UTILITIES SECTOR
CAPABILITY STATEMENT

ASSURING DIGITAL
SUCCESS SINCE 1997

KJR®
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KJR is an Australian software quality engineering consultancy, specialising in software testing and AI implementation. KJR de-risks technology solutions and investments so our customers can harness technology for meaningful impact.

KJR has long-standing expertise working with customers in the Utilities sector for many years assuring digital success.

IMPACT OF TECHNOLOGY ON THE UTILITIES SECTOR

The Australian utilities sector is undergoing significant transformation driven by regulatory changes, increasing demand for sustainable practices, and continuous technological advancements. As the energy sector transitions to wind, solar and other renewable energy sources, forward-thinking utilities are leveraging new technologies to facilitate the process. Technological advancements transforming the industry include:

Smart Grids & Smart Meters

providing better monitoring and control

Data Analytics

enabling personalised customer services

IoT Sensors

providing real-time monitoring of water quality and usage

Enhanced digital interfaces

such as Mobile Apps and Portals improving customer engagement

Advanced Analytics & AI

used for Predictive Maintenance and Demand Forecasting

The Australian utilities sector is leveraging technology to enhance operational efficiency, integrate renewable energy sources, and engage customers more effectively. They are upgrading or replacing outdated applications - often developed years or even decades ago, positioning themselves for long-term success in a rapidly evolving industry.

Data and business rule migration all requires extensive testing – where KJR stands at the fore

OUR SERVICES

KJR's specialty services are crucial for delivering high-quality, secure, and reliable software products to customers. These services help customers achieve operational efficiency, reduce costs, ensure compliance, and build trust with their end-users.

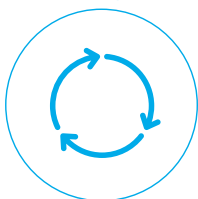Our key services cover four disciplines:

AI ASSURANCE & DATA QUALITY

With over a decade of direct experience in the AI field, we have always understood the importance of managing IT risk and how to deliver AI in a safe and guided low-risk manner. Used in areas such as predictive maintenance and grid management, AI Assurance and Data Quality play critical roles in the utilities sector, ensuring that technological advancements are reliable, efficient, and trustworthy.

SOFTWARE QUALITY ASSURANCE (SQA)

Founded on software testing in 1997, KJR continues to deliver expertise in testing and quality assurance 27 years on. SQA ensures software systems in the utilities sector are reliable, secure, and compliant, playing a crucial role in maintaining operational efficiency, enhancing customer satisfaction, and supporting the integration of new technologies.

DEVSECOPS

With security concerns now more paramount than ever, KJR's practical approach to DevSecOps ensures security is addressed during every stage of your software lifecycle. By integrating DevSecOps practices, the utilities sector can enhance its security posture, ensure regulatory compliance, improve operational resilience, and achieve more efficient development and deployment processes.

VDML

VDML (Validation Driven Machine Learning) is a methodology developed by KJR to guide customers in their development of robust and reliable Machine Learning models to deliver AI solutions. Such solutions can significantly enhance operational efficiency in the utilities sector, improve customer service and support sustainable practices, ultimately leading to a more reliable and efficient energy system.

INDUSTRY EXPERIENCE

KJR has deep experience working with some of Australia's largest utilities companies on transformative digital projects. The following provides a summary of just five of our projects:

In order to harness the full potential of their data, driving operational excellence and cost efficiencies, a long-term customer wanted to unify their disparate data so that they could take advantage of new AI-enabled capabilities that would allow them to detect leaks and predict customer billing.

This required complex data ingestion and transformation using Databricks on the Azure platform. KJR undertook an AI implementation Risk Analysis and conducted thorough testing of data and transformations.

In addition to providing assurance to the customer their data had been ingested and transformed correctly and was secure, KJR also improved the customer's awareness of AI risks and of possible unintended errors in the data transformation. Successful project outcomes included *improved operational efficiency*, *enhanced end-customer satisfaction*, and *financial stability*.

A leading supplier group of natural gas and energy distribution was embarking on a major program of transformation to achieve operational efficiencies, meet regulatory requirements, and improve customer satisfaction. The program included leveraging new technologies, upgrading core systems, processes, and a shift to cloud-based infrastructure. This called for a trusted partner to advise and deliver key technical support with an efficient and flexible approach.

With these goals in mind, KJR was engaged to assist in discovering and documenting the current state of various systems processes and teams, so the impacts of change could be understood, and risks mitigated.

Outcomes achieved by KJR included providing a *clear understanding to the business executive of potential risks*, *options for mitigation*, and *opportunities for improvement*. KJR also delivered improvements to test automation processes, and *improved security* by enhancing DevSecOps integration and tool selection.

KJR continues to support the organisation with both strategic and tactical engagements.

INDUSTRY EXPERIENCE

SOFTWARE QUALITY ASSURANCE

A large Government owned retail water corporation was undergoing a large-scale water meter exchange project covering the integration of workflows across systems. Their team required trusted resources to implement and test workflow integration for accurate and secure storage of data collected from newly installed water meters in homes.

KJR was engaged to conduct Quality Assurance services and verified integration of PEGA tools and IOT applications to ensure accurate and secure collection of data from water meters.

Comprehensive testing by KJR resulted in the successful centralised storage of data collected from household meters and the efficient reporting on meter performance. Benefits achieved by the client included *streamlined data management*, *improvements in performance monitoring of meters*, and *proactive issue resolution with affected meters*.

SOFTWARE QUALITY ASSURANCE

One of Victoria's largest Government-owned retail water corporations underwent a large-scale government-based regulation implementation. This required significant changes to the way they managed their concession billing, multiple meter billing and billing structure. The new tariffs were added to facilitate the government legislation (unique identifiers to the water meters) and also impact reports used by the business to provide datasets on customers and resourcing.

KJR was engaged to conduct high-level Quality Assurance services, provide test scenarios, and conduct testing while working alongside the AGILE-based client project team to verify that specified features and integration were compliant with the required regulations from the Victorian Government.

The government legislation implementation was a resounding success, including *efficient reporting* on the new tariffs implemented.

INDUSTRY EXPERIENCE

ONGOING PARTNER RELATIONSHIP

A state water corporation recruited KJR over many years for multiple projects. Scope of Projects undertaken and KJR's role in each included:

• Infrastructure - Develop templates, processes and procedures for new Quality Centre implementation
• IT - Full quality management over the project, including providing system testing, document and plot testing, performance, security and automation testing
• Compliance - Full responsibility for testing
• Security and Penetration Testing

• Engineering - Overall responsibility and oversight of quality and ensuring transparency of test results across the various vendors

Services provided by KJR for each of these projects achieved *increased operational efficiency*, *cost savings*, *regulatory compliance*, *efficient asset management*, and *enhanced customer satisfaction*, ensuring a long-term rewarding engagement for both parties.

OUR HISTORY

1997

With Y2K approaching, demand was high for technology and software testing. K.J. Ross and Associates was established in a garage on the Gold Coast by Kelvin J. Ross in 1997.

NOW

KJR has now grown to approximately 120 staff across four offices nationally. We're proud to say we have multiple staff whom have been with us for decades, and many long-term customers we continue to work with today.

KJR is a proud Australian-owned company which believes in harnessing technology for meaningful impact. With over 27 years in the tech industry, we are committed to delivering world-class professional services at a human scale.

Distinguished by our dedication to de-risking the technology landscape our customers navigate, we apply our industry-leading expertise in AI and software quality assurance to ensure our customers realise the full potential of their technology programs.

TOOLS & TECHNOLOGY

KJR has extensive technical experience delivering successful outcomes for customers. Here's a snapshot:

- UFT
- **Selenium**
- Microsoft Dynamics
- Microsoft Azure
- PEGA
- HiAffinity
- Pulse (Salesforce)
- XPRO
- Boomi
- **Databricks**
- Montage
- Octopus Deploy
- Team City
- BitBucket
- Azure Services
- Tricentis QTest
- **Load Runner**
- ServiceNow
- **Energy Components**
- IBM Maximo

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KJR provides the specialist skills to define project risk, testing, and assurance requirements

UTILITIES SECTOR

CAPABILITY STATEMENT

K.J. Ross Associates Pty Ltd

https://www.kjr.com.au

info@kjr.com.au

1300 854 063

CONTACT YOUR LOCAL KJR GENERAL MANAGER:

Queensland
Graham Cummins
graham.cummins@kjr.com.au
0416 551 811

Victoria
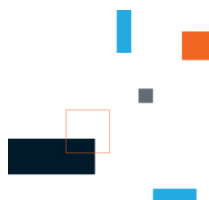Anil Kumar
anil.kumar@kjr.com.au
0404 441 695

Canberra & New South Wales
Andrew Hammond
andrew.hammond@kjr.com.au
0416 007 055

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