How a Public University Scaled Work-Integrated Learning with OLUMS Powered by AWS

A large public university required a scalable, secure, and compliant digital platform to manage Work-Integrated Learning (WIL) across multiple faculties, professional programmes, and industry partners. As participation expanded, fragmented systems and manual processes limited visibility, compliance, and operational efficiency.

OLUMS, an AWS Partner, implemented a purpose-built WIL platform running on Amazon Web Services (AWS) to centralise placements, integrate with institutional systems, support professional compliance requirements, and enable offline access for students placed in remote and low-connectivity environments.

Challenge

- Fragmented WIL processes across faculties and professional programmes
- Increasing compliance and reporting complexity, including professional body requirements
- Limited digital access for students placed in deep rural and field-based environments

Solution

- A purpose-built WIL platform deployed on AWS Cloud infrastructure
- Deep integration with institutional systems and regulatory workflows
- Offline-capable tools to support students without reliable connectivity

Results

- Improved visibility and coordination of WIL placements at scale
- Reduced administrative burden and stronger compliance alignment
- Greater inclusion of students placed in remote and rural locations

The Customer

The Customer is one of South Africa's largest universities of technology, serving a diverse student population across multiple faculties. The institution places strong emphasis on Work-Integrated Learning as a core component of graduate employability.

It delivers WIL across a wide range of disciplines, including health sciences, engineering, and applied sciences, often in geographically dispersed and resource-constrained environments.

About OLUMS

Online University Management Systems (OLUMS) is an education technology company specialising in digital platforms for higher education and skills development. Founded in 2019, OLUMS designs systems that support academic operations, industry engagement, and regulatory compliance.

As an AWS Partner, OLUMS builds and operates its platforms on Amazon Web Services to meet the scalability, security, and reliability requirements of public sector and higher education institutions.

The Challenge: Managing WIL at Institutional Scale

As WIL participation expanded, the customer faced growing operational and compliance pressures:

Fragmented Systems and Processes

WIL coordination was distributed across faculties and departments, resulting in inconsistent placement tracking, duplicated administrative effort, and limited institutional-level visibility.

Regulatory and Professional Body Compliance

Certain programmes, particularly in the health sciences, require structured reporting aligned to professional councils such as the HPCSA. Manual mapping of student activities to regulatory outcomes increased the risk of errors and audit challenges.

Connectivity Constraints in Real-World Placements

Many students complete WIL in deep rural areas, clinics, conservation sites, and game parks where reliable internet access is not guaranteed. Traditional web-only systems failed to support these realities, creating gaps in data capture and supervision.

The Solution: A Purpose-Built WIL Platform on AWS

OLUMS implemented the OLUMS Work-Integrated Learning Portal, designed specifically for higher education environments and deployed on AWS Cloud infrastructure.

Institutional Systems Integration

The platform integrates with the customer's internal institutional systems (ITS), enabling:

- Consistent student and academic data alignment
- Reduced duplication of data capture
- A single source of truth for WIL records
- This integration allows academic and administrative teams to manage WIL using trusted institutional data while maintaining governance controls.

Results: Operational, Compliance, and Access Improvements

Improved Visibility and Coordination
Academic and cooperative education teams gained real-time visibility into student placements, progress, and supervision across faculties.

Reduced Administrative Burden
Centralised workflows and ITS integration reduced manual reconciliation, duplicate data capture, and fragmented reporting.

Stronger Compliance Alignment
Structured HPCSA mapping and digital verification improved consistency, audit readiness, and confidence in regulatory reporting.

Inclusive Access for Remote Placements
Offline functionality ensured that students placed in rural, clinical, and field-based environments remained fully supported within the WIL process.

Seamless integration of academic systems, professional requirements, and field-based learning through a unified digital platform

To support Work-Integrated Learning at institutional scale, OLUMS designed a unified platform that aligns institutional academic systems, professional body requirements, and field-based learning workflows within a single architecture. The platform integrates with the customer's institutional systems to ensure data consistency and governance while enabling structured mapping of professional outcomes, including HPCSA-aligned requirements.

Built on AWS, the solution follows Well-Architected Reliability and Security principles by providing consistent data availability, controlled access, and auditable workflows across faculties and programmes. Centralised workflows reduce operational fragmentation and administrative overhead, supporting the Operational Excellence pillar by standardising processes and improving institutional visibility into WIL delivery.

This architectural approach enables the platform to support diverse academic programmes and regulatory contexts without requiring custom, programme-specific systems. By abstracting institutional rules, professional standards, and placement requirements into configurable workflows, OLUMS allows the customer to adapt WIL delivery as programmes evolve while maintaining governance and compliance. AWS Cloud services provide the foundation for secure role-based access, environment isolation, and scalable data management, ensuring that academic staff, supervisors, and administrators interact with the system according to clearly defined privilege boundaries. This design further supports the Well-Architected Security and Reliability pillars by reducing operational risk, improving traceability, and ensuring that critical WIL data remains protected and accessible throughout the academic lifecycle.

Designed to operate across systems, standards, and connectivity constraints

Work-Integrated Learning frequently takes place in environments where connectivity is intermittent or unavailable. OLUMS addressed this challenge by designing platform capabilities that remain functional under real-world constraints, including offline data capture for students placed in deep rural areas, clinical settings, and conservation environments.

Offline entries are securely synchronised once connectivity is restored, ensuring data integrity and continuity of supervision. This approach supports Well-Architected **Reliability** by enabling uninterrupted learning workflows, **Security** through controlled data synchronisation, and **Performance Efficiency** by optimising system behaviour across varying network conditions. Running on AWS Cloud infrastructure, the platform scales to meet peak academic demand while maintaining resilience and consistent user experience.

Supporting Professional Body Compliance Through Structured Outcome Mapping

For professionally regulated programmes, compliance extends beyond placement confirmation to the verified completion of specific supervised activities and learning outcomes. At Tshwane University of Technology, certain programmes require alignment with external professional councils, including the Health Professions Council of South Africa (HPCSA), which introduces additional reporting, verification, and audit obligations.

OLUMS addressed this requirement by configuring structured outcome mapping within the WIL platform, aligning student activities directly to HPCSA-defined competencies and supervision standards. Students capture supervised activities digitally within the platform, while mentors and academic supervisors complete structured verification workflows that reflect professional oversight requirements. This ensures that learning evidence is consistently recorded, reviewed, and validated in accordance with regulatory expectations.

By standardising outcome capture and verification across programmes, the platform improves audit readiness and reporting consistency while reducing reliance on manual documentation and post-placement reconciliation. Running on AWS Cloud infrastructure, these workflows support secure access controls, traceability, and data integrity, reinforcing Well-Architected **Security** and **Reliability** principles while enabling institutions to manage professional compliance at scale without introducing additional administrative complexity.

“OLUMS has been a vital partner in advancing our WIL initiatives and streamlining the management of student placements and industry collaborations. With their expert support, we are successfully implementing the WIL Portal, which has greatly enhanced our ability to connect students with meaningful industry opportunities and monitor their progress throughout their placements.”

Customer

Supporting Work-Integrated Learning in Low-Connectivity Environments

To support students placed in deep rural and remote environments, OLUMS introduced an offline editor that allows learning activities, reflections, and evidence to be captured without continuous connectivity. Student entries are securely synchronised once connectivity is restored, ensuring data continuity across the placement lifecycle.

Deployed on AWS Cloud infrastructure, this capability supports the Well-Architected Reliability and Performance Efficiency pillars by enabling uninterrupted learning workflows under variable network conditions, while maintaining secure data handling and consistent academic oversight regardless of placement location.