



Case Study: Four Years of Recordkeeping in the Cloud

University of NSW RAMS SaaS



UNSW
SYDNEY

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UNSW RAMS SaaS Case Study

The University of New South Wales (UNSW) enterprise Electronic Document and Records Management-as-a-Service solution is based on Micro Focus Content Manager (CM) software and in 2021 has been delivered in a Software-as-a-Service (SaaS) cloud for four years. Internally within UNSW the solution is known as the Records and Archives Management System as-a-Service solution (the RAMS Solution).

The service was created in 2017 through a 'lift, shift, upgrade and configure' approach using the previous UNSW on-premises TRIM Records Management system. Delivered across the internet using an NTT Platform-as-a-Service (PaaS), the solution was a 'like-for-like' upgrade of the existing 1205 user system, and incrementally expanded to over 2000 users.

After four successful years of continuously exceeding Service Level Agreements (SLAs), the NTT PaaS is due for retirement, and the service is being transitioned to iCognition's ISO27001 Information Security Management certified EDRMSaaS.Cloud, which utilises Government IRAP Security certified Azure Central.

Background and Objectives

Established in 1949, UNSW is one of Australia's leading research and teaching universities and is a founding member of the prestigious Group of Eight research intensive universities in Australia. For more information about UNSW, please refer to the website at www.unsw.edu.au.

By 2025, UNSW aims to be Australia's global university with world-leading research and being a teaching-intensive university. UNSW aspires to improve and transform lives through excellence in research, outstanding education and commitment to advancing a just society.

Key to achieving the University's goals was to enable constituent-facing staff to have a single, shared, 360-degree view of their constituents. To achieve this, UNSW realised it needed to migrate onto a single, shared, enterprise wide EDRMS platform. With a preference for the savings available, UNSW also acknowledged this project as a candidate for delivery via a SaaS model.

At the beginning of 2017 UNSW issued a tender to select a vendor to provide an enterprise Electronic Document and Records Management-as-a-Service (EDRMSaaS) solution. The principal objectives of the proposed approach and implementation included:

- reductions in the cost of the overall Solution delivery, taking into account hidden and discretionary costs of delivering the current solution;
- to achieve industry best practice in records management and cloud solution delivery;
- provide a Solution which is commercially competitive to manage long term cost;
- effectively manage information management and governance risks;
- comply with all applicable laws, standards, codes, practices and policies;

- provide effective performance reporting on the solution;
- provide help desk and support services to meet UNSW requirements;
- provide uncompromising account management and customer service; and
- establish a sustainable partnership between UNSW and the successful Tenderer to promote quality Solution

Solution Highlights

iCognition responded to the tender with a solution that was a 'lift, shift and upgrade' to the NTT PaaS, and in May 2017 UNSW contracted iCognition Pty Ltd to be their partner to deliver the University's transition to the cloud-based RAMS Solution.

The proposed solution is deployed on a secure cloud in Sydney, with Disaster Recovery (DR) in Melbourne. The solution is a fully managed secure platform providing UNSW with the 99.95% availability, Recovery Time Objective (RTO) of 4 hours, and a Recovery Point Objective (RPO) of 5 minutes. The service includes:

- Content Manager 9 thick client and web clients.
- Support for applications integrated via web services.
- Production and Training/Dev. Environments.
- Authentication via ADFS.
- Connectivity via NTT Internet Communications Services.
- Infrastructure with ongoing management and patching.
- Monthly maintenance of the cloud infrastructure and the application.
- Account/Service Delivery Management.
- Annual upgrades.

A Service Desk for 2nd Level calls was also established and provides an 8am-6pm Service Desk during business days.

Transitioning to the Cloud

Initial joint analysis of the solution included a review of the iCognition solution in light of the stringent UNSW Data Handling Guidelines and IT Security Standards. This security policy referenced industry best practice standards such as security standard ISO27001, Cloud Security Alliance and Governance, Risk Management and Compliance Stack. These UNSW IT Security Standards define data classification, data handling, security incident management reporting, business continuity and disaster recovery, and other risk management requirements.

The University and iCognition jointly agreed that appropriate adoption of these standards required some time to analyse the implications on the overall EDRMSaaS design. It was further agreed that the parties invest time and effort to ensure an agreed comprehensive design that met the UNSW cybersecurity and risk management policies and standards.

Examples were architecting for 'encryption everywhere', both in transit and at rest, and even between servers in the cloud, as well as the deployment of automated security vulnerability rules for ongoing risk management.

Once the design was agreed and the solution built, a transition plan was developed to create the full RAMS service model using a 'lift, shift, upgrade and configure' of the existing UNSW TRIM EDRMS into the cloud. The resulting solution was a 'like-for-like' upgraded system for the existing 1205 users to the new Content Manager 9, including access to Web Services for a variety of integrations, and a web interface for zero footprint remote access.

The existing UNSW 2.4 Tb TRIM dataset was copied to the new EDRMSaaS solution via an encrypted AWS S3 bucket (the dataset has now grown to 4.5Tb). Once the dataset was safely housed within the NTT cloud iCognition instigated the upgrade process and presented the upgraded solution in a secure 'pre-production' environment that allowed UNSW to conduct testing. The testing regime included system testing, penetration testing, DR and backup testing, integration testing and finally User Acceptance Testing.

As a result of the strong cybersecurity work undertaken by the joint iCognition/UNSW team, the independent penetration test report concluded:

'The overall security posture of the RAMS application was found to be of a high standard. UNSW has demonstrated a high level of knowledge and ability to conduct business in a secure manner by deploying the TRIM application securely.'

On successful completion of testing this 'pre-production' environment was updated with the changes to the existing dataset and promoted to become the final production RAMS EDRMSaaS system.

Four Years of Operations

RAMS came online in February 2018 to support UNSW's corporate record keeping requirements, replacing the older TRIM system that was maintained previously on the in-house UNSW computer network.

The resulting service is aligned with UNSW's cloud adoption policy and offers increased flexibility and better value for money than the system it replaced, while ensuring performance, privacy and security are still paramount. RAMS is secure, innovative, robust, truly best of breed, and will ensure updates occur throughout the contract.

In the UNSW Post Implementation Review, UNSW identified the following benefits received by transitioning to RAMS:

- A modern, up-to-date, market-leading EDRMS solution with improved SLA's; an upgraded foundation for an Enterprise EDRMS;

- Reduces internal resource time – removes UNSW IT operational management of Content Manager, to reduce data centre footprint, and eliminate UNSW IT training costs;
- Delivers additional process improvements from suppliers who are the leader in the marketplace and have multiple partners to integrate a service model;
- Use of the Content Manager web-interface leading to increased mobility across multiple devices;
- Encourages greater compliance and conformity of use across our existing user population, with a greater incentive for uptake amongst groups who have previously been reluctant to use formal records management;
- Increased digitisation of records and ultimately the elimination of paper-based records;
- Delegates the risk management associated with business continuity to the vendor.

However, one goal that was not achieved was to conduct regular upgrades, which required University staff to roll out software and test integrations. These resources were not available in earlier years, and in later years the impact of COVID significantly reduced University capability to support an upgrade.

2021 Transition to EDRMSaaS

The issue of upgrading will be addressed in a transition to new platform in 2021. After four successful years of continuously exceeding SLAs, the NTT PaaS is due for retirement, and the service is being transitioned to iCognition's ISO27001 Information Security Management certified EDRMSaaS.Cloud, which utilises Government IRAP Security certified Azure Central. This transition is free of iCognition charges and will result in a like-for-like service to the existing RAMS system. This is currently scheduled for September 2021.

Conclusion

UNSW's successful transition to record keeping using SaaS comes against a backdrop of increased momentum to transition public sector organisations to the cloud. The solution demonstrates it is possible to transition a key specialist application workload like EDRMS to the cloud achieving increased efficiency, user productivity, system scalability and availability and at the same time managing risk effectively. The only issue during the contract was the University's ability to resource regular upgrades, which is being addressed in the transition to EDRMaaS, and ongoing by stronger use of the web client to reduce desktop rollout requirements.