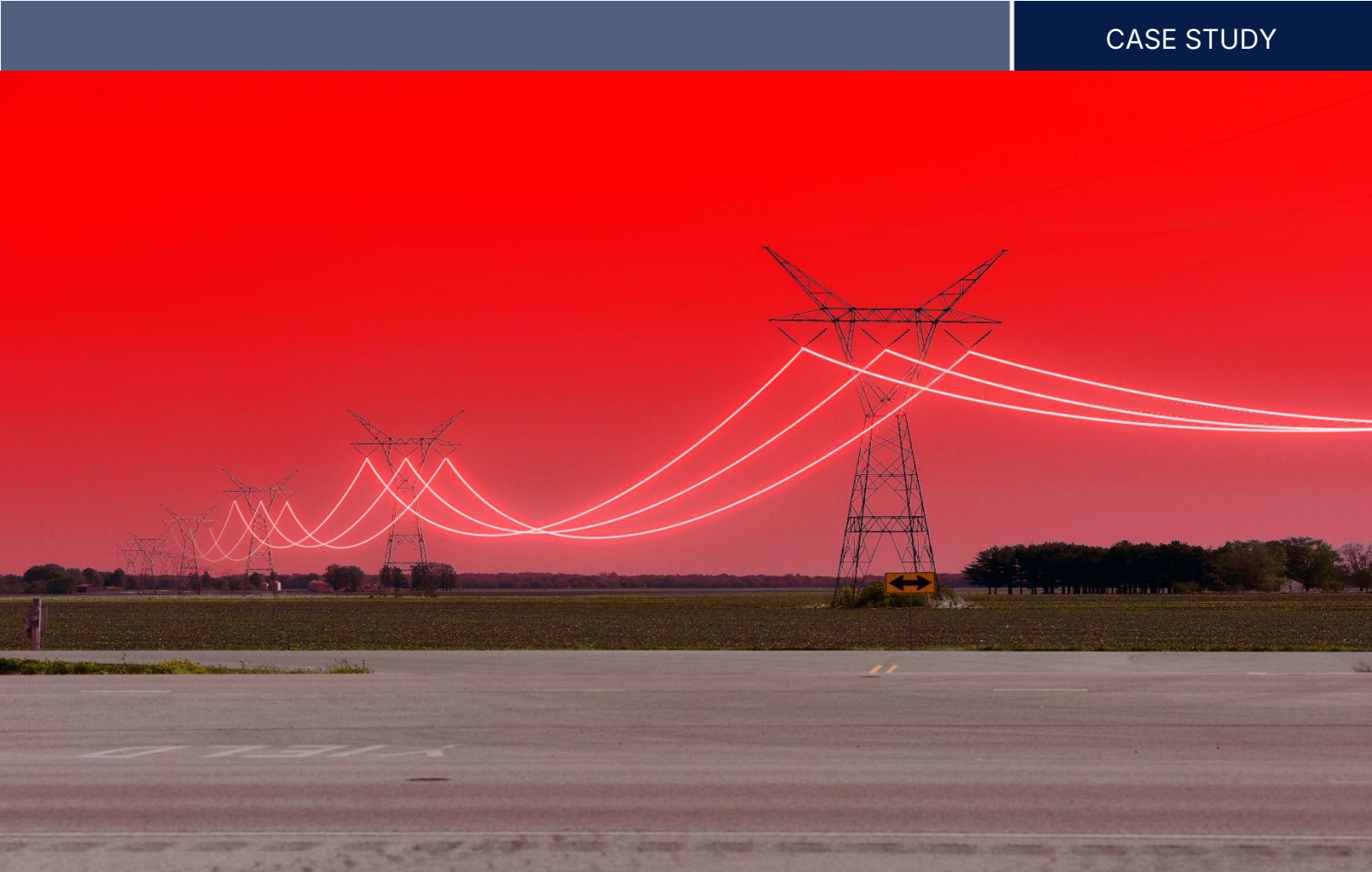




AEP Modernizes Test Automation Strategy

American Electric Power Adopts
Keysight Automation Intelligence (Eggplant Test)
on an Enterprise-Wide Level

01

Company

- American Electric Power (AEP)
- One of the largest utility companies in the United States
- Serves more than 5.5 million customers across homes and businesses

02

Solutions

Keysight Automation Intelligence (formerly called Eggplant Test)

03

Challenge

- Increase software quality assurance
- Save testing time and cost
- Modernize testing at enterprise level
- Build internal alignment around the benefits of test automation

04

Results

- **\$1.2 million** in annual savings using Eggplant Test
- **65%** reduction in time with development
- **75%** reduction in time with test execution
- **925k** exploratory testing scenarios discovered using Automation Intelligence (Eggplant Test)

Introduction

American Electric Power (AEP) is one of the largest energy companies in the United States, powering millions of homes and businesses across a transmission network that stretches more than 40,000 miles – the largest in the country. Having already adopted Keysight's Automation Intelligence (Eggplant Test) solution and seen early improvements in automation and DevOps efficiency, AEP's next challenge was how to scale that success across the entire enterprise.



Challenge

AEP needed to modernize test automation across a large, complex enterprise environment. With 17,000 employees, over 5.5 million customers, and an electricity transmission network spanning more than 40,000 miles, AEP's software quality and operational reliability carried significant business impact.

Reinforcing its position as a thought leader in the energy sector, AEP sought to leverage its purchase of Keysight's Automation Intelligence (Eggplant Test) solution to drive additional value through a cross-team adoption model to make automation work at scale, shrink testing timeframes and drive efficiencies.

Solution

AEP took an enterprise-wide approach to Automation Intelligence (Eggplant Test) adoption (see Figure 1), beginning with high-impact demonstrations that could build confidence across leadership and business teams. The team deliberately selected complex systems to prove that Automation Intelligence (Eggplant Test) could handle demanding, real-world applications.

One key milestone was testing AEP's field mobility application – a highly graphical, map-based application. Success with this complex use case helped create organizational buy-in and demonstrated Automation Intelligence (Eggplant Test) could support the most challenging user experiences. AEP also used Automation Intelligence (Eggplant Test) on customer-facing regional state websites, where customers reported outages and managed billing. By modelling user actions and running exploratory tests, the team uncovered 17 major errors in the financial module that had not been identified through previous code checks.

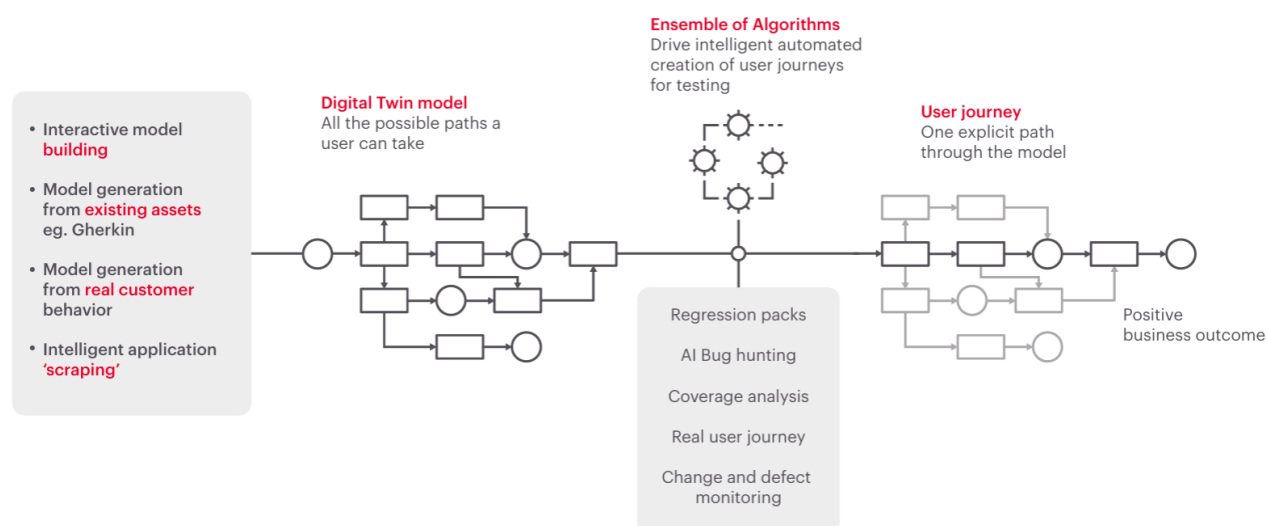


Figure 1. An overview of how Automation Intelligence (Eggplant Test) works

Beyond technical teams, AEP focused on enabling non-technical business users. John Alexander, AEP’s lead automation developer and architect on the project, built a digital twin and reusable snippets to demonstrate how easy it was to create test cases without needing coding knowledge or deep Automation Intelligence (Eggplant Test) expertise. Business users could now create test cases in only a few clicks.

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John Alexander

**Lead Automation Developer and Architect,
American Electric Power**

Being able to test AEP’s highly graphic map-based field mobility application successfully was a big milestone to build trust around our organization in test automation.

It validated what we wanted to show the business: No matter how complex the challenge is, Automation Intelligence (Eggplant Test) can test it.

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Results

Automation Intelligence (Eggplant Test) helped AEP uncover defects earlier, reduce testing time, improve quality, and generate measurable business value. In one test case, AEP had reviewed the codes and could not find what was wrong with their website. When they tested the same system using Automation Intelligence (Eggplant Test), they found and fixed the defects, which led to an **increase in revenue of \$170,000 after 30 days**.

The broader enterprise adoption produced major outcomes, including:

Key outcomes	Impact
Annual savings	\$1.2 million
Reduction in development time	65%
Reduction in test execution time	75%
Applications tested	55
Test scenarios completed	Over 1,400
Defects found and fixed before production	82
Exploratory testing scenarios discovered using Automation Intelligence (Eggplant Test)	925,000

These results reflect not just technical achievement, but a further evolution in how AEP approaches software quality. AEP expanded its use of model-based testing techniques and software quality practices across multiple teams.

Looking Ahead

AEP's Automation Intelligence (Eggplant Test) adoption demonstrates how test automation can become a catalyst for enterprise-wide modernization when paired with the right strategy, internal champions, and business-user enablement. The path forward is not only about faster testing. It is about expanding trust in automation, empowering more teams to participate in quality assurance, and continuing to apply artificial intelligence model-based testing across critical operational and customer-facing applications.

AEP is helping define what enterprise automation can look like for modern utilities. By moving beyond isolated use cases and applying automation as a strategic capability, AEP has shown how utilities can improve quality, reduce risk, strengthen collaboration, and deliver measurable financial impact.

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John Alexander

**Lead Automation Developer and Architect,
American Electric Power**

One of AEP's golden rules is promoting trust, teamwork, and work-life balance. The QA team felt more fulfilled when they saw the positive impact that using Automation Intelligence (Eggplant Test) had on the entire organization, both economically and operationally.

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Conclusion

AEP's adoption of Keysight Automation Intelligence (Eggplant Test) has enhanced how one of America's largest energy companies approaches software quality. By expanding test automation across multiple teams and use cases – from complex graphical field applications to customer-facing platforms – AEP has reduced testing time, identified defects earlier, and improved confidence in automation.

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