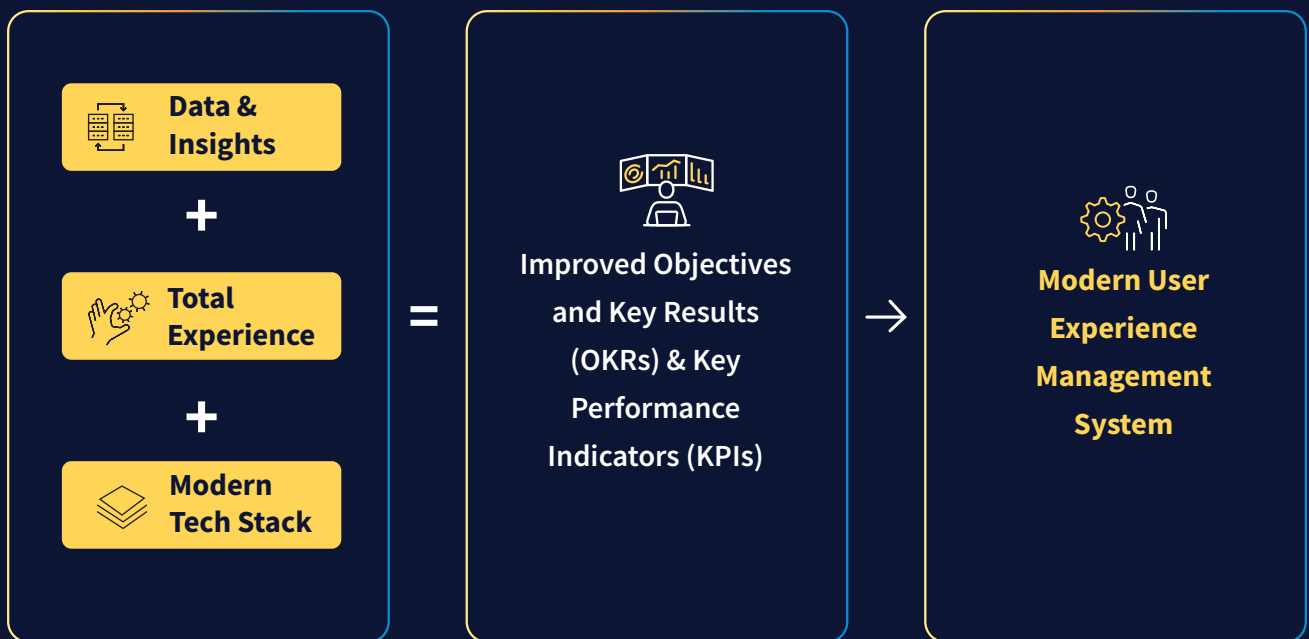
Challenges:

- Lack of specified user groups or personas such as customers, partners, crew members, and top-level management led to gaps in the user experience.

- The absence of these personas resulted in siloed experience management, which caused low user adoption. Despite the critical importance of these users, the current platform's product features were perceived as too complex to implement effectively.

- The existing technology stack was unable to handle the growing number of users and assets, causing frequent downtime.

- Reliance on manual processes further contributed to prolonged outages, slower resolution times, and decreased system reliability.

Our approach:

We developed a 360-degree innovative platform to manage user experiences across all key personas. This end-to-end solution ensured a seamless and integrated experience, addressing the unique needs of each user group.

Data & Insights

+

Total Experience

+

Modern Tech Stack

=

Improved Objectives and Key Results (OKRs) & Key Performance Indicators (KPIs)

→

Modern User Experience Management System

Solution:

We collaborated with the client as their consulting and engineering partner to define their transformation journey. Key steps included:

Discovery workshop:
We identified user journeys and pain points for end users, crew members, and outage partners.

Application design:
Created a microservice-based architecture tailored to key personas:

- Demand Centre App: Analyzed outages and emergency response times

- Dispatch Crew App: Planned and assigned tasks to crew members

Platform modernization:
Implemented asynchronous workflow management, search filters, overlay pop-ups, and task automation to boost team efficiency.

Microservices migration:
Performance and scalability were enhanced by transitioning from a monolithic structure to microservices.

AI-enhanced asset management:
We improved asset tagging, dispatch, resolution, and customer relations, leading to faster incident resolution.

Real-time updates:
We provided real-time updates on complaint resolutions and ensured accurate information capture.
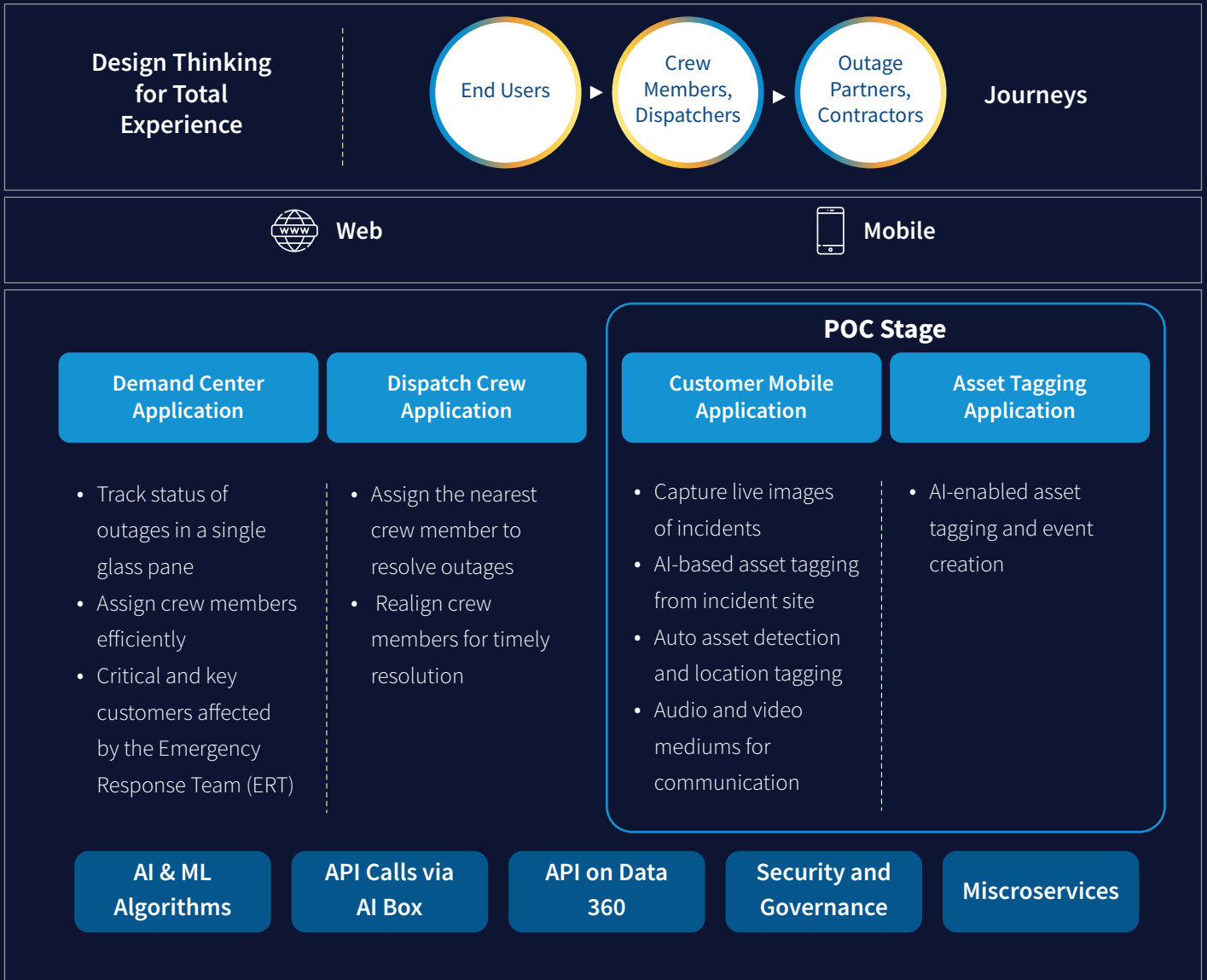
Transparency and reporting:
Application transparency and quick reporting were achieved through a comprehensive complaint mechanism.

POC for enhanced persona experience management:
We developed early concepts for an end-to-end outage management system featuring geolocation and complete outage details for stakeholders. This was enabled by:

- **Design thinking**
- **A total experience strategy**
- **API calls through an AI box**
- **AI application on data 360°**
- **Enhanced security and governance**

Design Thinking for Total Experience

End Users ▶ Crew Members, Dispatchers ▶ Outage Partners, Contractors — Journeys

🌐 Web 📱 Mobile

POC Stage

Demand Center Application	Dispatch Crew Application	Customer Mobile Application	Asset Tagging Application

- Track status of outages in a single glass pane
- Assign crew members efficiently
- Critical and key customers affected by the Emergency Response Team (ERT)

- Assign the nearest crew member to resolve outages
- Realign crew members for timely resolution

- Capture live images of incidents
- AI-based asset tagging from incident site
- Auto asset detection and location tagging
- Audio and video mediums for communication

- AI-enabled asset tagging and event creation

AI & ML Algorithms	API Calls via AI Box	API on Data 360	Security and Governance	Miscroservices

Customer's Experience Transformed

	Situational awareness & safety	Track time to resolution	Increase system reliability

Crew Member's Experience Transformed

	Analyze outage accurately	Provide real-time updates	Effortless communication with customers	Perform predictive maintenance

Benefits:

5X faster
dispatch rate

/ Crew members were able to respond to outages up to five times faster, leading to quicker resolution and minimized downtime for customers.

2X higher
user adoption

/ The new platform nearly doubled the user engagement, ensuring that critical tools were being effectively utilized across all key user groups.

25%
improvement
in crew utilization

/ Improved planning and task assignment boosted crew efficiency by 25%, allowing for better resource management and more timely responses.

12%
decrease
in system average interruption index

/ The system's reliability improved, reducing overall outages and enhancing service continuity.

10 Mins
reduction
in average customer interruption index

/ Customers experienced shorter service interruptions, with a significant reduction of 10 minutes in downtime, leading to higher satisfaction.

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Conclusion:

The transformation delivered by LTIMindtree empowered the client to modernize its operations, significantly enhancing both user experience and operational efficiency. This led to quicker response times, higher user adoption, and fewer service interruptions, boosting overall customer satisfaction. You can learn more about LTIMindtree's technology solutions for Utilities here.

Looking to transform your operations with innovative technology and a persona-driven approach?

Contact us at https://www.ltimindtree.com/contact-us/

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