



AI adoption and training in construction

Issues and recommendations

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Issues and recommendations

Construction firms should treat AI adoption as an ongoing responsibility for leadership and workforce development. Staff need to understand what the tools can do, have access to reliable project information, and practise using AI while remaining accountable for their work. The session identified three requirements for effective adoption: capability, infrastructure and habit.

Issues raised in the session

Leadership adoption is inconsistent

Participants described both leaders who never activated their accounts and leaders who relied on AI without adequate review. One rollout consisted of an announcement with no supporting guidance. Another example involved AI-generated change orders that had to be withdrawn because the underlying information and numbers were inadequate. These experiences show why leaders need the same training and quality expectations as their teams.

Automation can remove valuable learning

New graduates may not know which questions to ask or how to recognize missing information. Experienced staff also learn through preparing control budgets, building procurement logs, and reading drawings and specifications. Automating those activities without preserving their learning purpose risks producing documents faster while leaving people less prepared to manage the work. Competition for experienced estimators also made developing existing staff a concern in the discussion.

Reporting gaps reflect management and information problems

Project managers working without consistent mentoring can miss internal reports and opportunities to identify risk. Participants described fragmented information, unclear procedures and uneven accountability. AI cannot resolve these organizational gaps simply by generating more polished reports.

Tool choices can overlook the people doing the work

An enterprise purchase may serve executives or office staff without meeting field needs. Teams need tools suited to their documents and daily systems, with answers they can trace to the relevant source. Selecting software before understanding a slow or incomplete workflow can leave its underlying cause untouched.

Access does not create a lasting habit

A small group of enthusiastic users can develop useful practices that never reach colleagues. Limited time, skepticism and a lack of follow-up training impede adoption. Leaders may also undervalue the preparation and judgement behind work that AI helps produce quickly.

Recommendations

1 Give someone authority to lead adoption

Appoint an accountable enablement lead or a small cross-functional group, supported by an executive sponsor. Give that owner time, resources and authority to collect operational problems, coordinate tool selection and support use after launch. In a smaller firm, this can be an explicit responsibility within an existing role. Involve project and field teams in setting priorities.

Establish a short, practical AI use policy covering approved tools, what information may be entered, required checks and when to seek help. Make ownership explicit: the person submitting a deliverable remains responsible for its accuracy and completeness. Leaders should demonstrate that standard by explaining how they use AI and how they verify the result.

2 Select tools around a defined workflow

Start with a specific problem, such as incomplete daily reports or missing information in change orders. Ask the people doing the work where delays and errors occur. Assess candidate tools against the actual task, including access to current documents, source traceability, ease of use and compatibility with existing systems. Different roles may need different tools.

Build the information foundation alongside the pilot. Identify the authoritative drawings, specifications, contracts and procedures; assign responsibility for keeping them current and accessible. Begin with a bounded use case that can operate reliably with the information available, then expand as the supporting infrastructure improves.

3 Design AI practice to develop judgement

Define what a learner must understand before deciding what to automate. For a control budget, that may mean explaining how the estimate translates into the plan to build the job. For a procurement log, it may mean identifying requirements in the drawings, specifications and schedule. Use AI to support these exercises while retaining the reasoning, source review and discussion with a mentor.

Introduce guided workflows that ask for missing context and prompt users to check their sources. A participant described a pilot covering requests for information (RFIs), daily reports and change orders. The assistant asked for omitted information; the participant reported that users later began supplying that information themselves. This offers a practical model to test, with human review of the resulting work.

Have trainees explain their decisions, identify what the AI missed and complete selected tasks independently. Broaden mentoring where possible so staff learn from more than one experienced colleague. Assess progress through the quality of their work and explanations, rather than course attendance alone.

4 Build recurring practice and share useful examples

Make AI show-and-tell sessions, peer lunches or digital champion meetings part of the working routine. Use real examples and invite questions about the inputs, checks and limitations. Give employees time to experiment within clear boundaries, and recognize the judgement behind a good result. Adapt the format to the organization: a small team can meet together, while a larger firm may need local champions and cross-office communities.

Use demo days or focused hackathons to address a defined business problem and help colleagues discover useful approaches. Turn successful examples into shared templates, guided workflows and onboarding material, with an owner responsible for keeping them current. Ask vendors for refresher training and demonstrations using relevant scenarios, and test their claims against the team's requirements.

5 Connect reporting support to clear accountability

Use AI to help staff capture and organize the information needed for internal reporting. Guided prompts can ask about missing specification references, unresolved questions or verbal directions that have not yet been documented. Make the expected report, responsible person and review point clear. Review source accuracy and omissions before a report or change order is issued.

Give teams visibility into overdue or incomplete items so they can correct them early. Discuss recurring gaps with the people involved to distinguish missing knowledge, inaccessible information, workload and failure to follow an agreed process. Apply expectations consistently, including to senior staff, and use the findings to improve training and support.

A practical starting sequence

The following sequence is proposed for implementation. First, name the sponsor and enablement owner, agree the basic rules, and select one workflow with the team that uses it. Record its current completion time, common omissions and review effort.

Next, run a guided pilot with accessible source material, a mentor and regular opportunities to compare results. Check whether participants can explain and verify their outputs. Track both time saved and the corrections needed, including the effort required for review.

Then refine the workflow, document what worked and share it through recurring demonstrations and onboarding. Expand when work quality and learner capability justify doing so. Keep capability, infrastructure and habit under review together: each needs an owner and continued attention.

Source material: AI and training workshop recording and participant flip charts.



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