WHITE PAPER

Bridging the Gap:

Examining Behavioral Determinants in AI Adoption for Project Management

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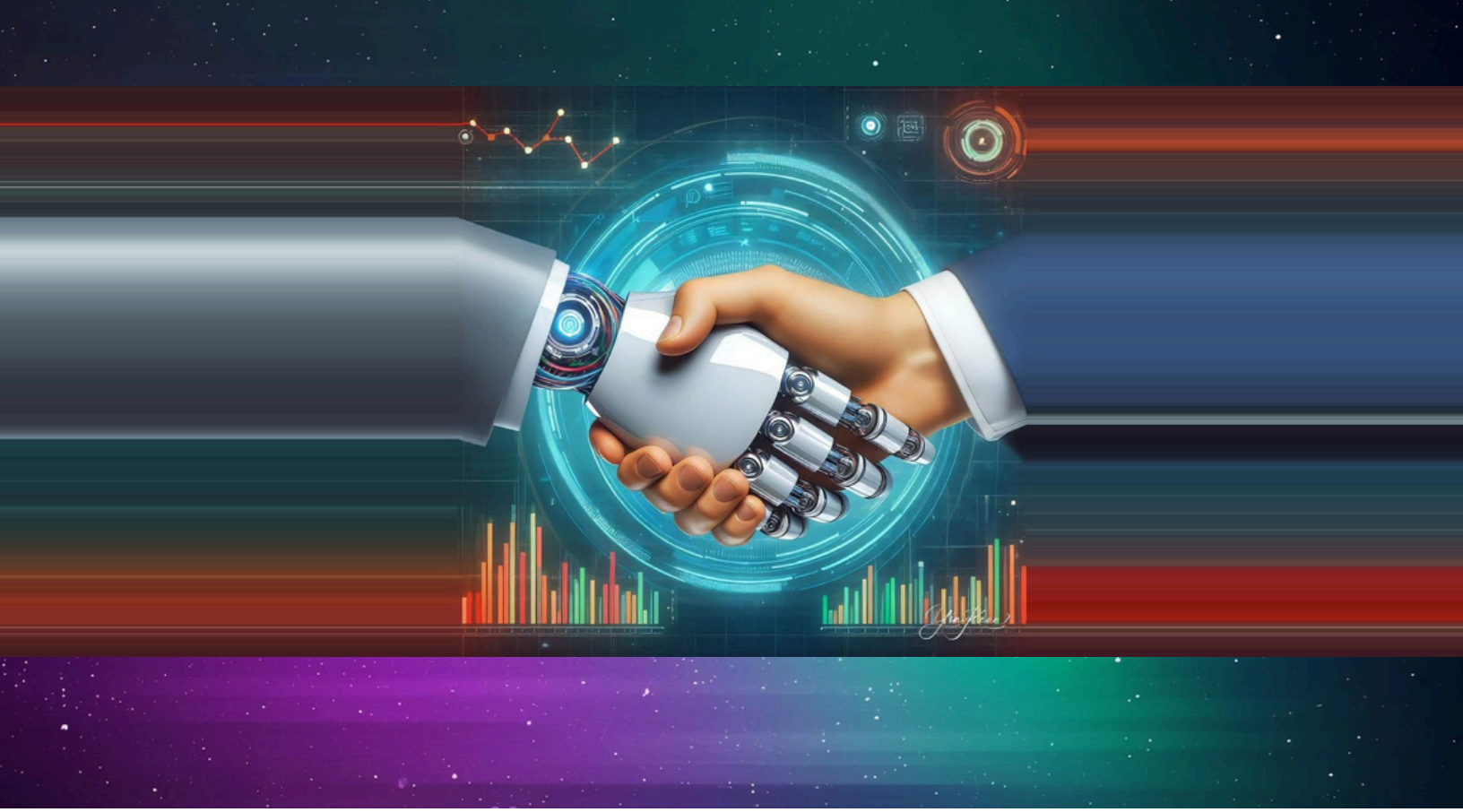

Acknowedgement

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Executive Summary

Artificial intelligence (AI) is driving a paradigm shift in project management, yet the profession faces a critical readiness gap. According to PMI's 2023 global survey, only 18% of project managers report significant experience, while nearly half report minimal or no exposure. This shortage of AI-competent professionals has tangible consequences: inefficiencies, higher costs, and lost opportunities for innovation and performance.

This study applied the Technology Acceptance Model (TAM), a validated framework for technology adoption, focusing on three behavioral determinants: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Intention to Use (ITU). A survey of 293 U.S. project professionals generated both theoretical insights and actionable recommendations.

Statistical tests confirmed that perceived usefulness was the strongest predictor of intention to use AI, while ease of use contributed directly and indirectly by enhancing perceptions of usefulness. Together, PU and PEOU explained nearly half of the variance in adoption intent, validating TAM in the project management context. Exploratory patterns revealed higher readiness among certified and senior professionals, while organizational support, time availability, and role identity further shaped adoption.

The findings demonstrate that adoption depends less on technical capability and more on behavioral readiness, reinforced by professional development, organizational support, and shared standards. From this evidence, several recommendations emerged. Project managers should strengthen readiness through applied learning, certifications, and peer mentoring. Organizations should highlight performance gains, provide intuitive tools, and create space for exploration. At the professional level, associations and credentialing bodies should embed AI into competency frameworks, certification pathways, and continuing education to build a digitally fluent workforce.

Bridging the readiness gap is not about chasing technology but about strengthening behavioral readiness. Project managers adopt AI when they perceive it as useful, easy to use, and aligned with their goals. By integrating demographic patterns and exploratory insights, this study validated TAM within project management and extended its practical relevance, offering evidence-based guidance for organizations, leaders, and professionals to advance AI adoption with confidence.

Introduction

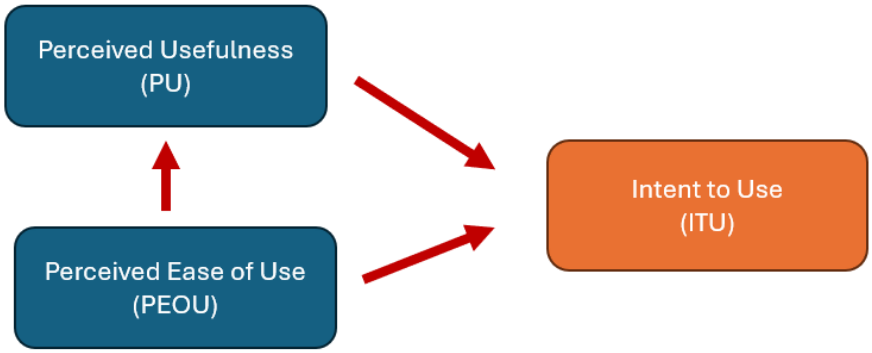
Artificial intelligence (AI) is here, reshaping project management through intelligence analysis, adaptive leadership, and value-focused delivery. A pressing challenge in project management is the shortage of AI-competent professionals to meet accelerating demands. While technology advances rapidly, many project managers remain underprepared. A survey found that only 18% reported significant AI experience, while nearly half had little or none, a readiness gap that is both visible and consequential.

The central puzzle is not about the technology itself but about the people expected to use AI in their work. Why are capable project managers, highly skilled in core competencies such as leadership, collaboration, and value creation, not adopting AI at the pace of its accelerating growth? While technical and organizational factors influence readiness, research shows that adoption is often driven by perception. The Technology Acceptance Model (TAM), one of the most widely applied behavioral frameworks, highlights three critical factors: whether professionals believe AI is useful (Perceived Usefulness, PU), whether AI tools are easy to use (Perceived Ease of Use, PEOU), and whether professionals intend to adopt AI in practice (Intention to Use, ITU).

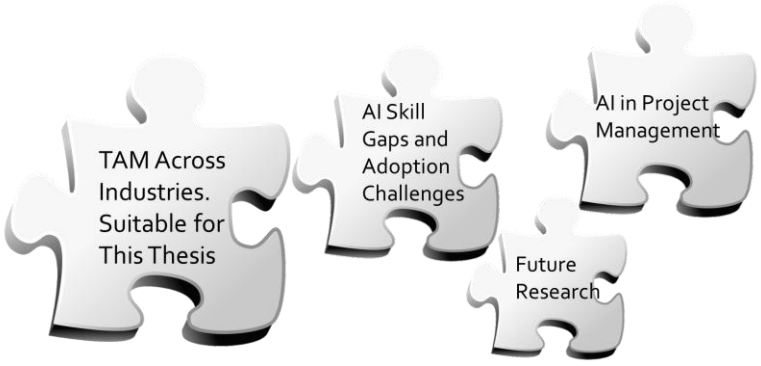
The study applied TAM to the project management context through a validated survey of 293 U.S. professionals. The purpose was not only to test the strength of the behavioral pathways but also to explore contextual patterns, including certification, experience, and organizational readiness. The findings reveal that AI adoption is strengthened not just by technical capability but by perceptions of value, simplicity, and support.

The story that emerges is clear: bridging the readiness gap requires both capable tools and prepared professionals. While tools enable adoption, perceptions of usefulness and ease ultimately determine whether adoption takes hold. Aligning AI with these human expectations, including demonstrating value, ensuring simplicity, and creating supportive environments is the path to success.

Literature Review: Assembling the Puzzle



Every research project begins with a framework — a blueprint that guides design, interpretation, and evidence-based recommendations. For this study, the blueprint was Davis's original TAM. TAM is built around three constructs analogous to a three-bedroom house: PU, PEOU, and ITU, a simple structure that has stood the test of time. Later versions, such as TAM2, TAM3, and the Unified Theory of Acceptance and Use of Technology (UTAUT), expanded the framework with additional constructs, like adding more "rooms" to the house. Yet for this study, the original TAM was the right blueprint: validated, widely applied, and well suited for examining how project managers approach AI adoption.



A key strength of TAM is its established measurement instrument. The survey developed by Davis has been tested repeatedly across industries, ensuring reliability and comparability. In this study, the instrument was carefully adapted by replacing the context of "email" with "AI," while preserving the validated structure. This approach ensured that results could be linked back to decades of prior research while focusing directly on the adoption of AI in project management.

The broader literature review was less like a blueprint and more like assembling a puzzle. Each piece highlighted a different part of the picture. One stream of research showed how AI is reshaping project management itself, influencing standards such as the PMBOK® Guide and reframing professional competencies within the PMI Talent Triangle®: ways of working, power skills, and business acumen. Another piece revealed the skills gaps and adoption challenges facing project managers, especially the tension between fast-moving technology and slower human readiness. A third stream pointed to opportunities for expanding TAM, incorporating new constructs to reflect emerging realities of digital transformation.

Together, these pieces formed a coherent picture: TAM is a proven framework, but project management with AI is an underexplored context. The literature confirmed the relevance of TAM while simultaneously exposing a gap: no study had yet applied this behavioral model to the unique challenges and competencies of project managers adopting AI. That gap became the starting point for this research.

Methods

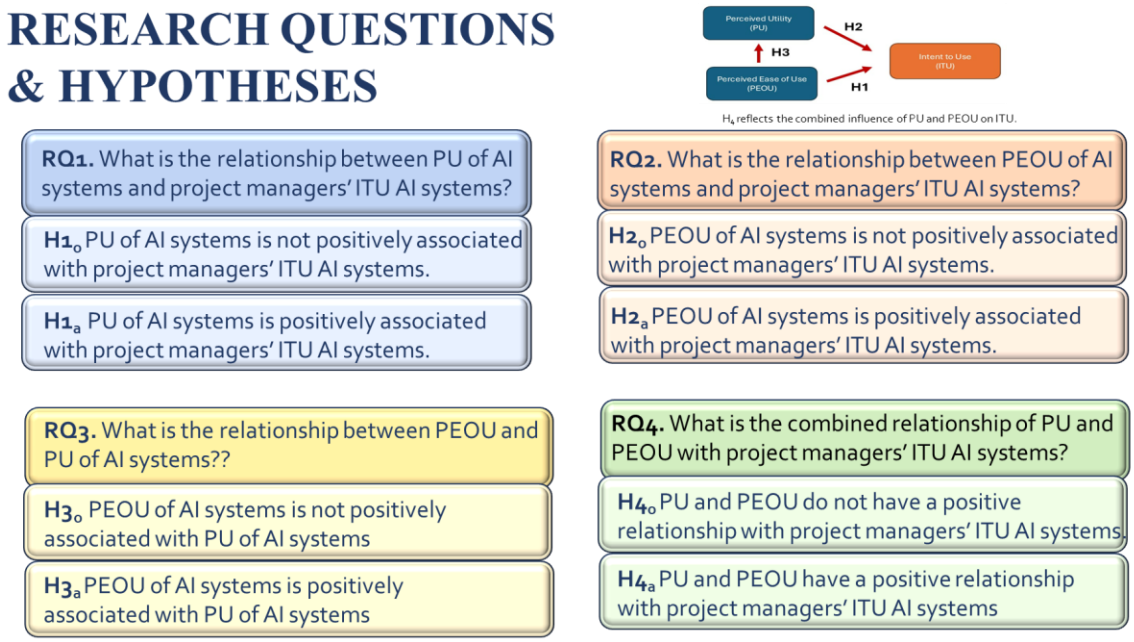
The study used a correlational quantitative design, applying simple and multiple regression to test relationships among the TAM constructs. Project managers and project professionals across the United States, regardless of certification status, were surveyed through purposive sampling. A total of 318 responses were collected, with 293 valid responses retained after data cleaning. The achieved sample exceeded the minimum requirements identified through a G*Power analysis, indicating sufficient statistical power for hypothesis testing.

The survey instrument followed established best practices, including composite scoring for TAM constructs, reverse-coded items to reduce bias, and 0–100 slider scales to increase sensitivity. Demographic controls were included, and common method bias, outliers, and nonresponses were addressed. Face and content validity were confirmed by an expert panel consisting of a TAM/UTAUT scholar and two certified project managers.

Construct validity was supported by factor analysis, which confirmed that the survey items grouped cleanly into the intended categories. Reliability met accepted benchmarks, with Cronbach’s alpha above .70 for all constructs and exploratory variables, indicating consistent measurement. Assumption checks confirmed the

appropriateness of parametric methods, including normality and linearity. Multicollinearity was also assessed and not a concern.

The dataset was organized into three categories of variables: demographic indicators (such as certification status, role, and years of experience), validated TAM constructs (PU, PEOU, and ITU), and exploratory variables (organizational support, time availability, and role identity). This structure allowed for hypothesis testing of the TAM relationships while also enabling exploratory analyses of contextual and demographic patterns.



Research Questions

RQ1: What is the relationship between PU of AI systems and project managers' ITU AI systems?

Tested relationship: **PU → ITU**

RQ2: What is the relationship between PEOU of AI systems and project managers' ITU AI systems?

Tested relationship: **PEOU → ITU**

RQ3: What is the relationship between PEOU and PU of AI systems?

Tested relationship: **PEOU → PU**

RQ4: What is the combined relationship of PU and PEOU with project managers' ITU AI systems?

Tested relationship: **PU + PEOU → ITU**

Findings

Usefulness drives adoption (PU → ITU)

The data revealed with clarity that perceived usefulness was the strongest driver of adoption. Project managers showed the highest intention to use AI when they believed it would improve forecasting, risk assessment, or decision-making. This confirms the core principle of TAM: value drives behavior. For project managers, adoption begins when AI tools demonstrate practical outcomes, not novelty, but performance.

Simplicity lowers resistance (PEOU → ITU)

Ease of use also played a significant role in shaping adoption. When AI tools were intuitive and required minimal effort, project managers were more willing to integrate them into daily work. Complex or clunky tools quickly dampened enthusiasm. The finding reinforces TAM's insight that simplicity reduces barriers. Adoption grows when professionals can focus on outcomes rather than mechanics. Training, onboarding, and tool design all matter in lowering resistance.

Usability creates value (PEOU → PU)

The data also showed that ease of use directly enhanced perceptions of usefulness. When AI simplified processes such as scheduling or data synthesis project managers valued it more. In contrast, difficult tools diminished perceived benefits. This illustrates how usability and value are linked. Simplicity is not just a convenience; it is a pathway to recognizing AI's true potential.

Value and simplicity together drive adoption (PU + PEOU → ITU)

The strongest insight came from looking at both factors together. Adoption intent was highest when AI was perceived as both useful and easy to use. Each factor contributed uniquely, confirming their complementary roles in TAM. The implication is clear: AI adoption requires balance. Project managers are most ready when tools deliver practical value and are accessible to use a dual condition that organizations must address to close the readiness gap.

Clues for the Future (Exploratory Patterns)

Beyond the core TAM relationships, the data revealed several exploratory patterns that add depth to the story of adoption. Certified and senior project managers reported higher perceptions of usefulness and stronger intentions to adopt AI, suggesting that experience and training amplify confidence. This highlights the potential of professional development and mentoring to accelerate readiness across the field.

Industry and role differences also surfaced. Respondents working in technology-driven environments expressed higher openness to AI, while some project managers raised concerns about role overlap particularly in areas such as planning or task tracking. These perspectives show that adoption is shaped not only by perceptions of value and ease but also by professional identity and organizational context.

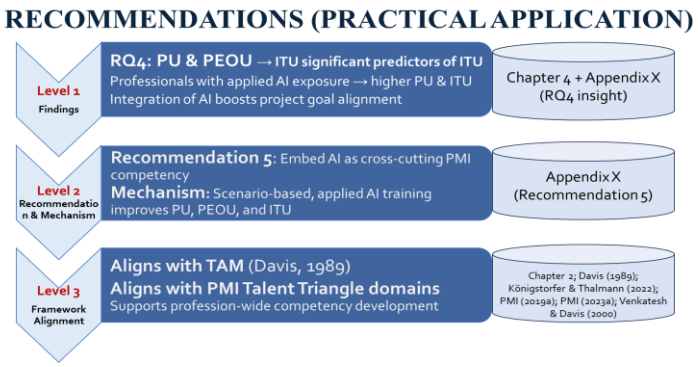
Finally, organizational support played a visible role. Project managers with greater access to AI tools and protected time to explore them reported stronger perceptions of usefulness and ease. This reinforces a practical insight: readiness grows where organizations create space for learning, experimentation, and applied use (see Appendix A – C).

Impact & Implications

Implications explain the significance of the findings what they mean for project managers, organizations, and the profession, and how the evidence reshapes understanding of AI adoption in practice. The findings indicate that adoption is primarily influenced by perceptions of usefulness and ease of use. These behavioral drivers, consistent with the Technology Acceptance Model, highlight that readiness depends on how effectively AI tools demonstrate value and remain accessible in practice

Recommendations

Building on these implications, the recommendations translate the evidence into actionable steps. The recommendations were derived through three steps: the study's findings identified the drivers of adoption; these were translated into practical actions and then aligned with professional frameworks for credibility. For example, one finding showed that both usefulness and ease of use predicted intention to adopt AI. Training provides a practical mechanism, supported in the literature, to replicate the benefits of direct AI experience on both dimensions, strengthening perceptions of usefulness and ease.



Recommendations for Project Managers

Project managers are at the forefront of AI adoption, and the study findings show that confidence and readiness grow with certification, applied learning, and direct exposure. Building individual strengths and professional maturity can accelerate adoption across the field:

Project managers should lead as AI change agents by serving as visible advocates and role models.
Commit to ongoing learning through certifications, modular upskilling, and applied training.
Embed AI in daily project tasks such as predictive risk modeling, scenario-based forecasting, intelligent reporting, and stakeholder sentiment analysis.
Leverage individual learning histories by tailoring development to prior experience and strengths.

Recommendations for Organizations

Organizational structures and culture significantly shape adoption by influencing PU and PEOU. Creating a supportive environment, prioritizing usability, and demonstrating value are critical steps for successful implementation.

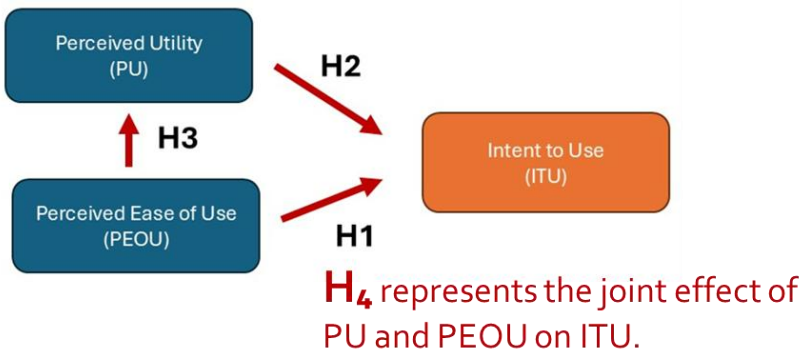
Create peer support networks by designating experienced professionals as AI champions.
Invest in iterative training with time, access, and modular learning that evolves from awareness to mastery.
Showcase value early with case studies and pilot projects that demonstrate tangible performance gains.
Prioritize usability by selecting intuitive, well-integrated tools that reduce the learning curve.
Use readiness assessments aligned with PU and PEOU to identify and close adoption gaps.

Recommendations for the Profession

The profession must evolve its standards and competencies to keep pace with AI-driven change. Embedding AI as a cross-cutting competency in technical, leadership, and strategic domains across competency models, notably the PMI Talent Triangle®, and broadening access to learning ensures that both certified and non-certified professionals are prepared:

Strengthen technical skills by expanding applied training, modular certifications, and AI-focused credentialing.
Develop AI-ready leaders with power skills such as digital fluency, adaptability, and effective communication.
Align AI with strategic outcomes to emphasize its role in performance, alignment, and value realization.
Broaden access by offering inclusive learning pathways for all professionals, not just those with certifications.

Across all levels, individual, organizational, and professional progress in AI adoption will depend not only on technical capabilities, but on strengthening the behavioral determinants of perceived usefulness and ease of use. These recommendations gain additional weight when considered alongside global benchmarks.



Comparative Analysis of PMI Sweden and U.S. Study Data

The PMI Sweden global survey (2024) gathered responses from 2,314 professionals in 129 countries, with 74% PMP certified and 83% holding at least a bachelor's or master's degree. The U.S. study of 293 project professionals showed a similar profile, with 82.3% certified and nearly half (47.8%) reporting four to six years of experience. Both datasets confirm a highly credentialed and experienced profession.

AI knowledge and training gaps were evident in both. PMI Sweden reported 65% with no or basic AI knowledge and 62% rating organizational training poorly. The U.S. study found 19.1% AI-Literate, 33.8% AI-Enabled, and 47.1% AI-Qualified. PMI Sweden highlighted expected areas of impact, such as data collection and monitoring, whereas the U.S. study showed broad experimentation, with most participants already using generative AI (76.1%). In the U.S. results, average self-rated proficiency was only moderate (66.9/100), underscoring that adoption reflects early use rather than advanced mastery.

The studies also highlight AI's growing role, but from different angles. PMI Sweden reported that 76% expect AI to transform project management within three years, while the U.S. study showed present-day activity, with a large majority already experimenting with generative AI tools.

Differences are clear in scope and focus. PMI Sweden provided a global perspective, including regional contrasts in AI maturity, while the U.S. study offered a U.S.-specific view with behavioral depth through the Technology Acceptance Model (TAM), examining how perceptions of usefulness (PU) and ease of use (PEOU) shape intention to use (ITU).

Together, the PMI Sweden survey and the U.S. study provide a powerful cross-regional perspective: one offering global breadth, the other contributing behavioral depth. This alignment links worldwide expectations with U.S. realities and strengthens the profession's foundation. By uniting these insights, project managers and organizations are better equipped to advance responsible AI adoption, foster innovation, and shape the future of project management with confidence (see Appendix D for the detailed comparison chart).

Future Research

Ongoing studies are extending adoption models such as TAM and UTAUT to broader datasets. These efforts will provide additional benchmarks on AI readiness across project professionals worldwide, offering insights that may guide future standards and practices. Applied case studies and international surveys, including efforts by PMI Sweden and IPMA, provide discoveries that future research could extend by applying UTAUT and innovative TAM-based approaches. At the academic level, future research could further examine barriers to AI learning, extend TAM through advanced modeling, and pursue longitudinal studies to trace adoption over time.

Conclusion

The problem and purpose led the way: to address the AI readiness gap in project management by examining how PU and PEOU influence ITU. What began as a clear shortage, with only 18% of project managers in PMI's 2023 global survey reporting significant AI experience, unfolded into a deeper question about how professionals actually decide whether to adopt emerging technologies.

The study's evidence told a consistent story: adoption is less about the availability of tools and more about how project managers experience them. Usefulness emerged as the strongest signal, and ease of use lowered resistance and amplified value. These insights reveal that perceptions are not secondary to adoption; they are the drivers that unlock it.

By examining behavioral determinants through TAM, *Bridging the Gap: Examining Behavioral Determinants in AI Adoption for Project Management* contributes both evidence and direction. It addresses the shortage of AI-competent project managers and offers practical guidance for organizations to support effective, sustainable, and human-centered transformation toward AI readiness, strengthening professional practice while advancing the academic foundation of AI in project management.

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The references section highlights selected sources most relevant to the white paper. A complete list of 166 references is available in the author's doctoral dissertation (National University (U.S.)).

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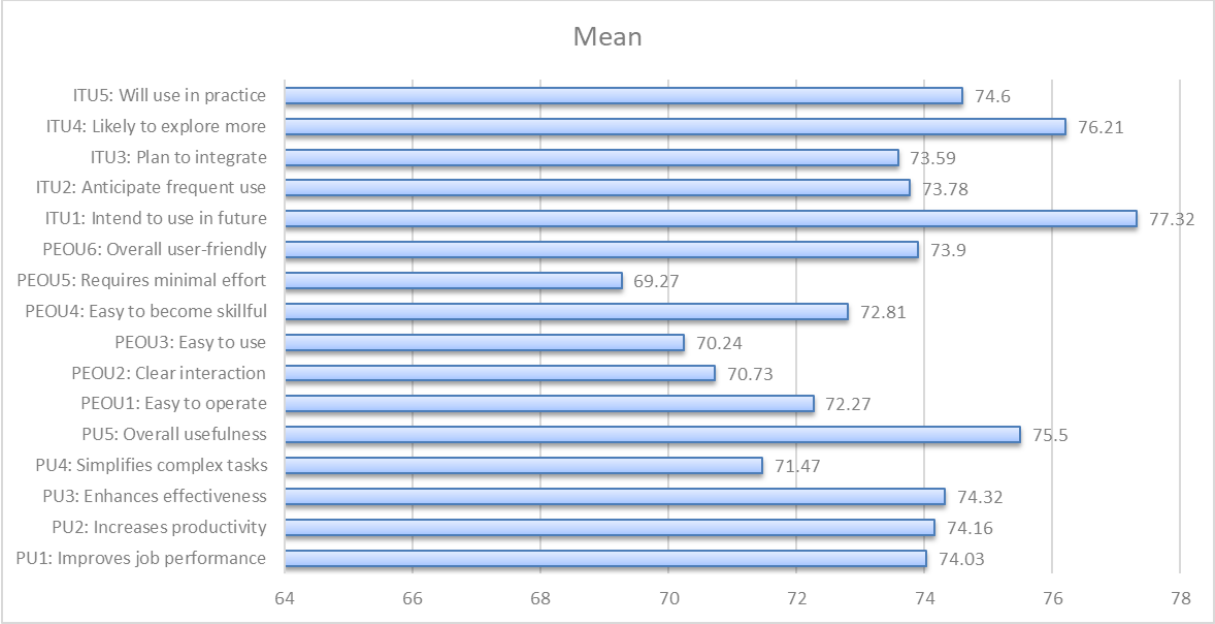
Appendix A

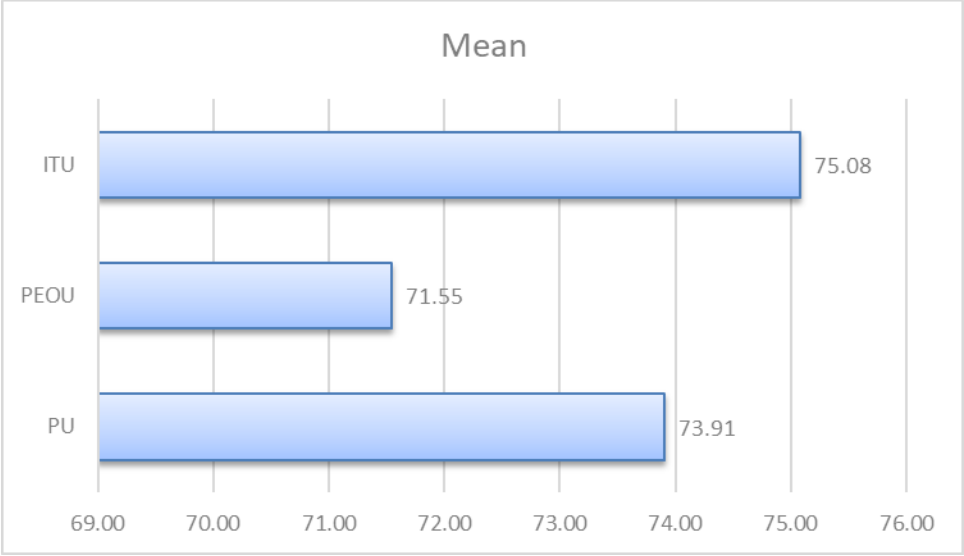
Results - Demographics

Variable	Category	Count	Percent of total
	Eligibility 18+ (N)	293	100.00%
Project Management Role	Manages or Directs Projects	147	50.2%
	Coordinates or Supports Project Activities	126	43.0%
	Other Roles & Responsibilities	19	6.5%
	Missing	1	0.3%
Holds a PM Certification	Yes	241	82.3%
	No	46	25.7%
	Missing	6	2.0%
Years Experience	Less than One Year	15	5.1%
	One - three Years	66	22.5%
	Four to Six Years	140	47.8%
	Seven to Ten Years	29	9.9%
	More Than 10 Years	43	14.7%
Industry	Construction	20	6.8%
	Education	30	10.2%
	Engineering	44	15.0%
	Finance & Insurance Services	56	19.1%
	Healthcare	39	13.3%
	Information Technology	52	17.7%
	Manufacturing	30	10.2%
	Other Industry	22	7.5%
Level of Experience	AI Qualified Project Professional	138	47.1%
	AI Enabled Project Professional	99	33.8%
	AI-Literate	56	19.1%
Previously used AI tools	Yes	266	90.8%
	No	26	8.9%
	Missing	1	0.3%
AI tools used	Generative AI (e.g. ChatGPT)	223	76.1%
	Predictive Analytics	170	58.0%
	Scheduling Tools	148	50.5%
	AI PM Software	149	50.9%
	AI Documentation	126	43.0%
	Other AI Tools	60	20.5%
Self-Rated AI-Proficiency	N=288; Range = 5-100; Mean=66.91; Std Dev. = 17.16		

Appendix B

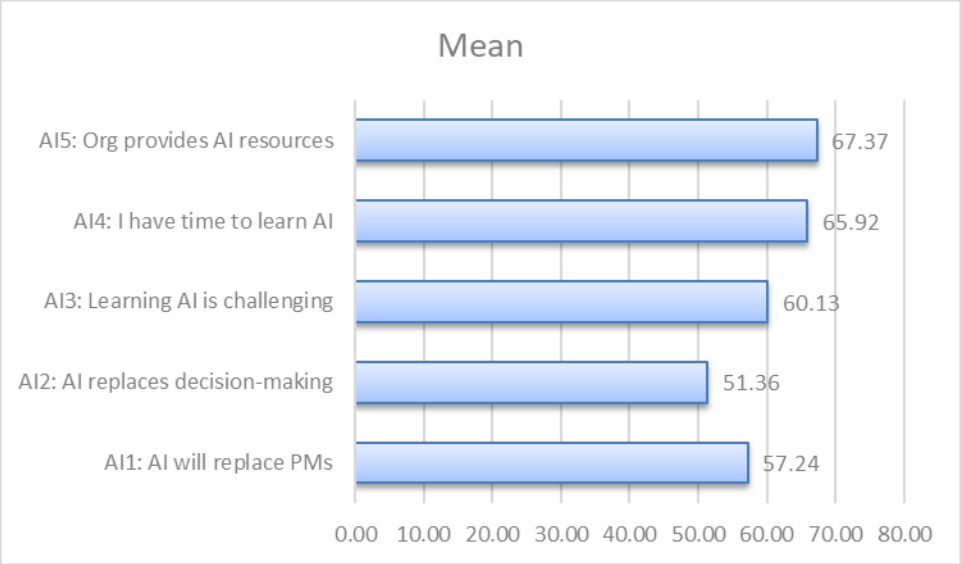
Results – Composite Mean Scores for TAM Constructs





Appendix C

Results – Exploratory Variables



Appendix D

Comparative Analysis of PMI Sweden and U.S. Study Data

Dimension	PMI Sweden (2024)	U.S. Study (2025)	Notes / Interpretation
Sample Size	2,314 respondents	293 respondents	PMI = global, multi-region; Study = U.S.-based
Countries Represented	129	U.S. only	PMI = breadth; Study = depth
Certification	74% PMP	82.3% certified PMs	Both show highly credentialed participants
Education	83% Bachelor/Master	NA	PMI captured education; U.S. study focused on practice variables.
Years of Experience	NA	47.8% (4–6 yrs); 26.6% (7–10 yrs); 14.7% (10+ yrs); remainder <4 yrs	Study adds detailed tenure data
Role	Reported at global role level	50.2% managing/directing projects; 43.0% coordinating/supporting	Study captures finer role distribution
Industry	48 industries; IT Services most prevalent	Finance (19.1%), IT (17.7%), Engineering (15.0%), Healthcare (13.3%), etc.	Study offers sector-specific insights
AI Knowledge / Classification	16% no knowledge; 55% basic; 25% intermediate; 4% advanced	19.1% AI-Literate; 33.8% AI-Enabled; 47.1% AI-Qualified	Both measure knowledge, but categories differ
AI Proficiency (self-rated)	NA	Mean = 66.9/100	Study includes quantitative proficiency scale
Organizational AI Training / Maturity	62% rated ≤4/10 on training/maturity	Avg. rating 67.4/100 for resources/time to learn AI	Both highlight organizational gaps
AI Tools & Applications	*In which areas do you expect AI to have the greatest impact?* Focused on expected areas of impact (data collection, reporting, monitoring, time management)	*Which AI tools/applications have you used?* 76.1% generative AI; 58.0% predictive analytics; 50.5% scheduling; 43.0% documentation	PMI = expectations, Study = actual adoption
Attitudinal Concerns	NA	Concerns: AI replacing decision-making (M=51.4), replacing PMs (M=57.2)	Study captures nuanced professional concerns
TAM Constructs (PU, PEOU, ITU)	NA	PU = 73.9, PEOU = 71.6, ITU = 75.1 (1–100)	Study adds behavioral determinants of adoption
Expectation of AI Transformation	76% expect AI to transform PM within 3 years	High ITU scores; generative AI adoption at 76%	Both show strong optimism

Note. NA = Not available in the PMI Sweden Chapter (2024) report.

This white paper is based on doctoral research completed at National University (U.S.).

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