



SICE | TECHNOLOGY
FOR PROGRESS

Water Management Capabilities





About us

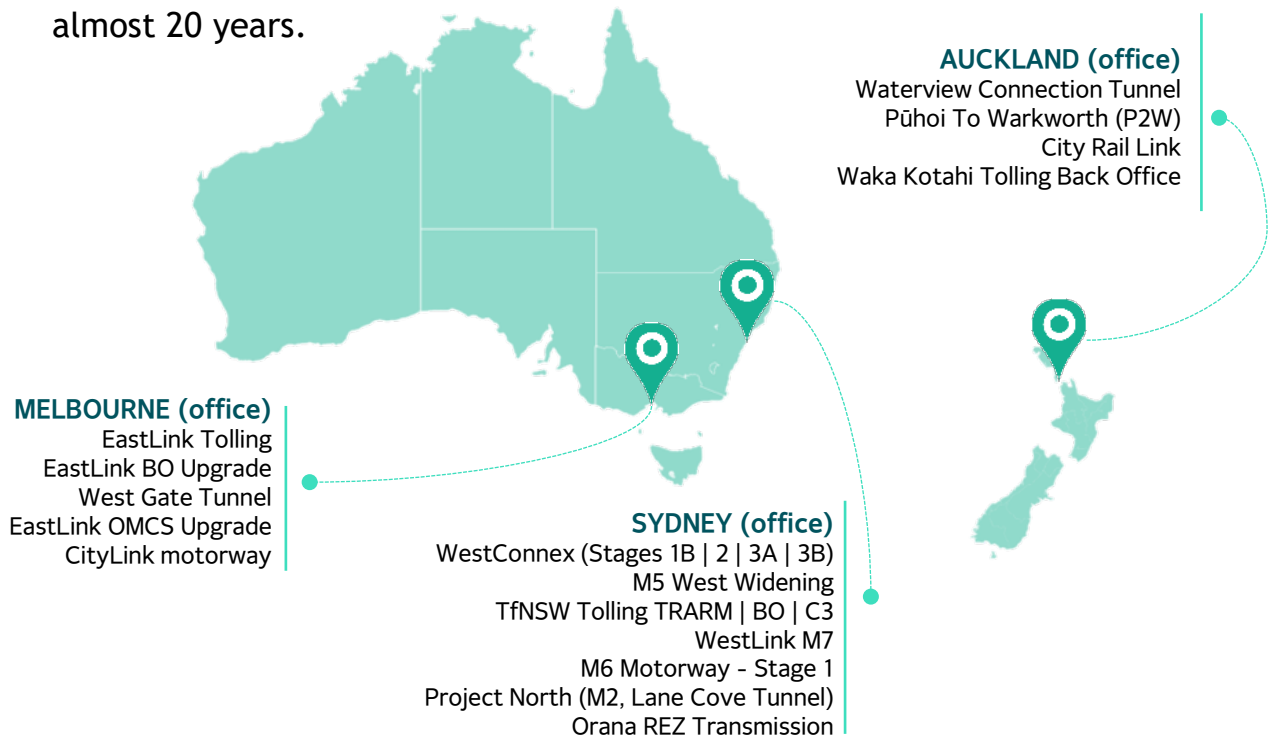
SICE is a multinational leader in the integration of technologies for infrastructure management. With more than **100 years of history**, it has become an international benchmark in the fields of water management, civil engineering, transport and mobility.

In 2008, SICE acquired OFITECO, a company with more than 50 years of experience in the comprehensive management of dam safety—covering every stage from design and construction to long-term operation and monitoring.

This acquisition strengthened SICE's position as a leader in hydraulic infrastructure safety and engineering. Building on this expertise, SICE and OFITECO jointly developed **DamData**, a proprietary platform for remote monitoring and real-time data management, currently deployed at over 400 dams worldwide. With expertise gained from supporting the operation of over 200 dams, the functional requirements of **DamData** were specified by senior dam engineering specialists and implemented in line with modern IT architecture principles, ensuring a powerful, scalable, secure, and future-ready solution for operators.

A global company **with long local expertise**

With offices in Melbourne, Sydney, and Auckland, and a team of **over 280 people**, SICE ANZ has steadily and profitably expanded its operations for almost 20 years.



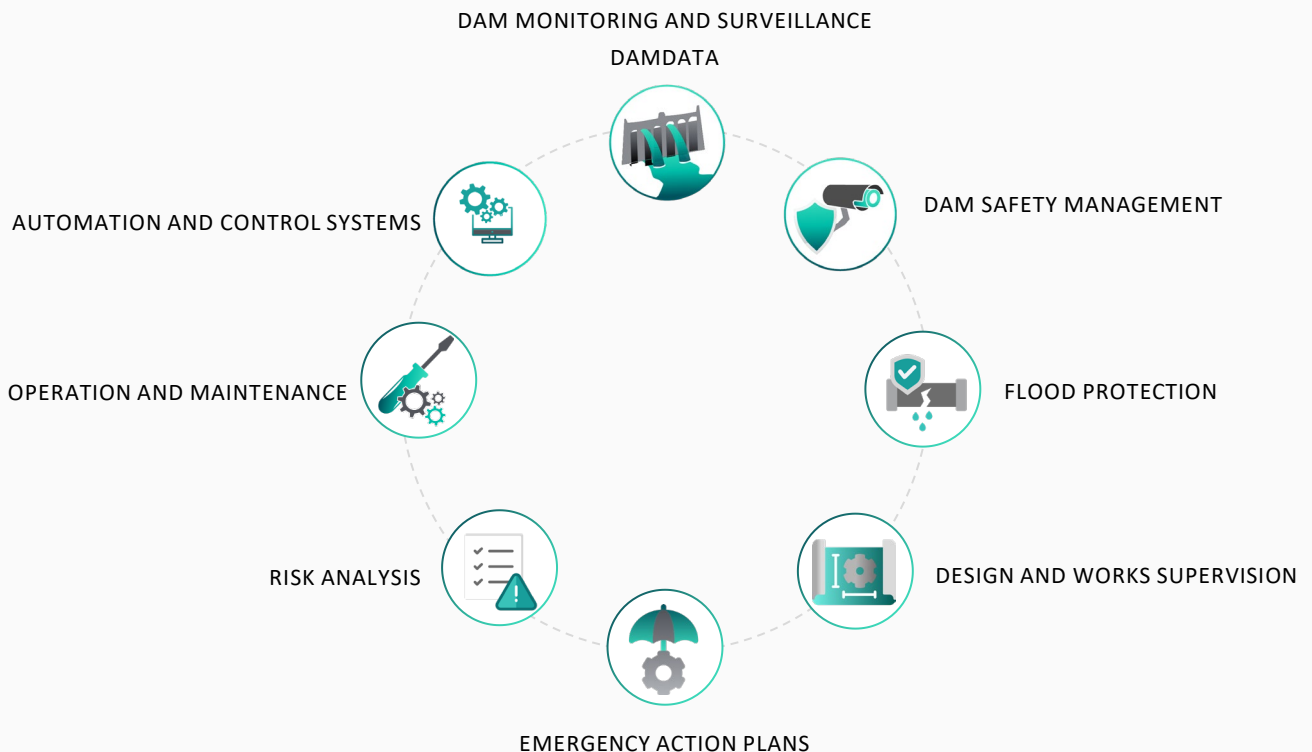
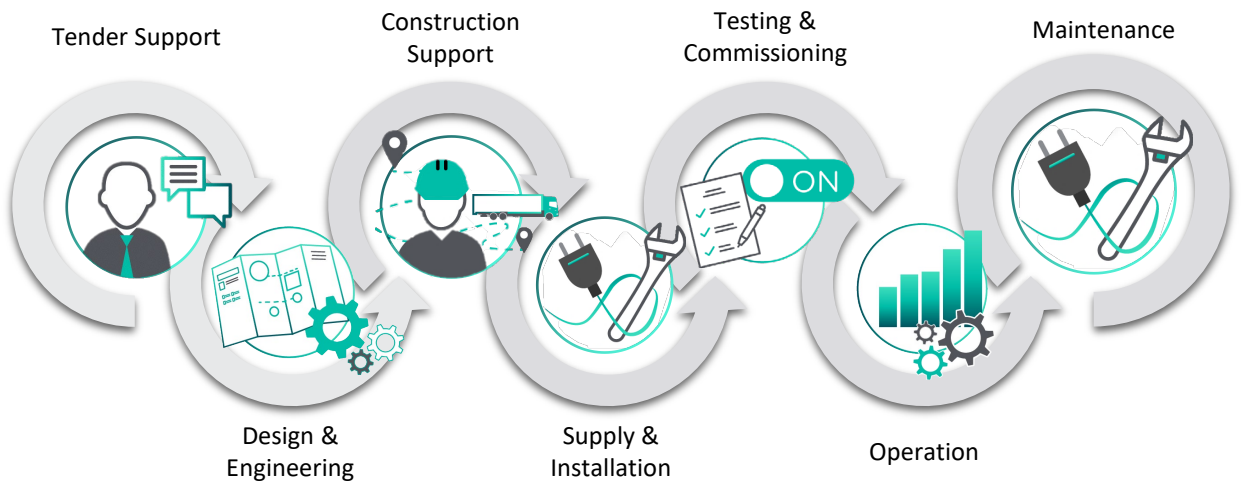




Water Capabilities

Covering all phases of a project from design to maintenance and operation

SICE generates and analyses data to assist clients and stakeholders in providing solutions tailored to their needs.



Dam Safety Management



Dams Safety Management experience in **more than 400 dams** worldwide ensuring the integrity and safety of dam structures.

- Visual Inspections and Functional Tests
- General Safety Assessment
- Emergency Action Plans
- Dam Behaviour Reports
- Surveillance and Instrumentation Plan
- Dam Classification and Dam Break Analysis
- Ordinary and Extraordinary Operation Manuals
- Risk Analysis and Assessment

Dam Monitoring and Surveillance



Design of Monitoring Solutions

Monitoring plans and procedures.
Instrumentation.
Data centralisation.
Upgrades and Improvements.



Implementation

Procurement/Acquisition.
Supply, installation and supervision.
Calibration and maintenance service.



Data Management

Reading and interpretation campaigns.
Real-time data management (DamData).
Threshold definition.
Data Evaluation and Safety Assessment.
Operational and functional tests.



Advanced Technologies

BIM 3D, Digital Twins, Drones, augmented reality glasses, 360° imagery and LiDAR to enhance data collection and visualisation.



Training



Visualisation and analysis with flexible settings of graphs that integrates all the systems and functionalities required for optimal real-time data management.



Automation and Control Systems



For the complete automation and control of dam systems, SICE provides the following services:

PROTECTION AND CONTROL



PLC Network



SCADA Control



Control Room



Security Systems

COMMUNICATION SYSTEMS



Wired Network



Wireless Networks



Radio & Mobile Communication



Cybersecurity

MECHANICAL & ELECTRICAL



Lighting



Ventilation



Power



Outlets



Design and Construction Support

We provide a complete consultation and advisory service:

● Feasibility Studies and Preliminary Design

Evaluating site conditions and client requirements to determine project viability.

● Detailed Design

Delivering precise engineering solutions to meet all technical and regulatory standards, ensuring long-term reliability and safety.

● Construction Support

Providing expert on-site support, ensuring the highest standards of quality and safety are met, aligning the construction with the project's design.



Life Cycle Management

SICE is able to fully maintain and operate a dam throughout its lifetime:



Compliance with Regulations and Legislation



Comprehensive Maintenance Plans



Preventive and Corrective Maintenance



Operations and support



Monitoring, Surveillance, and Inspections



Video surveillance and intrusion control

Risk Analysis



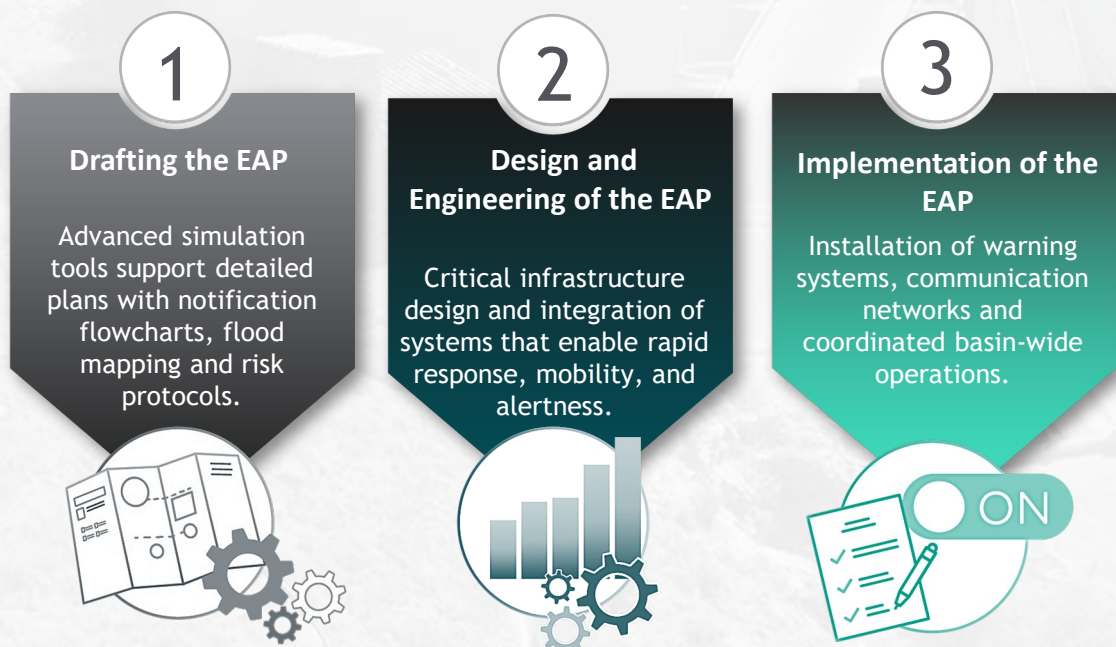
- Review of Technical Records
- Failure mode identification and analysis of consequences
- Calculation of conditional probabilities of system responses and consequences
- Risk evaluations
- Load increase probability calculations
- Site visits
- Numerical models, for failure calculations
- Definition and evaluation of alternatives
- Prioritization of risk reduction measures

Emergency Preparedness



Introducing the concept of active safety and setting up mechanisms and procedures

This enables easy identification of risk scenarios, determination of necessary mitigation measures and reduction of potential consequences to human life, services and the environment.





Flood Management

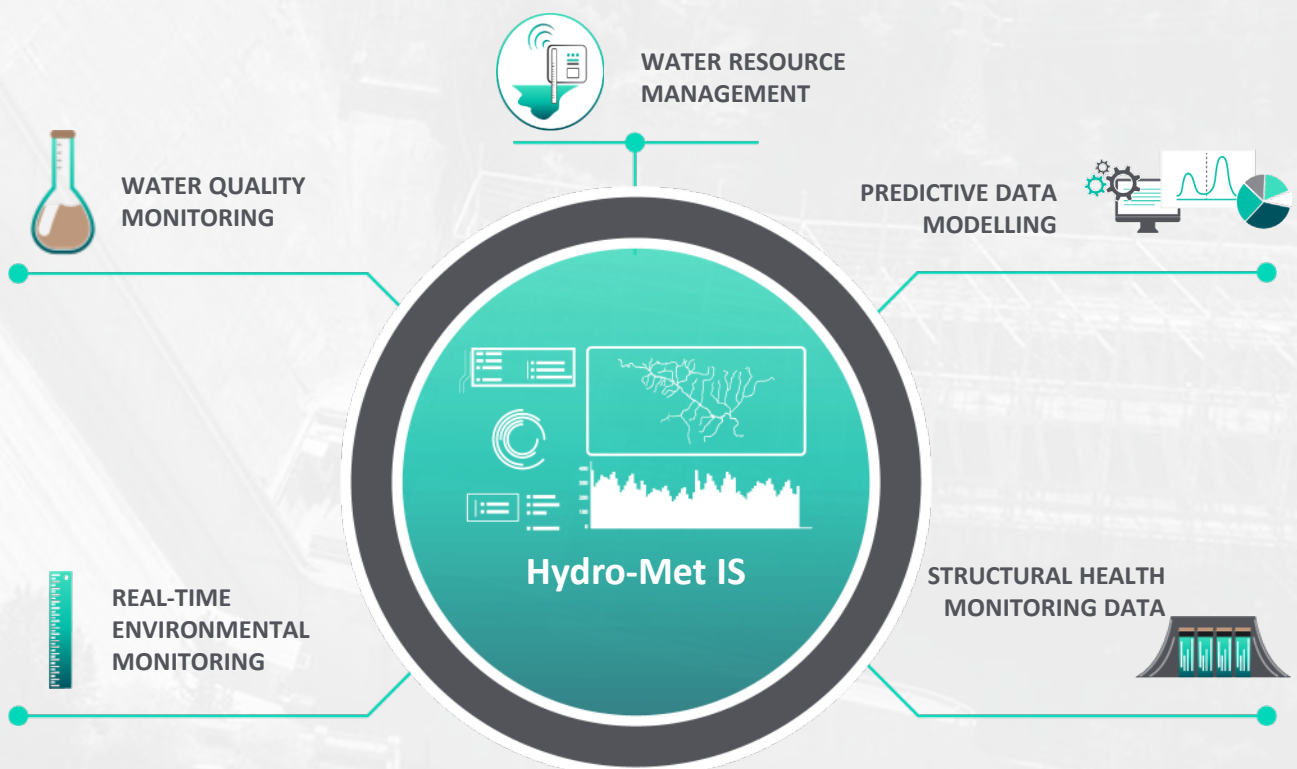
SICE has extensive experience in designing and implementing flood protection measures:

- Flood risk evaluation
- Risk and hazard mapping
- Dam Operation Manuals
- Structural and non-structural flood risk measures
- Emergency Action Plans
- Early Warning Systems
- Decision Support Systems
- Hydro-Meteorological Information Systems



Hydro-Meteorological Information Systems

Hydro-Meteorological Information Systems are advanced real-time river basin control platforms that enable river basin authorities to monitor hydrological, hydraulic, and water quality conditions and to forecast floods and prepare for floods.



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