

What's possible with AI in WHS and safety management

Evidence current to mid-2026.

A clear breakdown of where AI does and does not fit across the core tasks of WHS and safety management. Based on Australian law and recent evidence, not vendor marketing. Throughout, 'the safety lead' means whoever holds the WHS duty at your business: a dedicated WHS officer or safety manager, a site manager with WHS responsibilities, or the business owner.

Where AI is mature: strong fit today

Proven and available today. AI does the bulk of the work and the safety lead reviews it.

Function	The job today	With AI
Toolbox talk and induction content	Write site-specific toolbox talk scripts and induction briefings, translate for diverse workforces	AI drafts topic-specific scripts and multilingual versions; the safety lead checks site accuracy and Australian regulatory alignment before anyone hears it
Incident report first draft	Turn field notes, photos, and verbal accounts into a structured written report	AI drafts from notes, photos, or audio; the safety lead verifies the facts, determines whether the incident is notifiable, and signs off
Training records and competency tracking	Maintain a training matrix, track certification expiries, ensure every worker holds the required tickets	Software tracks expiries and flags gaps 30-90 days out; the safety lead follows up and verifies licences against regulator records
Safety performance reporting	Compile incident counts, Lost Time Injury Frequency Rate (LTIFR), near-miss rates, and write the management safety summary	AI assembles the data and drafts the narrative; the safety lead verifies every number, owns the interpretation, and does not let AI assert what caused the trend

Where AI is emerging: consider piloting with a human gate

Promising but not yet proven at this scale. AI assists and the safety lead stays in the loop, so trial it on a contained scope first.

Function	The job today	With AI
SWMS drafting	Write a Safe Work Method Statement for each type of high-risk construction work, listing every hazard and control	AI generates a first-draft SWMS from a description of the work; a competent person reviews (AI tends to underweight engineering controls), worker consultation happens, and the PCBU owns the final document
Risk register maintenance	Identify workplace hazards, list them in the register, assess likelihood and consequence, assign and review controls	AI prompts hazard identification and helps structure the register; a competent person rates every risk and approves every control
SDS and chemical register management	Maintain a register of every hazardous chemical with a current Safety Data Sheet (SDS) (no older than five years), flag incompatible storage	AI tools extract data from SDS documents and flag gaps; the safety lead verifies critical fields, does the physical site walkthrough, and checks Globally Harmonised System version 7 (GHS 7) compliance
Inspection and audit checklists	Build site-specific inspection checklists, run the inspection, track corrective actions to close	AI generates checklist structures and can summarise recurring findings across audit sets; the safety lead does the physical inspection and verifies corrective actions in the field
Safety management plan drafting	Write or update the WHS management plan covering responsibilities, hazard management, and emergency procedures	AI drafts the structure and standard sections; a competent person checks that higher-order controls are not being skipped and adds the site-specific content

Function	The job today	With AI
RTW and workers comp admin	Lodge and manage the workers compensation claim, coordinate RTW plan documentation, draft suitable duties proposals, track recovery and ongoing treatment	AI drafts claim and RTW documents, tracks milestones and treatment, and reconciles treatment invoices against the plan; the safety lead owns the worker relationship and the insurer liaison, and only the treating doctor certifies work capacity
Contractor and visitor induction	Build pre-qualification questionnaires, online induction modules, and site-specific visitor briefings	Platforms manage pre-qualification status and track completion; AI drafts the induction content; the safety lead approves each contractor and supervises them in the field
Regulatory correspondence (routine)	Draft routine enquiries and standard letters to WHS regulators	AI drafts routine enquiry and acknowledgement letters; the safety lead verifies factual accuracy and signs. Formal compliance submissions stay with the PCBU or another responsible officer

Where AI is not ready or suitable today: keep with people

These stay with people, either because the tooling is not reliable enough or because the law and accountability rule it out.

- **Determining whether an incident is notifiable.** Under WHS Act sections 35-38, the PCBU must assess whether an incident meets the statutory definition and notify the regulator immediately. AI can tell you what the criteria are; the safety lead makes the call and sends the notification.
- **Risk rating and approving controls.** Likelihood and consequence ratings must be made by a competent person who knows the specific workplace, the workers, and the controls already in place. AI cannot inspect the site or consult workers as required by WHS Act section 47.
- **SWMS sign-off.** The PCBU must ensure the SWMS accurately reflects the actual work, plant, and site. The PCBU or a competent person with knowledge of the specific job must review it. AI cannot.
- **RTW medical determinations.** Work capacity certificates are issued by registered medical practitioners under the Australian Health Practitioner Regulation Agency (AHPRA). No AI tool can certify incapacity, determine suitable duties, or override a treating doctor's certificate.
- **Workplace investigation findings.** A credible investigation requires interviewing witnesses, assessing credibility, and weighing evidence under procedural fairness. AI can organise documents and draft timelines; the investigator reaches the finding.

Worth weighing: for any of these, the upfront setup, mapping site hazards, building templates, structuring the register, is a one-off cost. The ongoing job on the strong-fit items is mostly review, not the old grind. The time that comes back goes to the field: worker consultation, checking that controls are actually holding, and the judgement calls that only someone on the ground can make. AI takes the writing and the record-keeping; the safety lead stays where they are needed most.