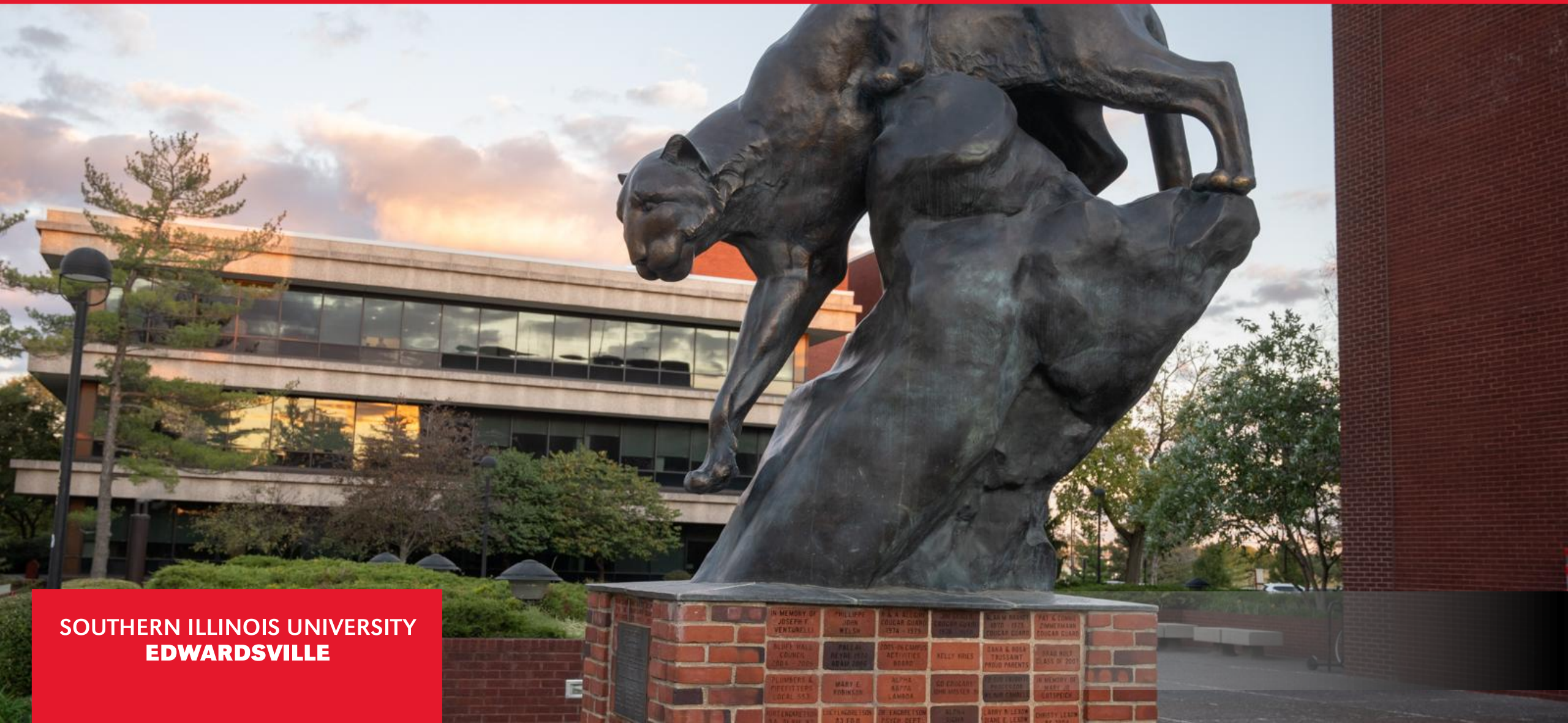
Data-Driven Project Management in the Age of GenAI



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THREE QUESTIONS, SEVEN STUDIES

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01

GenAI and the Project Manager

Skills, behavior and productivity

Li et al. (2026)
Kim (2026)
Pompei et al. (2026)

02

Readiness, Governance and Human–AI Teams

Getting the organization ready for AI

Armanios & Tucci (2025)
Liu et al. (2026)

03

AI and Algorithms as Project Analytics

Text as data, rules as code

Fu et al. (2023)
Mariani et al. (2026)

GENAI USE: MINDFULNESS & JOB CRAFTING

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THEME 1 | Survey, two-wave time-lagged | 441 project managers

Li, Zhang, Hughes & Griffin (2026). International Journal of Project Management, 44, 102816

RESEARCH QUESTION

How does a project manager's mindfulness shape how often, and how effectively, they use GenAI?

KEY FINDINGS

- Mindful PMs engage in more job crafting, which fully mediates the link to GenAI use (frequency and effectiveness)
- GenAI knowledge strengthens the step from job crafting to GenAI use
- Project complexity as a moderator was only partially supported

441

project managers surveyed at two time points

TAKEAWAY

GenAI adoption is a behavioral skill, not only a technical one. Give PMs room to redesign their own work, and build GenAI knowledge alongside it.

TAKE IT TO WORK | REDESIGN ONE RECURRING PM TASK

"Act as a project-workflow analyst. Here is my current [status reporting/risk review] process: [paste]. Identify 3 steps GenAI can augment, what human judgment must remain, and a two-week experiment with success metrics."

HOW TO USE IT

1. Track time saved and rework.
2. Let the PM modify the workflow, not just use a prescribed prompt.
3. Review after two weeks: keep, change or stop.

GENERATIVE AI AND DRAFTING PRODUCTIVITY

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THEME 1 | Quasi-experiment, DiD + PSM | 80 civil servants (40 / 40)

Kim (2026). Government Information Quarterly, 43, 102108

RESEARCH QUESTION

Does a specialized GenAI drafting tool make officials faster at writing responses to citizen inquiries?

KEY FINDINGS

- The AI group drafted responses 3.81 minutes faster (difference-in-differences); 4.05 minutes after regression adjustment
- Newer employees (two years or less) gained most: a 4.50-minute pre–post reduction
- The tool was a domain-specific small language model; output quality and wider outcomes were not assessed

~4 min

faster per drafted document

TAKEAWAY

Expect real task-level speed gains on documentation, with the largest gains for novices. Pair them with quality checks and standards.

TAKE IT TO WORK | RUN A DOCUMENT-SPEED TRIAL

"Using this approved template and source notes, draft a weekly project update. Separate verified facts, assumptions, risks and decisions needed. Do not invent dates, owners or progress."

HOW TO USE IT

1. Compare baseline vs GenAI drafting time over 10 documents.
2. Measure correction time and error rate, not only speed.
3. Start with novice PMs and routine documents.

GENAI AS A RISK-IDENTIFICATION SCAFFOLD

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THEME 1 | Randomized pilot experiment | Novice project managers

Pompei, Battistella & Nonino (2026). International Journal of Managing Projects in Business.

RESEARCH QUESTION

Can GenAI help novice project managers build better project risk registers?

KEY FINDINGS

- AI-assisted teams produced more structured and comprehensive risk registers, especially for identification and monitoring.
- Non-AI teams showed stronger contextual sensitivity and stakeholder awareness.
- Prompt competence shaped output quality; GenAI improved coherence but could narrow originality.

AI + HUMAN

structure improved; context still needed

TAKEAWAY

Use GenAI to expand and structure the risk register, then require a human stakeholder-and-context challenge round.

TAKE IT TO WORK | USE A TWO-PASS RISK WORKSHOP

"Generate a risk register for [project] with cause, event, effect, owner, trigger and response. Then critique the register for missing stakeholder, political, regulatory and context-specific risks."

HOW TO USE IT

1. Pass 1 expands and structures; Pass 2 challenges context.
2. Require evidence or rationale for each risk.
3. Ask humans to add weak signals and local knowledge.

CIPHER: READINESS FOR AI IN PROJECTS

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THEME 2 | Conceptual essay | Framework + testable propositions

Armanios & Tucci (2025). International Journal of Project Management, 43, 102792

RESEARCH QUESTION

What must projects and organizations have in place before AI tools can be deployed productively?

KEY FINDINGS

- Most studies ask how AI improves outcomes; this essay asks whether the project is ready to absorb it
- Six tensions arise when people work with algorithms directly, or through robots, immersive reality or multi-agent systems
- Each tension is paired with a project lever and a testable proposition

SIX TENSIONS → PROJECT LEVERS

Cognitive → Intergenerational teaming

Informational → Problem scoping

Projection → Delivery–validation scaffolding

Haptic → Task separability

Exchange → Multi-agent governance

Resource → Model parsimony & transfer learning

TAKE IT TO WORK | CONDUCT A SIX-TENSION READINESS CHECK

"Assess this proposed GenAI use case against cognitive, informational, projection, haptic, exchange and resource tensions. For each: risk, control, accountable owner and go/no-go criterion."

HOW TO USE IT

1. Narrow the problem before choosing the model.
2. Require validation scaffolds for consequential outputs.
3. Define agent authority and escalation paths.

HUAWEI: HUMAN-LED, AGENT-ASSISTED PM

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THEME 2 | Practice insight | Interviews with Huawei's Chief PM Expert

Liu, Sun, Ning, Ding & Huemann (2026). International Journal of Project Management, 44, 102859

RESEARCH QUESTION

How did Huawei make project management a 'root capability', and how are digitalization and AI reshaping it?

KEY FINDINGS

- Four phases: PM 1.0 professionalization, 2.0 systemization, 3.0 digitalization, 4.0 value creation
- An Integrated Service Delivery Platform and a 'Project Brain' link data, knowledge and algorithms to decisions
- Agents handle monitoring, scheduling, resource matching, documents and anomaly detection; PMs keep objectives, stakeholders, risk trade-offs and team leadership

1.0 → 4.0

from professionalization to value creation

TAKEAWAY

The PM role shifts rather than disappears: from controller of tasks to orchestrator of people, platforms, data and agents.

TAKE IT TO WORK | CREATE A HUMAN-AGENT RESPONSIBILITY MAP

"For this project workflow, classify tasks as automate, AI-assist, human-decide or prohibit. Explain the classification using reversibility, data sensitivity, ambiguity and stakeholder consequence."

HOW TO USE IT

1. Agents monitor and summarize; humans own objectives and trade-offs.
2. Log recommendations and overrides.
3. Name one accountable human for every automated action.

LANGUAGE MODELS READ CONTRACTS

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THEME 3 | NLP, fine-tuned DeBERTa | 20,612 sentences, 52 contracts

Fu, Xu, Zhang & Chen (2023). Automation in Construction, 152, 104890

RESEARCH QUESTION

Can a pre-trained language model measure construction contract complexity (control, coordination, adaptation) accurately and efficiently?

KEY FINDINGS

- Training data: 17 standard contract forms plus 35 real project contracts, manually coded
- The fine-tuned DeBERTa model reached Cohen's kappa of 77.69% on multi-category classification
- Enables large-scale, objective contract measurement; interpretability is a limitation

κ = 0.78

agreement with expert coding

TAKEAWAY

Language models can turn contract text into analyzable data for governance and contract design.

TAKE IT TO WORK | TURN CONTRACTS INTO A REVIEW CHECKLIST

"Classify these clauses as control, coordination or adaptation. Quote the exact clause, explain the classification, identify ambiguity and list questions for legal review."

HOW TO USE IT

1. Use retrieval and exact quotations.
2. Treat classifications as screening, not legal advice.
3. Track false negatives on high-risk clauses.

AI-SCORED SENTIMENT AND LEGITIMACY

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THEME 3 | Text mining, fine-tuned BERT sentiment | 190,000+ tweets over 15 years

Mariani, Araya Aliaga & Mancini (2026). International Journal of Project Management, 44, 102847

RESEARCH QUESTION

How do online communities construct and contest a megaproject's legitimacy over time? (Lyon–Turin high-speed rail)

KEY FINDINGS

- Legitimacy is event-driven: governance, economic and protest events shift sentiment, with protests strongest
- Supporters and opponents are each internally polarized
- Rising negative sentiment goes with lower engagement with the promoting organization

190K+

tweets scored for sentiment

TAKEAWAY

AI-based listening gives project leaders a stakeholder radar. Monitor online discourse and engage before events, not after.

TAKE IT TO WORK | BUILD AN EVENT-BASED STAKEHOLDER RADAR

"Analyze these stakeholder comments. Identify recurring issues, sentiment shifts, emerging coalitions and events likely driving change. Provide evidence quotes and uncertainty."

HOW TO USE IT

1. Monitor change over time, not one sentiment score.
2. Keep dissenting subgroups visible.
3. Engage before major milestones and public events.

WHAT THIS MEANS FOR PROJECT LEADERS

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1. **GenAI gains are real, but task-level**
   About 4 minutes saved per document, most for newcomers. Quality is still untested (Kim, 2026)

2. **Adoption is behavioral**
   Mindfulness and job crafting drive GenAI use; Gen Z pairs AI with emotional intelligence (Li et al.2026)

3. **Readiness and governance come before tools**
   CIPHER tensions, partner misfit and hidden coordination costs decide outcomes (Armanios & Tucci 2025)

4. **The PM becomes an orchestrator**
   Human-led, agent-assisted work; design for trust, workload and explainability (Liu et al. 2026)

5. **Text and rules are now data**
   Contracts, tweets and tender rules can be analyzed or executed at scale (Fu et al. 2023; Mariani et al. 2026)

Open questions

Where research goes next

01 **Beyond speed**

Does GenAI improve the quality of project decisions and documents, not just the time taken?

02 **Test the frameworks**

Field tests of CIPHER's readiness propositions and the STS principles in live projects

03 **Accountability**

Who answers for machine-generated project recommendations, and how are they explained and escalated?

04 **Stronger designs**

Randomized and longitudinal studies to complement cross-sectional surveys

05 **Education**

How should PM competence standards combine AI fluency with emotional intelligence?

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QUESTIONS & DISCUSSION

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Thank you

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