



LEADING THROUGH AI RISK

A Practical Guide for Project Delivery Leaders

About This Guide

Artificial intelligence is rapidly changing engineering practice. While much of the discussion surrounding AI focuses on technology, the ACEC Research Institute's *Leading Through AI Risk: The Enterprise Framework for Engineering Firm Leaders* found that the risks associated with AI extend across virtually every aspect of an engineering organization, including technical quality, professional responsibility, data governance, workforce development, ethics, cybersecurity, financial performance, and organizational leadership.

The research combined an extensive literature review with in-depth interviews involving 21 leaders representing engineering firms, public infrastructure owners, technology providers, AI consultants, insurance and legal professionals, and the engineering licensing community. One of the study's central findings was that managing AI risk is fundamentally an organizational challenge rather than simply a technology challenge.

The Eight Domains of AI Risk

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| 1 Technical Reliability and Model Risk | 2 Professional Liability and Standard of Care Risk |
| 3 Data Governance, Privacy and Intellectual Property Risk | 4 Organizational and Workforce Risk |
| 5 Ethical, Regulatory and Reputational Risk | 6 Operational and Cybersecurity Risk |
| 7 Financial and Business Model Risk | 8 Strategic Leadership and Enterprise Governance Risk |

Although each domain represents a distinct category of risk, AI risks do not remain within individual departments. Workforce training affects technical reliability, data governance influences cybersecurity and intellectual property protection, and weak organizational oversight can create legal liability. Effective AI risk management therefore requires coordinated governance across the enterprise.

What This Means for Project Delivery Leaders

Project delivery leaders translate enterprise AI policies into day-to-day project practice. Their role includes implementing approved workflows, maintaining quality and professional review, protecting project information, communicating concerns, supporting continuity, and sharing lessons learned.

Project delivery leaders do not own every AI risk. They are an essential connection between enterprise governance and project teams and should work closely with engineering, technology, executive leadership, human resources, and risk management and legal professionals.

How to use this guide: Each question below is a direct translation of a Project Delivery Leaders action identified in the published report.

1. Technical Reliability and Model Risk

Technical reliability depends on how AI is used during project execution. Project delivery leaders ensure approved tools are used, AI-assisted work is reviewed, QA/QC is followed, and lessons learned are shared.

Questions Project Delivery Leaders Should Ask

- Have we integrated approved AI tools and workflows into day-to-day project execution?
- Are we ensuring AI-assisted work receives appropriate technical review before incorporation into project deliverables?
- Are we reinforcing adherence to established QA/QC procedures while using AI to improve project efficiency?
- Are we sharing lessons learned, emerging risks, and successful AI practices across project teams to support continuous organizational improvement?

2. Professional Liability and Standard of Care Risk

Professional responsibility applies throughout project delivery regardless of AI involvement. Project delivery leaders help ensure appropriate assignment, review, licensed involvement, documentation, and protection of engineering judgment.

Questions Project Delivery Leaders Should Ask

- Are we ensuring AI-assisted work is assigned, reviewed, and incorporated into project deliverables in accordance with the firm's quality management procedures?
- Are we confirming that licensed engineers maintain appropriate involvement in engineering decisions and responsible charge throughout project delivery?
- Are we promoting transparent documentation of engineering decisions and significant AI-assisted workflows where appropriate?
- Are we balancing project efficiency with professional obligations, ensuring schedule pressures do not compromise engineering judgment or quality?

3. Data Governance, Privacy and Intellectual Property Risk

Project teams generate and use valuable organizational knowledge and confidential information. Project delivery leaders reinforce consistent documentation, approved systems, data standards, and appropriate information handling.

Questions Project Delivery Leaders Should Ask

- Are we promoting consistent project documentation practices that improve the quality and usability of organizational knowledge?
- Are we ensuring project information is stored in approved systems using established data management standards?
- Are we encouraging project teams to capture lessons learned, engineering decisions, and reusable knowledge in searchable formats?
- Are we reinforcing appropriate handling of client information and confidential data when using AI during project delivery?

4. Organizational and Workforce Risk

Responsible AI use must become part of day-to-day project culture. Project delivery leaders model expected behavior, reinforce policies, support appropriate client transparency, escalate concerns, and create an environment where inappropriate use can be questioned.

Questions Project Delivery Leaders Should Ask

- Are we modeling responsible AI use in day-to-day project delivery and reinforce adherence to the firm's AI policies and ethical standards?

- Are we promoting transparency with clients regarding AI use when required by firm policy, contractual obligations, or project circumstances?
- Do we recognize and escalate ethical, regulatory, or client concerns related to AI use through appropriate organizational channels?
- Are we fostering a project culture where team members feel comfortable questioning or reporting inappropriate AI use?

5. Ethical, Regulatory and Reputational Risk

AI practices can affect ethical obligations, client expectations, operational consistency, and organizational reputation. Project delivery leaders are positioned to identify emerging issues during project work and communicate them to leadership.

Questions Project Delivery Leaders Should Ask

- Have we implemented approved AI workflows consistently across project teams while maintaining established operational procedures?
- Are we ensuring project teams can continue delivering quality work when AI tools are unavailable, limited, or inappropriate for a particular task?
- Have we identified operational challenges, workflow improvements, and emerging AI risks encountered during project delivery and communicate them to organizational leadership?
- Are we promoting consistent adoption of AI practices that improve project delivery while preserving resilience, quality, and client service?

6. Operational and Cybersecurity Risk

AI introduces operational and cybersecurity considerations directly into project delivery. Project delivery leaders ensure teams follow approved practices, report concerns, maintain continuity, and share operational lessons.

Questions Project Delivery Leaders Should Ask

- Are we ensuring project teams consistently follow approved AI workflows, cybersecurity practices, and operational procedures during project delivery?
- Are we monitoring project-level use of AI for compliance with firm policies and promptly report operational or cybersecurity concerns through established channels?
- Are we maintaining project continuity by ensuring teams can effectively complete critical work when AI tools are unavailable or inappropriate for specific tasks?
- Are we sharing operational lessons learned and emerging AI-related risks to strengthen organizational resilience and improve future project delivery?

7. Financial and Business Model Risk

AI can affect project efficiency, quality, client value, resource utilization, and return on investment. Project delivery leaders provide practical feedback on where AI creates value and which successful practices can scale.

Questions Project Delivery Leaders Should Ask

- Have we identified opportunities to use AI to improve project efficiency, quality, and client value while maintaining professional standards?
- Are we providing feedback on how AI affects project delivery, resource utilization, and client service to help inform organizational investment decisions?
- Are we sharing successful AI-enabled project practices that can be scaled across the organization to improve performance and return on investment?

8. Strategic Leadership and Enterprise Governance Risk

Enterprise governance succeeds only when it is implemented consistently across projects. Project delivery leaders reinforce governance expectations, identify barriers and emerging risks, and contribute lessons that improve the enterprise approach.

Questions Project Delivery Leaders Should Ask

- Have we implemented organizational AI governance policies consistently across project teams and reinforce expectations for responsible AI use?
- Are we providing feedback to leadership on governance challenges, operational barriers, and emerging risks encountered during project delivery?
- Are we supporting continuous improvement by sharing successful implementation practices and lessons learned that can strengthen enterprise AI governance?

The Role of Project Delivery Leaders in Managing AI Risk

These questions show where AI governance becomes operational. Project delivery leaders help ensure approved AI practices are applied consistently, professional and technical controls remain intact, and emerging risks are identified and communicated.

Because AI risks are interconnected, governance must be integrated into existing workflows rather than managed through parallel systems. Project delivery leaders make enterprise expectations workable in day-to-day delivery.

The objective is to capture AI's benefits while preserving project quality, professional standards, client confidence, operational resilience, and adherence to firm policies.

For the complete AI Risk Framework, research findings, and recommendations for engineering firms, read

[**Leading Through AI Risk: The Enterprise Framework for Engineering Firm Leaders.**](#)