WaterIQ:
Digital Enablement of Rural Water Management in Queensland

Challenge

Context:
Queensland allocates approximately 6.9 million megalitres of water annually for rural use, supporting agriculture, industry, and regional communities. The Department of Local Government, Water and Volunteers(DLGWV) sought to modernise how entitlement holders access and manage their water data across a geographically diverse and operationally complex landscape.

Problem Definition:
Existing systems and work practices relied heavily on manual processes, fragmented data sources, and limited digital access for users. This created ine liciencies in customer service, compliance monitoring, and operational responsiveness. The challenge was to deliver a unified, scalable solution that could support real-time access, regulatory integration, and future measurement and water accounting expansion.

Impact:
Manual workflows and limited customer visibility of water entitlement details (including water usage) led to delays in reconciliation of water account balances, increased administrative burden, and reduced confidence in the accuracy of entitlement data. These issues posed risks to sustainable water management and hindered the department's ability to respond to environmental pressures and policy changes.

Objective:
To deliver a secure, user-friendly digital platform that enables rural water users to manage their entitlements, access real-time data, and interact with the department through streamlined, integrated systems.
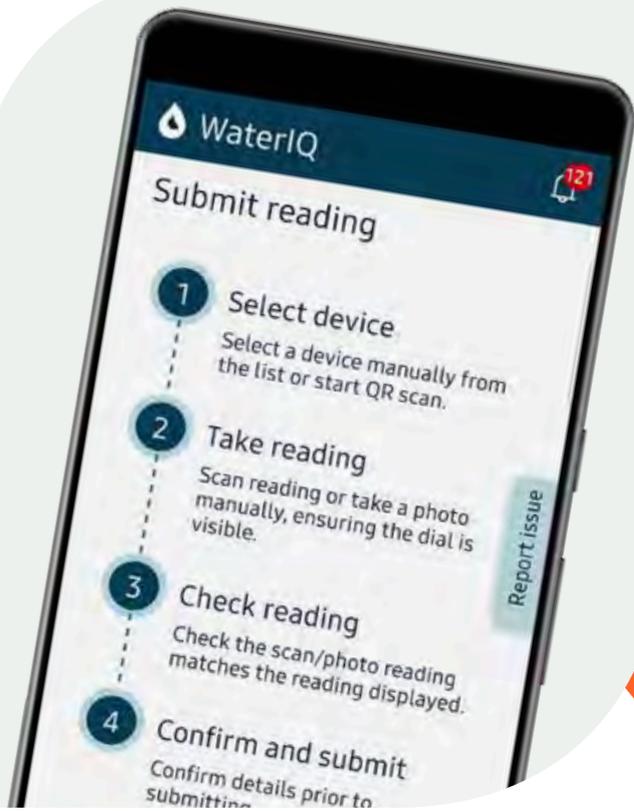
Solution

Project Overview:
Adasa led a consortium with Brennan to deliver the WaterIQ platform. Adasa was responsible for solution architecture, .NET and React development, project management, and shared QA activities. Brennan provided Dynamics 365 capability and also contributed to QA. Together, the consortium delivered a multi-channel solution comprising a web portal, mobile apps, and integrated back-office systems.

Technology/ System Implemented:
WaterIQ was built using a modern technology stack:
- .NET and React for the customer-facing portal and mobile apps
- Dynamics 365 CRM for back-office operations and compliance workflows

The technology stack was chosen for its scalability, integration flexibility, and alignment with digital best practices.

Implementation Details:
- Web portal and mobile apps deployed for entitlement holders across Queensland
- Integration with departmental systems to support customer service and water management
- QR-code scanning functionality for meter readings
- Delivered in a phased rollout aligned with regional readiness and addressing user feedback

Key Features and Advantages:
- Secure, real-time access to water data
- Mobile-enabled self-service tools
- Integrated CRM for staff workflows
- Scalable architecture for future telemetry and analytics
- Facilitates alignment with Queensland's non-urban water metering standards

Results

Outcomes:
- Improved customer experience through 24/7 access to entitlement and usage data
- Enhanced operational efficiency with reduced manual processing
- Strengthened regulatory oversight via accurate, timely data
- Foundation for future measurement requirements and predictive analytics

Benefits to Stakeholders:
- Entitlement holders gain transparency and control over water entitlement data
- Departmental staff benefit from streamlined workflows and reduced administrative overhead
- Supports environmental sustainability through better data-driven decision-making

Broader Impact:
WaterIQ contributes to Queensland's long-term goals of sustainable water management, digital transformation in public service delivery, and regulatory resilience in the face of climate variability and population growth.

Key Takeaways

01 WaterIQ sets a benchmark for digital water services in Queensland

02 Delivered through a successful government–industry partnership led by Adasa in partnership with Brennan

03 Built using modern technology architected to support Queensland's non-urban water management workflows

04 Scalable and adaptable for future policy and infrastructure needs

05 Enhances transparency, efficiency, and stakeholder confidence

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