

CASE STUDY

UTILITIES INDUSTRY



Testing Excellence - KJR's role in asset management upgrade

Project: South East Water Maximo Regression Testing



KEY OUTCOME 1

Smooth production release with no high-severity defects identified.



KEY OUTCOME 2

Stakeholder confidence in future Maximo updates.



KEY OUTCOME 3

Maximo documentation enhanced with test plan, tailored cases and clear requirements.

BACKGROUND

South East Water, a Government owned retail water corporation providing essential services including potable water, sewerage, trade waste and recycled water collaborated with KJR to test recent enhancements to Maximo's asset and location usability.

Maximo software combines IoT data with AI-driven cognitive insights to simplify decision-making and enhance the efficient management of physical infrastructure assets.

The objective of this partnership was to ensure the updated system meets the customer's requirements and effectively supports its ongoing business operations.

WHY KJR WAS ENGAGED

KJR was engaged as a trusted partner to apply their enterprise software quality engineering expertise to South East Water's Maximo regression testing challenges.

- **Deep Domain Knowledge:** KJR's expertise in utilities and Maximo asset management enhanced testing precision.
- **End-to-End Test Management:** Their comprehensive testing experience enabled effective Maximo test planning and execution.
- **Tailored Test Case Design:** KJR tailored test cases to meet the customer's operational needs and new Maximo features.
- **Risk-Based Testing Strategy:** Focusing on high-risk areas ensured maximum test coverage within the project's tight time constraints.

CHALLENGE

KJR was responsible for managing, planning, executing, and reporting on the Maximo asset location enhancement regression testing. The customer faced several challenges, including:

- **Time constraints:** Limited testing time compressed KJR's schedules.
- **Outdated documentation:** Previous Maximo upgrades resulted in outdated documentation and test cases, hindering understanding of the current system.
- **Limited subject matter expertise:** As third-party integrators completed their engagements, project teams rolled off or resigned, leaving a limited pool of in-house Maximo experts for KJR to consult.

SOLUTION

KJR assembled a specialised team for South East Water to handle Maximo regression testing. Key steps included:

- **Requirements Gathering:** Conducted detailed walkthroughs and interviews with the customer's team to document and refine requirements.
- **Test Plan Development:** Created a comprehensive Test Plan outlining scope, resources, and risk management.
- **Test Case Creation and Prioritisation:** Designed test cases covering updates and existing functionality, prioritizing critical areas.
- **Test Execution and Defect Management:** Conducted tests using XRAY and managed defects through regular triage calls.

By following this approach, KJR successfully delivered a comprehensive regression testing solution to the customer.

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DELIVERABLES

KJR delivered several services throughout the Maximo asset location enhancement project including:

- **Test Plan:** To ensure the quality and reliability of the customer's Maximo system, KJR has developed a comprehensive test plan to describe the asset location updates testing approach.
- **Test Cases:** KJR promoted a shift-left approach by participating in initial workshops. This involvement allowed the team to create concise and clear tailored test cases, ensuring that new team members could easily understand the basic functionality and purpose of the tests.
- **Test Execution:** 72 test cases were executed to validate the asset location updates in the Maximo system. This testing ensured that the system was able to accurately identify and locate assets within the customer's network.
- **Defect Management:** A total of 30 defects were identified and managed to resolution. This process ensured that all issues were investigated, reported, and fixed.
- **Test Summary Report:** The Test Summary Report provided a comprehensive overview of the Maximo asset location enhancement test outcome, including details on the number of test cases executed, defects raised, and resolutions achieved. This report serves as a valuable tool for stakeholders to understand the effectiveness of the testing process and the overall quality of the customer's Maximo system.

CUSTOMER BENEFITS

The key customer benefits from the Maximo asset location enhancement testing project included:

- **72 end-to-end test scenarios** executed, verifying the functionality and quality of South East Water's Maximo asset location enhancements and regression tested the wider Maximo system.
- **30 defects were raised** and managed to a resolution. Notably, no defects were identified post-production, demonstrating the effectiveness of the overall KJR testing approach.
- **Updated Maximo test cases:** KJR developed a set of tailored regression test cases for the Maximo system. These test cases can be reused in future Maximo testing.

The successful delivery of Maximo asset management enhancement testing has led to the customer extending KJR's initial scope of testing by inviting the KJR team to join the customer's Business Analyst User (BAU) team.

This partnership will enable South East Water to leverage KJR's Maximo expertise to update documentation and keep the Maximo test cases current as the customer rolls out new versions of the system through their environments. This long-term collaboration underscores the value that the customer places on KJR's expertise, ensuring a continued focus on driving business success by delivering high-quality results.

TOOLS & TECHNOLOGIES

JIRA, Confluence, SharePoint, Maximo, Montage, and HIAffinity

