



America's Leading Utility Firm Transforms Outage Management:

Cutting Costs and Boosting Adoption & Performance with Enhanced UX Leveraging Data and AI



About client:

The client is an American investor-owned utilities company with over 100 years of history and is one of the largest producers of combined natural gas and electric energy. They sought to build an innovative outage management system by modernizing their tech stack, increasing adoption across systems, and reducing overall infrastructure costs.



135

years old

3500+

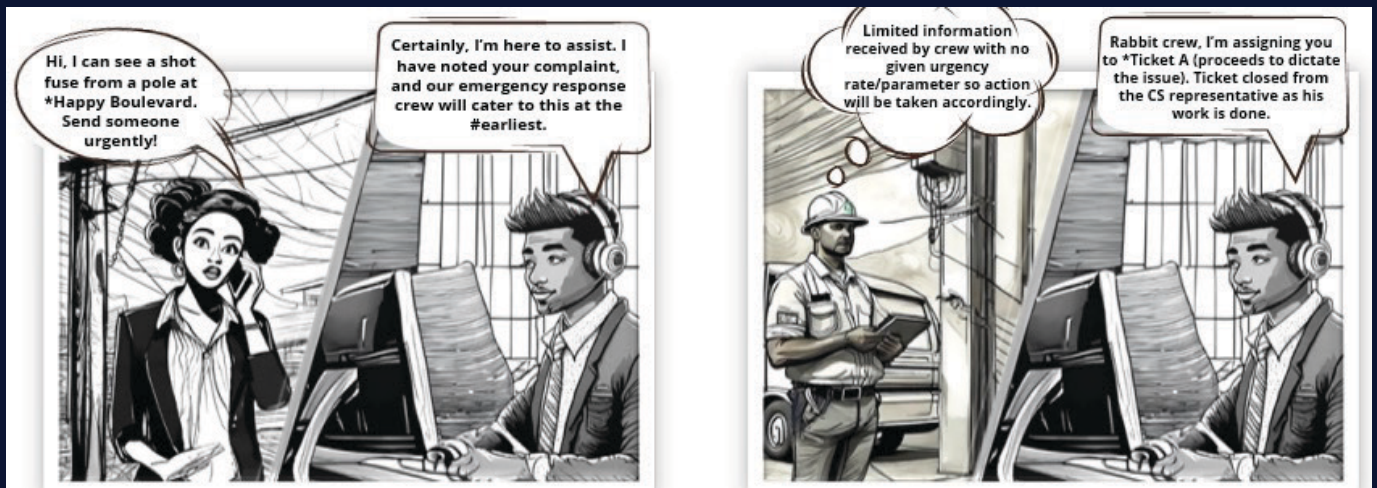
megawatt electricals

5000+

employees

900k

end users



Ambiguous information:

The CS representative fails to get the exact details given the manual process and fixed script

Long complaint calls:

*Happy Boulevard has over 100 electricity poles spread across a 100k sqm. The user has no certain way of describing the exact faulty pole

Lack of transparency:

#Earliest is an undefined amount of time which could result in fatalities

Manual processes:

Manual process because of legacy systems and practices

Excel-based crew planning and utilization:

Limited digitization results in lack of deep data insights and increased inefficiencies

Disconnected tech systems:

Legacy tech stack as a roadblock for modern age digital systems

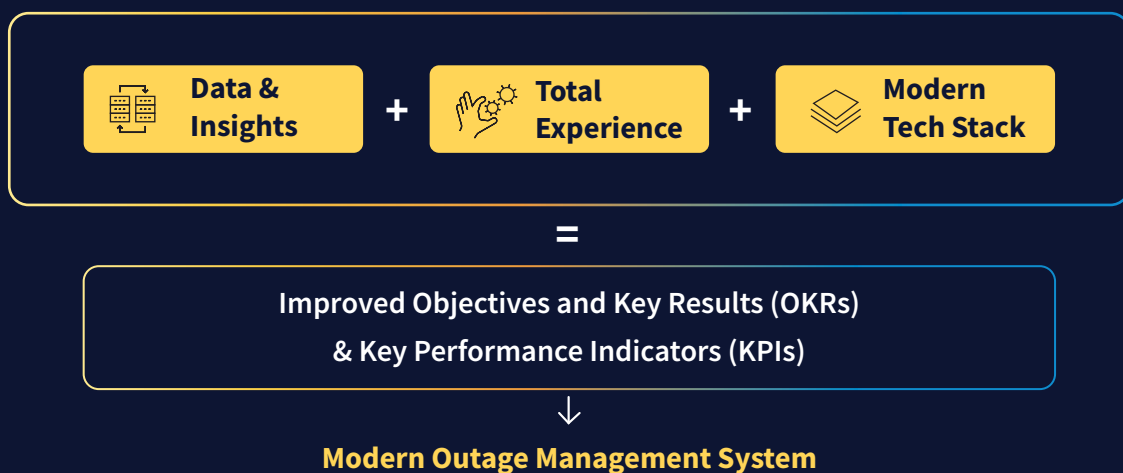


Challenges:

- The existing **outage management system solutions** were siloed, leading to low user adoption despite being business critical. Also, productizing features appeared complex.
- The current technology stack was inefficient in handling the growing number of users and assets, resulting in **significant downtime**. The client wanted to develop a solution that would provide appropriate information to various users at the right time, thereby increasing adoption.
- **Defining the pain points** of partner transformation required to create a successful experience.
- **Identified the key user groups** in the journey—customers, partners, crew members, and top-level management.
- **Moving away from manual processes** through productization using AI with different applications for each user function (ensuring transparency, shorter outages, faster resolution, and increased system reliability).

Our approach:

A one-of-its-kind experience, envisioned as an **end-to-end 360°** innovative outage management platform.

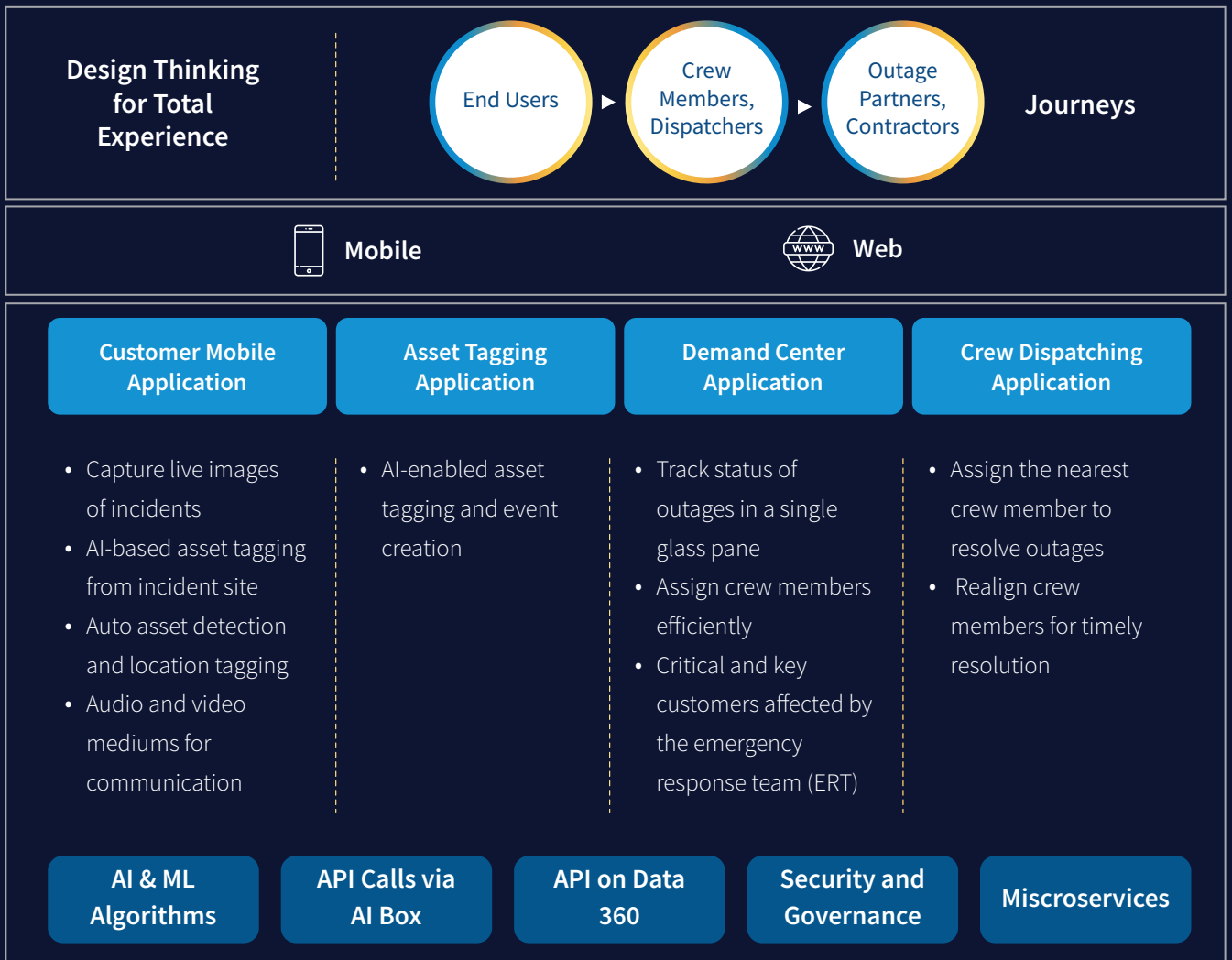


Solution:

We engaged with the client as a consulting and engineering partner to understand their problems, current state of work, and relevant processes, and defined the transformation journey. We started the customer’s transformation journey in a phased manner, wherein we:

- Conducted a discovery workshop to uncover user journeys and pain points of stakeholder personas—endusers, crewmembers/dispatchers, and outage partners/contractors
- Designed a microservice architecture-based application that brings forward the best level of information and set of actions for each stakeholder groups:
 - **Customer app—reporting outages**
 - **Asset tagging app—identifying and tagging malfunctioning assets**
 - **Demand Centre app—analyzing outages and emergency response time (ERT)**
 - **Dispatch Crew app—planning and assigning crew members**
- Built an end-to-end outage management system with geolocations, providing complete outage details for each stakeholder group enabled through:
 - **Design thinking**
 - **Total experience strategy approach**
 - **API calls via AI box**
 - **AI application on data 360°**
 - **Security & governance**
- Modernized the platform by implementing async workflow management, search filters with a collapsed view, overlay pop-ups prompting users to take specific actions, and automating complex tasks, enabling specific teams to focus on their own tasks
- Migrated from monolith to microservices to enhance performance and scalability, thereby addressing the modernization requirements of high throughput and low latency
- Enhanced asset management with the use of AI—for asset tagging, dispatch, resolution, and customer relations for faster incident resolution
- Provided run-time updates on the progress of complaint resolutions
- Ensured precise information capture
- Achieved application transparency and quick reporting through a holistic complaint mechanism





Benefits:



**Accelerated
feature release**



**Improved user
experience**



**Optimized
performance**

5X Faster
dispatch rate

2X Higher
user adoption

25% Increase
in crew utilization

12% Decrease
in system average interruption index

10 Mins Reduction
in average customer interruption index

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