The Impact of Artificial Intelligence in Project Management: A Survey

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Introduction

The integration of Artificial Intelligence (AI) into project management is revolutionizing traditional practices, bringing about profound changes in how projects are planned, executed, and monitored. AI's impact on project management is multifaceted, influencing everything from decision-making processes to resource allocation and risk management. As AI technologies continue to advance, organizations are exploring a continuum of adoption, where some are early adopters leveraging AI for competitive advantage, while others are cautiously testing its potential before full-scale implementation.

On a recent survey launched by IIL Consulting[1], we analyzed the impact of AI in the project management field. The results are described in the next sections of this paper. The **overall conclusion** is that the evolution of AI, from basic automation to more complex systems capable of predictive analytics and autonomous decision-making, is reshaping project management landscapes. However, the success of AI integration depends heavily on building trust and acceptance among project teams and stakeholders. This trust is fostered through transparent AI systems, ethical usage, and seamless integration with existing tools.

Furthermore, comprehensive training programs and robust delivery mechanisms are essential to equip project managers and teams with the skills needed to utilize AI effectively. The effectiveness of AI in project management must be measured through clear metrics, such as improved project outcomes and enhanced efficiency.

Despite these advancements, the **integration of AI is not without risks**. There are significant concerns about decision-making biases introduced by AI systems, emphasizing the need for rigorous data validation and quality checks. Ethical considerations, including transparency, privacy, and the avoidance of algorithmic bias, are critical to ensuring AI's responsible use. Organizations must address these concerns proactively to build confidence in AI systems and ensure they complement rather than complicate human decision-making.

As AI continues to evolve and its adoption in project management grows, it is crucial for organizations to adopt a balanced approach. This involves not only embracing the technological benefits AI offers but also being vigilant about the associated risks and

(1) IIL Consulting is a division of International Institute for Learning, Inc.

ethical challenges. By fostering an environment of trust, continuous learning, and ethical responsibility, project managers can effectively integrate AI into their workflows, driving enhanced project outcomes and organizational success.

Methodology

From March to May 2024, IIL Consulting conducted a comprehensive survey to investigate the **intersection of Generative AI technology and project management practices**. The survey targeted a carefully selected group of clients, resulting in 65 responses from professionals across 13 countries from North America, South America, Europe and Asia-Pacific. This diverse cohort represented 19 different industries such as education, IT, telecommunications, pharmaceuticals/healthcare, non-profits, government, and business/professional consulting services.

Participants were drawn from organizations of varying sizes and financial standings, ranging from companies with annual revenues below $10 million to those exceeding $1 billion, and employee counts from fewer than 100 to over 50,000. The survey aimed to capture a broad spectrum of perspectives by including respondents in various roles within their organizations. The largest group of participants consisted of project/program managers (46%), followed by business owners (15%) and heads of PMO (11%). Additionally, the survey included portfolio managers, senior executives (EVP, SVP, C-Level), and project management team members, ensuring a comprehensive understanding of the landscape.

The survey explored a **wide array of topics critical to the future of project management, particularly in the context of Generative AI**. Key areas of focus included general project management practices, the potential risks and challenges posed by AI integration, societal and human impacts, organizational alignment, and complex issues surrounding ethics, copyright, and bias. The insights gathered from this survey provide a valuable lens through which to understand the evolving dynamics of project management in the age of AI.

Findings

General Project Management Practices

Unsurprisingly, there is a **familiarity with AI** in the context of project management. As shown in Figure 1, a sizable portion of respondents (72%) indicated they were either somewhat familiar (46%) or very familiar (26%) with this combination. This familiarity spectrum acknowledges AI's incorporation into digital tools such as ChatGPT, Gemini,

Copilot, and PMI's Infinity chatbots. Conversely, at the other end of the spectrum, there is interest but limited understanding of AI's applicability in project management. These perspectives highlight the importance of training opportunities and the value of AI in supporting research.

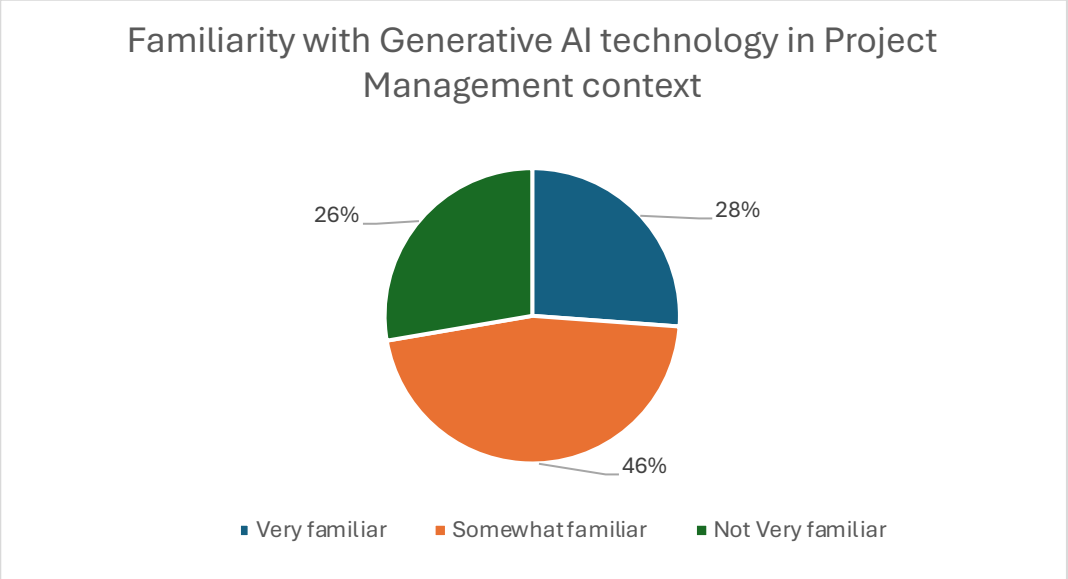

Figure 1

Respondents identified several key areas in project management where AI could have a significant impact. These areas include generating project reports and documents, providing decision support for project planning and scheduling, and optimizing resource allocation. While some of these tasks are lower-level AI applications, there is broad ecognition of AI's potential to organize, analyze, and interpret data, as well as to assist with budgeting and cost control, ultimately leading to greater project success. Additionally, some respondents highlighted the advanced use of AI in risk assessment and mitigation. However, also noting that if not managed properly, AI could complicate communication and collaboration.

The responses to the **use of AI in all portfolio projects** was not universally embraced. Most respondents favoured moderate usage (32%), while 28% preferred minimal adoption. Only 17% indicated extensive use of AI.

Client approval for the use of AI in their projects was viewed positively by a majority (48%) or partially (38%). Comments suggested the approval process could be like that for any other tool or technology used in project management and that client buy-in is crucial for project success. Clients should be informed about when and how AI will be used (transparency), and that training on AI systems will be necessary if the data are

protected and/or owned by the client. The scope of the project will also influence this level of involvement.

It was acknowledged that the **final decision and control remain with humans**. However, this acceptance may vary depending on the client's perspective. There is a recognized need for open discussions about the use of AI. The emphasis on project outcomes, and any tool, such as ChatGPT, should be used judiciously by the project manager.For the 22% of respondents who indicated it would not be used in all projects, the commentary suggested that the use of AI is not an issue if it enhances professional and personal performance.

The integration AI into project management requires **measures to evaluate its effectiveness** and success in improving project management practices. The assessment of AI's impact is predominantly based on project outcomes (27%) and key performance indicators (26%). There was minimal variation across the remaining measures of 'reductions in project timelines and costs' and 'user feedback'. Commentary included that as AI implementation progresses, the criteria for measuring its success and influence on project outcomes may also need to evolve.

Responses to managing situations where project teams disagree with AI decisions indicated a **preference for decisions to be made by the project manager and technical lead** (43%), with 32% favouring a combined approach of AI and human mechanisms. The decision-making process should consider the team structure, organizational culture, and the relevance of the decision at hand. Effective governance implemented from the outset can pre-empt the need for escalation by addressing potential disagreements and establishing predetermined resolution methods. Given the novelty of AI integration, governance frameworks may require adjustments if initial strategies prove inadequate. Comments noted that **AI should not independently make decisions where avoidable**; instead, it should serve as a decision support tool. The project manager must maintain a leadership role, ensuring a human presence in the decision-making loop.

According to Figure 2, workshop and training sessions (32%) are considered the **most effective method for preparing project teams to utilize AI** in their daily activities. Similarly, the use of online courses and resources (29%) and integration into existing training programs (24%) are also highly valued. The commentary highlights the value of open resources, Q&A pages, and mandatory, updated training. For some organizations, AI tools are already available.

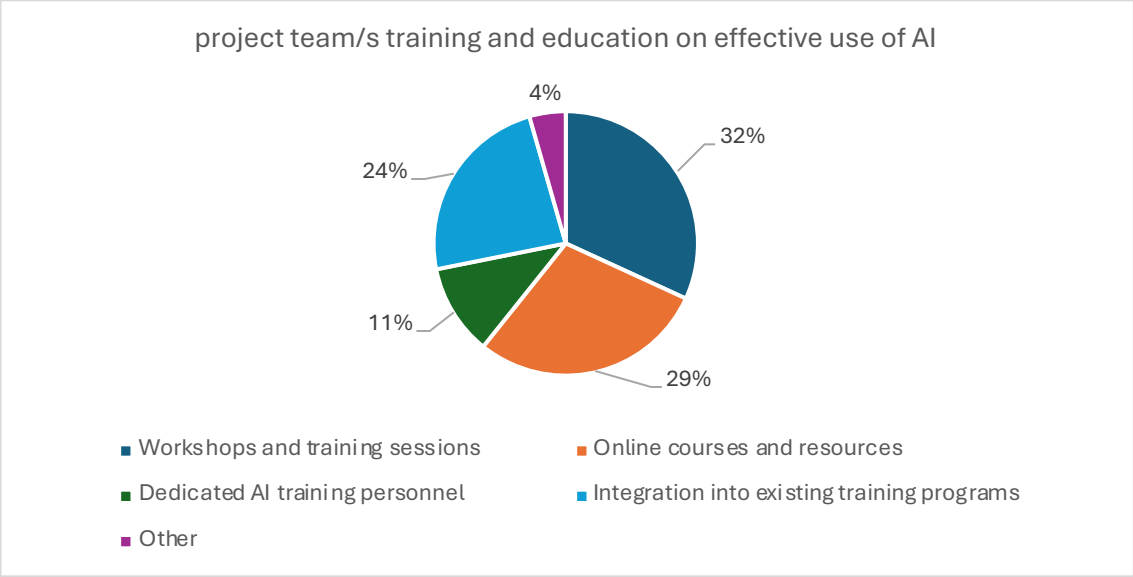

Figure 2

Risks and Challenges of Using AI

The **potential risks associated with using AI** identified data security and privacy breaches as the most significant concern (32%), followed by overreliance on AI, and miscommunication and misunderstanding, both at 23% and 'decision-making bias' (22%). The comments reflect these concerns:

- AI is perceived as a clumsy assistant, not comparable to Google or any expert.
- There is a risk of using poor or inaccurate data. Generative AI, in particular, may not have sufficient data to recognize potential outlier situations.
- Many users are unaware that they are sharing their information globally when using the free version of ChatGPT.
- The extensive use of AI, coupled with reckless usage and poor privacy considerations, could lead to unintentional information leaks. Foundational knowledge remains essential as a quality check.

Confidence in AI's ability to mitigate risks associated with project team miscommunication is low for some respondents, with the majority remaining neutral at 49%. Mitigation is only one of several strategies for developing risk responses.

Effective integration of AI will require thoughtful interaction and depends on the resources using it. Currently, there are few well-marketed or value-added solutions available. If not implemented wisely, AI may exacerbate communication issues within

the organization. Even simple automated systems took considerable time to build trust within the workforce.

Human involvement remains crucial. Communication is inherently human, and understanding different perspectives is essential. However, 'AI can assist by taking excellent meeting notes',

Supporting the creation of more content in various mediums is expected to significantly improve communication efficacy. As technology and proficiency in its use, increase, so will the success rate of communication plans and change management strategies.

AI implementation challenges

According to Figure 3, most respondents (43%) identified a **lack of understanding of AI technology as the biggest challenge in AI implementation**, followed by integration with existing tools (32%) and resistance from team members (23%). Commentary include AI's novelty and the lack of proactive use and adaptation. The principle of 'garbage in, garbage out' applies, as issues can arise from not rigorously checking ChatGPT-generated procedures. While using ChatGPT to draft procedures has proven timesaving for clients, it cannot yet be fully trusted, partly due to the previously discussed data availability issues.

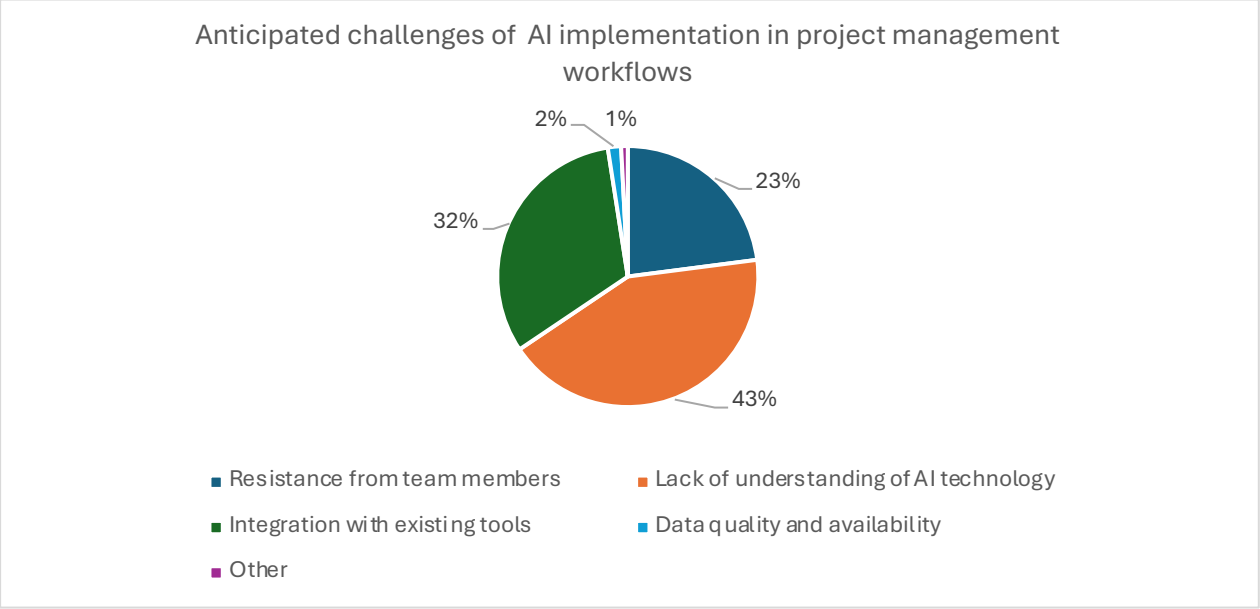

Figure 3

Impact on Society / Human in the Loop

Human intervention is crucial for most respondents in scenarios involving complex decision-making (28%), ethical dilemmas (26%), and handling sensitive information (25%). Ensuring diversity and inclusion (18%) also requires significant human involvement.

Commentary varied:

- some suggesting that AI-generated material should always be reviewed and often edited to ensure the intended message is conveyed with high quality and appropriate timing. It is essential to keep 'the human in the loop,' especially when a person's safety or livelihood is at stake. AI is not a replacement for human judgment.
- In scenarios involving ethical dilemmas and diversity, equity and inclusion (DEI), the programming and training of AI, along with the datasets used, present challenges. DEI is considered an ethical issue and is similar to psychological safety, an area where AI struggles to grasp complexities and nuances.
- The term "human intervention" may not be the best choice; "mutual incorporation" offers more options and advantages. When AI is designed to ensure diversity, it may not always reflect the reality, which might not be diverse.

Many respondents indicated they were either comfortable (52%) or very comfortable (29%) with human oversight in AI-generated project documents and communications, with an additional 19% expressing neutrality. Comments suggest that society will adapt positively to this change, successfully integrating with the technology and its outputs. **It is essential to maintain "the human in the loop."**

However, as with any delegated task, project managers must determine the appropriate level of oversight for AI, treating it similarly to other tools or employees. The challenge lies in identifying the extent and nature of the required oversight, as some unusual AI-generated outcomes have highlighted this need.

Organizational Fit

Respondents favored AI's fit into their organizations' existing project management occurring through parallel adoption (41%) or gradual replacement of existing tools (37%). Some envision AI as a standalone system (13%) while fewer see it as a seamless exercise at 8%. Comments included that future tools would provide this integration.

The most significant change needed for AI integration into project management processes is a **cultural shift towards data-driven decision-making** at 40%. A less favoured options were establishing a Centre of AI Excellence (25%), restructuring project management teams (15%) and employing AI specialists (15%). The commentary noted the profound changes AI will bring, such as job transformations and the adaptation of AI products into organizational culture, supported by good governance.

Ethics, Copyright and Bias

The responsibility for ensuring that AI-generated information does not infringe copyright is primarily seen as the role of intellectual property specialists (30%) and legal experts (26%). To a lesser extent, project advisors (20%) and project managers (15%) are also considered responsible, with only 9% of respondents indicating that AI developers undertake this function.

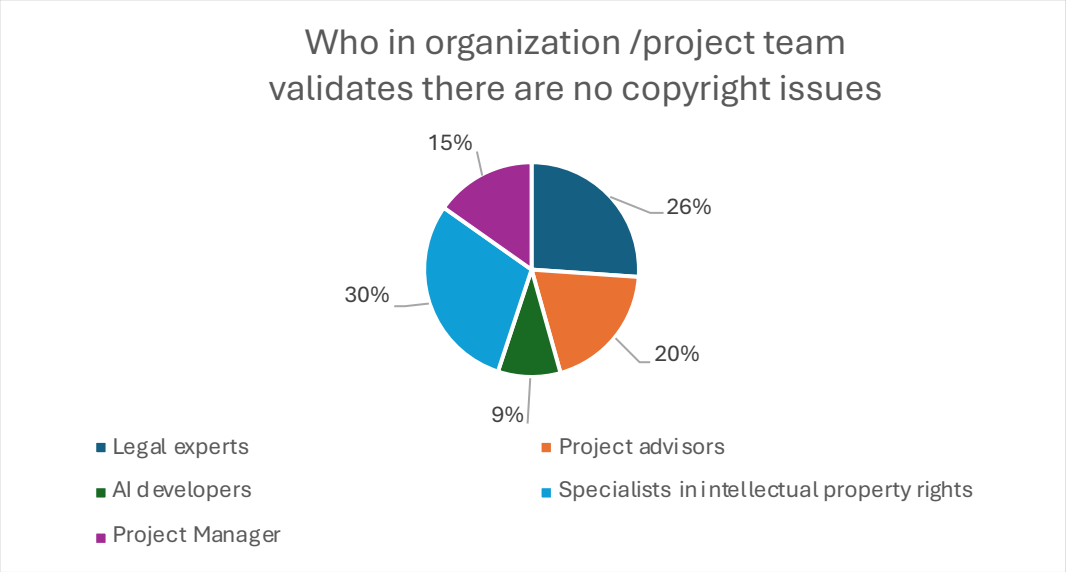

Figure 4

When it comes to validating the correct use of AI within a project team, respondents predominantly assign this responsibility to project managers (26%) and cross-functional teams (23%). Quality assurance specialists (18%) and AI programming specialists (13%) are also considered responsible. Commentary suggests that organizational size, project structure, and AI governance need to be considered, but ultimately, project managers must leverage all necessary resources to complete the project and effectively monitor and evaluate AI's performance.

According to Figure 5, **ethical considerations are paramount when integrating AI into project management**. Respondents did not identify a single primary ethical element; instead, their selections were relatively evenly distributed across several key areas: ensuring transparency in AI decision-making (30%), avoiding bias in AI algorithms (25%), safeguarding user privacy and consent (23%), and ensuring fair treatment of all stakeholders (20%).

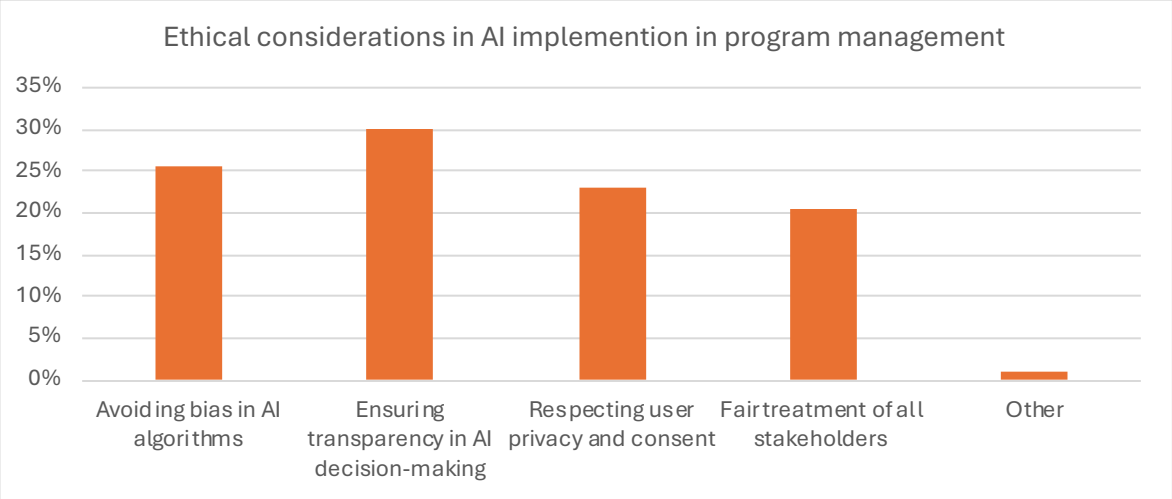

Figure 5

Implications for Project Management

While a significant portion of respondents are familiar with AI in project management there is still a need for training to bridge the gap for those with less exposure/ understanding.

Effective preparation for AI integration needs to include workshops and online courses, and incorporation into existing training programs with open resources and mandatory, updated training considered crucial.

AI can significantly impact project management by generating reports, aiding in decision-making for planning and scheduling, and optimizing resource allocation. AI can streamline tasks such as report generation, planning, and resource management, leading to greater project success. Its ability to analyse and interpret data can support better budgeting, cost control, and risk management.

There is varied acceptance of AI in all portfolio of projects with a majority favoring moderate usage. Extensive use is less common, indicating cautious adoption. Client

buy-in is crucial, with transparency about AI usage and necessary training being key factors for approval. Final decisions and control remain with humans, emphasizing the need for open discussions about AI's role.

Most **effective measurement of AI's success** is by project outcomes and KPIs. Governance frameworks may need adjustments to address disagreements and ensure smooth integration. AI should serve as a decision support tool, not make independent decisions. Project managers must maintain leadership and ensure human presence in decision-making. Transparent communication about AI usage can enhance client trust and approval, crucial for project success.

Main Risks

As organizations increasingly integrate Generative AI into their project management practices, several significant risks have emerged that highlight the need for a balanced approach to AI-human collaboration. One of the primary concerns is the overreliance on AI, where the technology is depended upon too heavily, potentially leading to miscommunication or misunderstanding. This risk underscores the importance of maintaining a collaborative dynamic where human judgment complements AI outputs, ensuring that the insights generated by AI are interpreted correctly and contextualized within the broader project framework.

Another critical risk involves **decision-making bias**. AI systems, particularly those that rely on machine learning algorithms, can inadvertently perpetuate or even amplify existing biases present in the data they are trained on. This risk highlights the necessity of robust human oversight to monitor and adjust AI-driven decisions, ensuring that they remain fair, accurate, and aligned with organizational values. Implementing a governance framework that actively mitigates bias is essential to maintaining the integrity of project management outcomes.

The risk associated with **poor or inaccurate data** is particularly pronounced in the context of Generative AI, which relies heavily on vast amounts of data to produce meaningful outputs. If the data feeding into these systems is flawed, the resulting insights and decisions can be equally compromised. This situation emphasizes the critical need for rigorous data validation and quality checks to ensure that the AI systems operate on accurate and reliable information. Establishing clear protocols for data management and verification is vital to mitigating this risk.

Building trust in AI systems presents another challenge, particularly when introducing these technologies into established project management processes (refer to Figure 6). Trust is a fundamental component of effective collaboration, and without it, the integration of AI tools can lead to resistance or skepticism among team members. To address this, organizations must focus on thoughtful implementation, providing transparent communication about how AI systems work, their limitations, and the ways in which they can enhance rather than replace human expertise. Additionally, continuous improvement of AI tools, informed by user feedback and evolving best practices, is necessary to ensure that these systems remain reliable and valuable assets within the project management landscape.

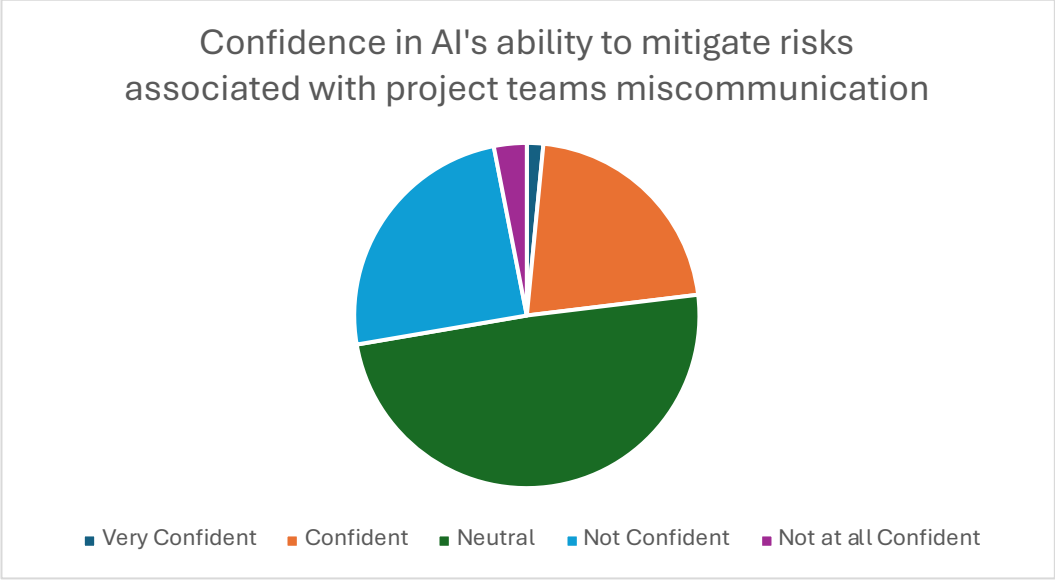

Figure 6

Finally, the integration of AI with existing tools and workflows poses both technical and cultural challenges. Ensuring seamless interoperability between AI systems and current project management platforms requires careful planning and execution. This integration must be approached with an understanding of the unique needs and workflows of the organization, allowing for a smooth transition that enhances overall efficiency without disrupting established processes. Ongoing training and support will be essential to help teams adapt to new tools and maximize their potential.

Overall Ethical considerations

To fully capitalize on the benefits of Generative AI in project management while safeguarding against potential pitfalls, **organizations and project managers must take a proactive and strategic approach**. As seen in Figure 7, the survey was clear that it was crucial to have human intervention in AI driven project communication, with 52% of participants suggesting ethical dilemmas was a critical element as was complex decision making.

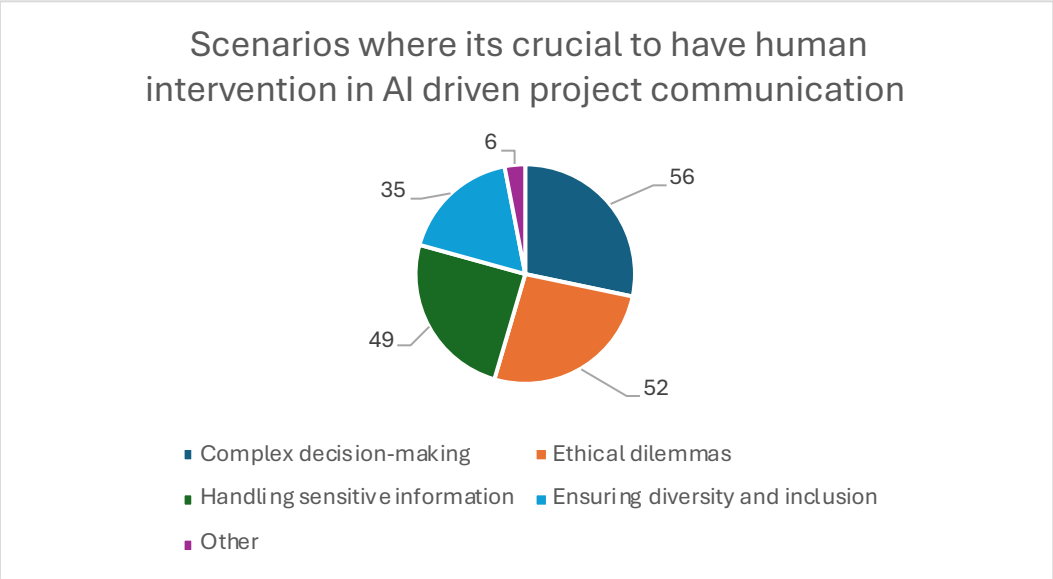

Figure 7

One of the key areas where this is essential is in the **protection and management of intellectual property (IP)**. By engaging intellectual property specialists and legal experts, organizations can ensure that their use of AI aligns with existing copyright laws, thereby enhancing the credibility and legality of AI-generated content. This step is not only about compliance but also about safeguarding the organization's reputation and avoiding costly legal challenges that could arise from improper use of AI technologies.

Active monitoring and evaluation of AI's performance by project managers and cross-functional teams is another critical practice. It's not enough to simply implement AI tools; their effectiveness must be continuously assessed to ensure they are being used correctly and adding value to projects. This monitoring should include regular performance reviews, feedback loops, and adjustments to AI systems as necessary, ensuring that AI remains an asset rather than a liability. By embedding these practices into the project lifecycle, organizations can better integrate AI technologies while maintaining high standards of project delivery.

Moreover, addressing the ethical considerations associated with AI is paramount. Project managers must champion **transparency in AI processes**, ensuring that all stakeholders understand how AI-driven decisions are made. Bias avoidance is another crucial area, requiring the development of strategies to identify and mitigate any biases that AI systems might introduce. Additionally, privacy and fairness should be at the forefront of AI implementation, with robust measures in place to protect sensitive data and ensure equitable outcomes for all project stakeholders. Building a strong ethical framework around AI not only helps in gaining trust and acceptance but also positions the organization as a leader in responsible AI usage.

The implications of AI in project management are vast, but so are the opportunities. Project managers and organizational leaders are now called upon to actively engage with these technologies, not just as tools but as transformative elements that can redefine project management. By addressing the legal, operational, and ethical implications of AI, and by leveraging its capabilities thoughtfully, organizations can significantly enhance project outcomes and overall efficiency.

Conclusions

Integrating AI into project management requires a thoughtful, phased approach. Organizations must ensure each step is accompanied by proper oversight, training, and evaluation. Project managers should lead this transition with strategies that align AI adoption with organizational goals and ethical standards. This approach not only mitigates risks but also unlocks new levels of innovation and productivity. The time to act is now—embrace AI responsibly, keep human oversight central, and prioritize your commitment to customers in decision-making. Doing so will position your organization at the forefront of the future of project management.

The survey results are clear: **many organizations are already leveraging AI, while others plan to do so in the near future.** There's strong recognition of AI's potential to reduce project costs, improve timelines, and enhance project outcomes. However, not all organizations are at the same point on the AI adoption curve. This calls for an incremental and thoughtful approach.

The **opportunities are vast**, and as AI continues to evolve, project managers must stay informed, consider how to leverage AI effectively, and maintain a balanced approach that combines technological advancements with human expertise.

Reference:

1st IIL Global Survey (2024) - The Impact of Artificial Intelligence in Project Management, by IIL Consulting (H. Kerzner, L. Herszon, E. Farrow), 2024

About the Authors

Dr. Leon Herszon, PhD, PMP®, CSM®, CSPO®, DASSM

Dr. Leon Herszon is the Head of IIL Consulting (a division of International Institute for Learning, Inc.), a results-oriented and client-focused consulting firm. He performed roles as executive and managing director, Chief Agility Officer, entrepreneur, portfolio, program and project director, business transformation leader, and corporate educator. He is also an Adjunct Professor at the prestigious Rutgers Business School.

Dr. Herszon has experience leading teams to improve performance and manage business transformation focused on agility, transparency, teamwork, experimentation, and innovation. His doctoral research explored factors that contribute to project complexity and proposed a model to manage complexity. Dr. Herszon can communicate in English, French, Portuguese, German, and Spanish, and is also a several times Ironman triathlon finisher.

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Dr. Elissa Farrow is a futurist, author, facilitator, coach, and strategist. She has over 25 years of experience in research, organizational innovation, design, adaptation, and benefit realization. Dr. Farrow is known for her compassionate leadership and engagement approach. She is an experienced leader and has been a partner in transformation in various industries. Dr. Farrow is a published author, and her doctoral research explored the implications of Artificial Intelligence on organizational futures. Her research created innovative adaptation principles for leaders and delivery teams as well as new knowledge relating to how to best transform organizations operating models to anticipate and create positive futures. In 2023, Dr. Farrow became an Adjunct Fellow at the University of the Sunshine Coast.