



**ARM HUB AI
ADOPT CENTRE**

Impact Study

AMCA

Air-conditioning &
Mechanical Contractors
Association of Australia



Reduced Downtime,
Safer Workspaces

Impact Study

Reduced Downtime, Safer Workspaces

▶ The Air-conditioning & Mechanical Contractors Association of Australia (AMCA) represents more than 130 businesses specialising in the installation and servicing of commercial heating, ventilation, and air conditioning (HVAC) systems. Their work is essential to creating and maintaining indoor environments that are safe, comfortable, and energy efficient. Operating in a highly regulated industry requires AMCA members to comply with extensive work health and safety requirements, meaning that on any given day managers and workers may need to verify procedures, confirm control measures, or interpret regulatory requirements before carrying out a task.

Most AMCA members however are small contracting businesses, where safety responsibilities are shared across multiple roles rather than assigned to a dedicated safety manager. The knowledge they rely on is typically dispersed across lengthy manuals, policies, and regulatory documents, making critical information difficult to locate when it is needed most. Valuable time can be lost searching for answers, reducing productivity and increasing the risk that workers may base their actions on or incorrect outdated procedures, and when safety incidents do occur, it can be difficult to identify the guidance or decision-making process that contributed to that outcome.

For AMCA, supporting the safety and success of its members is central to its mission. With this goal in mind, the organisation partnered with ARM Hub to develop a better way of making essential safety knowledge readily accessible via its Integrated Management Systems (IMS), ensuring that managers and workers can quickly find reliable, up-to-date information whenever and wherever they need it.

Impact Study

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What we are developing gives our members instant, reliable guidance that keeps them compliant and takes the guesswork out of an area that genuinely keeps people up at night.

— Ben Hawkins,
CEO, AMCA

130+

member companies have access to the AMCA digital Integrate Management System (IMS) program.

Up to

90%

reduction in time to produce a compliant Safe Work Method Statement (SWMS) document – from four hours to under 15 minutes.

3000+

safety queries expected per week across active member companies at current adoption. Every document produced through the AMCA SWMS Generator is created to match the task, the site, and AMCA standards.

Problem

► For AMCA, supporting the safety and success of its members is central to its mission. With this goal in mind, the organisation partnered with ARM Hub to develop a better way of making essential safety knowledge readily accessible via its Integrated Management Systems (IMS), ensuring that managers and workers can quickly find reliable, up-to-date information whenever and wherever they need it.

As a result, ad hoc queries frequently fall to supervisors and project managers. This impacts their productivity as they search for information, and this informal approach often leaves no consistent record of the questions raised or the guidance provided, making it difficult to reconstruct the decision-making process or identify recurring issues that could be better addressed through improved training or updated procedures.

A similar challenge exists for the preparation of Safe Work Method Statements (SWMS), which AMCA's member businesses are required to produce before undertaking high-risk construction work. For many members, SWMS are created by modifying previous documents, manually re-entering project information, and reconstructing risk assessments from memory or outdated templates. This process is slow, inconsistent, and prone to error.

The result is documentation that can vary significantly in quality, omit required information, or fail to accurately reflect site conditions, creating compliance risks for both contractors and principals. It also limits AMCA's ability to understand the challenges faced by its members or gain visibility into whether the safety documentation being produced meets the standards the organisation expects.



Challenge

AMCA's core challenge has been to help its predominantly small and medium-sized member businesses maintain safe, compliant workplaces using tools that are modern, reliable, and practical for everyday use. Workers and supervisors need immediate access to accurate safety guidance without relying on phone calls, emails, or time-consuming searches through manuals and policy documents. At the same time, AMCA must ensure that any digital tool provides advice drawn exclusively from AMCA-approved content and remains subject to appropriate governance and oversight.

This challenge is compounded by the complexity of the regulatory environment. Safety guidance spans work health and safety legislation, energy efficiency requirements, Australian Standards, and state-based building and construction regulations, all of which evolve over time. Any digital solution must therefore support ongoing content management, integrate with the AMCA digital Integrate Management System (IMS) program, respect legal and privacy obligations, and maintain a transparent audit trail that meets the expectations of regulators, clients, and member businesses.

AMCA's objective has been to harness emerging technologies to improve access to trusted safety knowledge while strengthening the role of supervisors in managing site safety and ensuring compliance.

Solution

AMCA initially approached ARM Hub to help raise awareness of the impact of AI and related technologies in the construction industry. Subsequent discussions revealed that this same technology could significantly benefit members through providing improved access to essential safety information, and in late 2025 AMCA commenced work with the ARM Hub AI Adopt Centre to codevelop relevant solutions.

This resulted in the creation of two complementary AI-powered tools: the AI OHS Assistant and the AI SWMS Generator. Together, they are transforming how AMCA members access standards, procedures, and templates by providing accessible, real-time support that helps them make safer, faster, and more informed decisions.

The AI OHS Assistant provides immediate answers to safety and compliance questions using AMCA-approved content, while the AI SWMS Generator streamlines the creation of consistent, site-specific Safe Work Method Statements based on the same trusted information.

Use Case 1: AI OHS Assistant

The AI OHS Assistant is a conversational chatbot that gives AMCA members instant access to trusted safety and compliance guidance. Workers can ask questions in plain language, just as they would speak to a supervisor, and receive clear, concise answers.

Responses are drawn exclusively from AMCA-approved content, including Safe Systems of Work Procedures (SSPs), Safe Work Instructions (SWIs), Mechanical Services Procedures (MSPs), Safe Work Method Statements (SWMS), and other relevant policies and resources. Every response is fully traceable to an approved document, giving workers and supervisors confidence in the information provided.

The assistant is designed with safety and governance at its core, with each response evaluated against a confidence threshold. When the system can confidently answer a question, it provides the relevant guidance and source reference. Should the query be ambiguous, outside its knowledge base, or require human judgement, it escalates the request to a supervisor rather than attempting to generate an answer.

Every interaction is logged, creating a searchable audit trail that supports compliance, enables supervisors to review the advice provided, and highlights recurring questions that can inform future training, documentation, and continuous improvement.

Use Case 2: AI SWMS Generator

The AI SWMS Generator streamlines the creation of Safe Work Method Statements (SWMS) by guiding users through a structured, step-by-step workflow that combines AMCA-approved content with company details, project information, and site-specific hazards. This ensures every SWMS is built on trusted, consistent information. Users select from pre-approved hazard libraries, control measures, and procedural content, and the platform automatically pre-populates most of the document using approved templates, and provides AI-assisted suggestions based on the project scope, task type, and selected hazards. Users remain in control throughout the process, reviewing and confirming all content before it is included in the final document.

To maintain strong governance, the system preserves a clear separation between AMCA-controlled content and user-editable project information, ensuring that approved safety guidance cannot be unintentionally altered, while still allowing documents to reflect site-specific conditions. The completed SWMS can be exported in Microsoft Word or PDF format and is stored in a version-controlled archive, providing a comprehensive audit trail that supports compliance, document management, and continuous improvement.

Impact

For workers and apprentices on site, the impact of the AI OHS Assistant is immediate and practical. They can check a procedure, confirm a control measure, or clarify a safety requirement in the time it takes to ask a question, and receive a plain-language response linked directly to the relevant AMCA source document. Instead of waiting for a supervisor to become available or searching through lengthy manuals, they have instant access to trusted guidance that encourages more frequent verification and supports safer, more confident decision-making. Supervisors, in turn, spend less time answering routine safety queries and more time managing higher-risk activities.

The SWMS Generator significantly reduces the time and effort required for site supervisors, project managers, and safety officers to prepare compliant documentation. Project information is captured once and reused throughout the workflow and mandatory sections are consistently applied. The exclusive use of AMCA-approved content provides a reliable foundation for every document while allowing project-specific details to be tailored as needed. The result is more consistent and accurate Safe Work Method Statements, reduced administrative effort, and less reliance on outdated templates or copied content.

For AMCA, the combined solution strengthens governance across its member network. Every response and every document is built on approved content, interactions are recorded through an auditable trail, and common questions and emerging issues become visible over time. This creates opportunities to improve guidance, target training, and continuously enhance safety outcomes while giving member businesses practical tools that fit the realities of day-to-day work.



Safe Work Method Statements (SWMS)

are mandatory on all Australian high-risk construction work. Inadequate or untailored documentation remains one of the most common causes of construction safety notices nationally.

130+

member businesses able to access AI-assisted safety guidance and SWMS creation through a single governed platform.

400+

Safe Work Method Statements expected to be generated each month using ACMA-approved content and tailored to the specific task and site conditions.

Program Support

The AMCA engagement is being delivered through the ARM Hub AI Adopt Centre as part of the AMCA Digital Integrated Management System program. ARM Hub worked alongside AMCA to identify priority use cases, understand the operational challenges faced by member businesses, and design AI solutions that make AMCA's existing knowledge easier to access and apply in day-to-day work. This collaborative approach included workshops with AMCA leadership and member representatives to define requirements, establish governance principles, and agree on measures of success.

A key design principle was that the solution would be built entirely on AMCA's own safety, quality, and environmental management content. The AI OHS Assistant and AI SWMS Generator draw exclusively from AMCA-approved manuals, procedures, hazard libraries, and templates, ensuring that every response and document is grounded in trusted organisational knowledge.

ARM Hub also designed the knowledge ingestion pipeline that continuously synchronises the AI knowledge base with AMCA's document repository. As standards, procedures, and policies are updated, the system automatically incorporates those changes while keeping all data within AMCA's environment. Confidence thresholds, audit logging, and escalation pathways ensure that ambiguous or sensitive queries are referred to a supervisor rather than answered speculatively.

The result is a governed AI platform that strengthens AMCA's existing safety management systems, making trusted knowledge easier to access, apply, and maintain, while preserving AMCA's ownership and control of its content.

Through the ARM Hub AI Adopt Centre, AMCA has transformed decades of safety, quality, and environmental expertise from static manuals and procedures into an interactive safety management system that provides governed, traceable, real-time guidance to member businesses, extending AMCA's ability to deliver trusted knowledge at the point it is needed most.

Key Personnel



+ Prof. Cori Stewart
Founder and Chief Executive Officer

Professor Cori Stewart is a skilled and versatile science and technology commercialisation leader, who works in executive and advisor roles across industry, government, and the research sector. She is passionate about driving impact through university and industry collaboration and building strategic and trusted collaborations in Australia and across the globe.



+ Samuel Jesuedian
Chief Commercial Officer

Samuel Jesuadian serves as the Chief Commercial Officer, overseeing the functions of the Business Operations, Facilities Management and Finances of the ARM Hub. Samuel is an experienced operational professional who has a focus in business acumen on managing risk, driving strategic direction through systems innovation and a passion for business improvements.



+ Roozbeh Derakhshan
Director and Founder of DKE

Dr. Roozbeh Derakhshan is the Founder of Data & Knowledge Enterprise (DKE), launched in Brisbane in 2024, on a mission to make data and AI accessible to businesses of all sizes through a data and AI-as-a-service offering. With a global career spanning Accenture, SAP, IBM, ETH Zurich, and the University of Queensland, he brings deep expertise in real-time data processing. By partnering with leaders in academia and industry, Roozbeh continues to democratize data and AI for organisations of all sizes.



+ Charlotte Birkinshaw
Software/AI Engineer

Charlotte is an AI Engineer. She has hands-on experience in data engineering, AI systems, and chatbot development, with a strong focus on practical and user-centric solutions. Charlotte was also a recipient of the prestigious New Colombo Plan grant, recognising her potential in technology and international collaboration.



+ Nirman Sarkar
AI Product Manager

A hands-on digital product leader with proven ability to identify and deliver significant business value across mining & manufacturing value chain. Experienced in data analytics including several years solving complex mining industry challenges leading cross functional and multi geography teams.



ARM HUB AI ADOPT CENTRE



Australian Government



National
AI Centre