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Maintaining Confidentiality and Security in the Utilization of Generative AI for IT Project Management

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Abstract: *The use of Generative AI has become a growing trend in project management, supporting activities such as learning, document preparation, and decision-making. However, its adoption also raises concerns related to confidentiality and security due to the involvement of sensitive project data. Therefore, this study examines how Generative AI can be safely utilized across PMBOK Knowledge Areas in IT project management while maintaining data confidentiality and security. The research was conducted in two stages. The first stage involved two systematic literature reviews following the Kitchenham method: one examining the utilization of Generative AI in project management (17 primary studies) and another focusing on ethical considerations, policy implications, and data security issues related to Generative AI (36 primary studies). The second stage involved an expert assessment with five experts to evaluate the applicability of Generative AI across PMBOK Knowledge Areas, identify relatively safe input types, and determine key considerations for maintaining confidentiality and security. The results indicate that Generative AI can be applied across all PMBOK Knowledge Areas, however not all input types and information are considered safe. Text identified as the safest, source code as high-risk, confidential data as unsuitable for sharing, and privacy and data protection as the primary concern.*

Keyword: *Generative AI, IT Project Management, Confidentiality, Security, Expert Assessment*

INTRODUCTION

One of the emerging trends in project management toward 2025 is the adoption of Generative AI. According to the Project Management Institute (PMI), Generative AI has the potential to support various project management activities, including brainstorming, content generation, automation of repetitive tasks, and project planning. By reducing time and effort spent on operational activities, Generative AI enables project managers to focus more on strategic and leadership-oriented tasks (California Inland Empire Chapter (PMICIE), 2025). A webinar conducted by The Project Group in January 2025 further highlighted this trend, where participants identified project planning (69%), resource management (64%), project

updates (53%), and risk management (47%) as the primary areas where AI is expected to play a significant role (TPG, 2024). Despite its potential benefits, the utilization of Generative AI also introduces significant risks related to data confidentiality and security. A notable example occurred in March 2023, when employees at Samsung uploaded confidential corporate information to ChatGPT after being granted access to the tool. (Park, 2023). This case illustrates the critical challenge organizations face in balancing productivity gains with the protection of sensitive project data.

Existing research on Generative AI has grown rapidly, particularly in exploring its applications across various domains and examining ethical and security-related concerns. However, the current literature tends to be divided into two main streams. On one hand, several studies investigate how Generative AI can be leveraged to support specific project management activities, such as risk management (Barcaui & Monat, 2023)(Nyqvist et al., 2024)(Aladağ, 2023). While these studies demonstrate the functional potential of Generative AI, considerations related to data confidentiality and security are often underexplored. On the other hand, a substantial body of literature focuses on ethical, policy, and data security issues associated with Generative AI across corporate (J. Liu, 2025) (Yue et al., 2024) (Rana et al., 2024) educational (Abuadas & Albikawi, 2025) (Scott-Kennel et al., 2025) (Spennemann et al., 2024) (Zhu et al., 2024) (Somià & Vecchiarini, 2024) (Cheng & Lee, 2024) (Rice, 2025), and governmental contexts (Koné et al., 2024) (J. Xu et al., 2024) (Goher, 2025). These studies, however, rarely address project management as a specific application domain.

To the best of author's knowledge, only small number of studies have attempted to integrate these perspectives. One study explored the impact of Generative AI on trust within project teams, emphasizing the importance of ethical considerations and internal policies (Paparic & Bodea, 2024a). Another study examined responsible Generative AI adoption in project management and its implications for roles, competencies, and organizational structures. Nevertheless, these studies do not provide practical guidance for secure implementation across project management knowledge areas (Paparic & Bodea, 2024b).

To address this gap, this study seeks to answer the following research question: How Generative AI can be safely utilized across PMBOK Knowledge Areas in IT project management while maintaining project data confidentiality and security based on literature and expert assessment. The objectives of this research are to identify potential applications of Generative AI in project management, examine confidentiality and security-related challenges associated with its use, and propose practical recommendations to support the safe and responsible adoption of Generative AI in corporate environments. In contrast to the previous research, this research integrates a systematic literature review with expert assessment to provide the following novel contributions.

1. Recommendations on safe input types for the use of Generative AI in project management.
2. Recommendations on safe information types that can be shared when using Generative AI in project management.
3. Identification of aspects that organization should consider maintaining confidentiality and security when using Generative AI in project management.

METHOD

Systematic Literature Review used the Kitchenham method (Kitchenham et al., 2009) which consists of 3 stages, namely planning, implementation, and reporting.

Review Planning

To obtain relevant literature, a Systematic Literature Review (SLR) is conducted using two distinct search queries. The first query aims to identify literature related to the

utilization of Generative AI in project management. Literature was collected from seven different databases to ensure diversity. Databases are Emerald Insight, IEEE Xplore, JSTOR, Sage Journals, Science Direct, Scopus, and Taylor & Francis Online. The identified literature was screened based on the following inclusion in Table 1 and exclusion criteria in Table 2.

Table 1. List of Inclusion Criteria

Item	Criteria
I1	Primary studies
I2	Publication year between 2020 - 2025
I3	English-language
I4	Peer-Reviewed articles

Source: (Research Data, 2025)

Table 2. List of Exclusion Criteria

Item	Criteria
E1	Non-Generative AI
E2	Opinion/blog/whitepaper articles without scientific validation

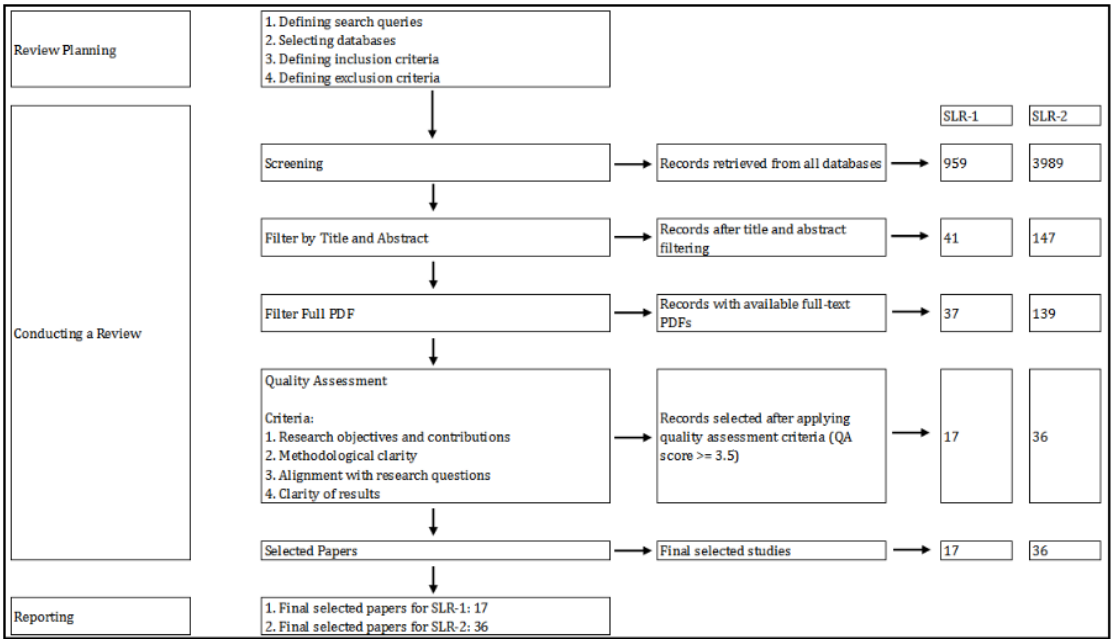
Source: (Research Data, 2025)

Conducting a Review

The first stage is screening, which involves each database using defined queries and applying inclusion and exclusion criteria. The next stage is filtering the literature based on titles and abstracts. This is followed by retrieving the full-text papers. After that, a quality assessment is conducted, and finally, the selected papers are obtained.

Reporting

The results of the literature review, from the screening stage to the selection of the final papers, are shown in figure 1. The SLR was conducted without industry limitations, allowing the literature to capture diverse use patterns and issues across multiple sectors. These findings are used as a foundation to highlight the relevance and potential application of Generative AI in the specific context of IT Project Management.



Source: (Research Results, 2025)

Figure 1. Literature Review Process

Expert Assessment

This method was used to obtain feedback from experts involved in IT projects, defined as professionals working as Project Managers or similar roles with at least three years of experience. Five experts participated in completing the questionnaire to provide practical perspectives on the use of Generative AI in IT project management. Although the number of experts is limited to five, this is consistent with qualitative expert-based research, where smaller samples are commonly used to obtain in-depth and experience-based insights. The selected experts possess relevant professional backgrounds in IT project management, allowing the study to capture informed perspectives. Data was collected through a structured questionnaire covering Generative AI utilization across PMBOK Knowledge Areas, input types, and aspects related to confidentiality and security. The results were interpreted using percentage agreement for multiple-response questions and frequency of selection for single-response questions.

RESULTS AND DISCUSSION

Mapping the Utilization of Generative AI Across PMBOK Knowledge Areas

Based on the analyzed literature, the application of Generative AI in project management can be mapped onto the PMBOK Knowledge Areas (PMBOK, 2017). Table 3 presents a detailed overview of Generative AI applications explicitly identified in the existing studies. This mapping provides a structured view of how Generative AI has been utilized across different project management functions and serves as a foundation for understanding its potential and limitations. Overall, this analysis indicates that Generative AI has the potential to contribute to various aspects of project management. However, no practical applications related to Project Procurement Management were identified in the reviewed literature. In addition, the adoption of Generative AI is not uniform across industries. Therefore, the following section maps the variation in the use of Generative AI by industry.

Table 3. Mapping of Generative AI Applications to PMBOK Knowledge Areas

No	PMBOK Knowledge Area (6th)	Details of Generative AI Applications
1	Project Integration Management	• Evaluation of LLM feasibility in Agile project planning compared to human Scrum Masters (Shahriary et al., 2025) • Integration of OpenAI and prompt engineering techniques to support managerial decision-making (Jayaram et al., 2024) • The CogniSim framework integrating LLMs into SAFe to enhance decision-making efficiency (Cinkusz et al., 2025) • Comparison between human practitioners and Generative AI (GPT-4) in developing Project Charter development (Barcaui & Monat, 2023)
2	Project Scope Management	• Integration of Generative AI with Work Breakdown Structures (WBS) to enable automated task planning systems (Zhen et al., 2024) • Comparison between human practitioners and Generative AI (GPT-4) in developing WBS, WBS Dictionary, Requirements Traceability Matrix, and Scope Statement (Barcaui & Monat, 2023)
3	Project Schedule Management	• Integration of OpenAI and prompt engineering techniques for project progress visualization (Jayaram et al., 2024) • Comparison between human practitioners and Generative AI (GPT-4) in developing the Schedule Baseline (Barcaui & Monat, 2023)
4	Project Cost Management	• Comparison between human practitioners and Generative AI (GPT-4) in developing cost estimates (Barcaui & Monat, 2023)
5	Project Quality Management	• Use of ChatGPT to enhance human understanding and improve project output quality (learning effects transferable to real-world projects) (Boubakri & Nafil, 2024) • Comparison between human practitioners and Generative AI (GPT-4) in

No	PMBOK Knowledge Area (6th)	Details of Generative AI Applications
		developing the Quality Plan (Barcaui & Monat, 2023)
6	Project Resource Management	• Application of Generative AI to enhance team diversity and resource allocation (Chan & Li, 2024) • Comparison between human practitioners and Generative AI (GPT-4) in developing the Resource Plan (Barcaui & Monat, 2023)
7	Project Communications Management	• Integration of ChatGPT with computer vision to automatically generate daily construction reports (Xiao et al., 2024) • Integration of OpenAI and prompt engineering techniques for automated documentation in machine and human-readable JSON formats (Jayaram et al., 2024) • The CogniSim framework integrating LLMs into SAFe to support project communication (Cinkusz et al., 2025) • Integration of Generative AI into Scrum planning poker as a learning support tool (Nafil & Lefdaoui, 2024) • Use of LLMs to identify and summarize constraints during construction project planning meetings (He et al., 2024) • Comparison between human practitioners and Generative AI (GPT-4) in developing the Communications Plan (Barcaui & Monat, 2023)
8	Project Risk Management	• Assessment of ChatGPT accuracy across different phases of risk management (Aladağ, 2023) • Comparison of ChatGPT and domain experts in risk identification, analysis, and control in construction projects (Nyqvist et al., 2024) • Comparison between human practitioners and Generative AI (GPT-4) in developing the Risk Management Plan (Barcaui & Monat, 2023)
9	Project Procurement Management	• - (No explicit application identified in reviewed literature)
10	Project Stakeholder Management	• Comparison between human practitioners and Generative AI (GPT-4) indeveloping stakeholder maps (Barcaui & Monat, 2023)

Source: (Research Results, 2025)

Variations in Generative AI Utilization Across Industries

The literature indicates that Generative AI is utilized differently across industries. The construction industry utilizes Generative AI, especially to support risk management (Nyqvist et al., 2024)(Aladağ, 2023), daily reporting (Xiao et al., 2024) and planning activities (Zhen et al., 2024) (He et al., 2024). In the information technology industry, greater emphasis is placed on integration with Agile frameworks (Shahriary et al., 2025) such as SAFe (Cinkusz et al., 2025). In the education sector, Generative AI functions mainly as a tool for learning (Boubakri & Nafil, 2024), simulation (Nafil & Lefdaoui, 2024) (Karnouskos, 2024), and training (Chen et al., 2025). Generative AI is also found to be beneficial in human resources (Chan & Li, 2024), supply chain (Georgiev et al., 2024), and cross-industry applications (Barcaui & Monat, 2023) (Jayaram et al., 2024) (AbuAlfateh et al., 2024). Although the context of Generative AI utilization varies across industries, several practices identified in non-IT sectors remain relevant for IT project management. For instance, risk management practices applied in the construction industry can be adapted to IT projects. This is particularly relevant for IT project management, where projects often involve sensitive client data, source code, and business strategies.

Confidentiality and Security Concerns in the Use of Generative AI

Despite different contexts, similar confidentiality and security concerns arise because ChatGPT responses are generated from mixed data sources such as licensed data, data

generated from human trainers, and publicly available data. Moreover, ChatGPT does not have access to confidential information (Aladağ, 2023). These technological challenges are closely related to issues of data privacy, security, and transparency (Cinkusz et al., 2025) In addition, concerns have been raised regarding cybersecurity and GDPR (Georgiev et al., 2024) The increasing adoption of Generative AI also highlights critical issues such as data privacy, ethical use and responsible implementation (Barcaui & Monat, 2023). Based on these findings across different industries, there is a clear need to classify which types of inputs can be considered safe and which may arise risks when used in Generative AI.

Classification on Information Input Used in Generative AI for Project Management

As discussed in the previous section, one of the main issues in the use of Generative AI is the risk related to confidentiality and security. Therefore, it is important to understand the types of information that may be input into Generative AI systems within the context of project management. Based on the analysis of 17 studies, the types of information input provided to Generative AI are summarized in Table 4. Table 4 shows that input types range from plain text to formal documents, indicating the potential for companies to utilize Generative AI with diverse data types. However, since not all data is safe to process, these inputs were used to develop an expert assessment instrument to validate safe and risky inputs and to inform practical guidelines for secure Generative AI use.

Table 4. Types of Information Input into Generative AI in Project Management

No	Type of Information Input into Generative AI	Reference
1	Project title, Specific features, Timeframe: 3 months, Project focus, Functionality, Technical requirements	(Shahriary et al., 2025)
2	Project information (type, location, special factors, objectives), Risks (category, factors, name, description), Strategy analysis (method, mitigation strategy, plan, actions), Stakeholders	(Aladağ, 2023)
3	Construction video report transcript	(Xiao et al., 2024)
4	Text documents (such as PDFs, project notes, legal documents, etc.), Custom prompts, Unstructured and semi-structured data	(Jayaram et al., 2024)
5	Case studies containing roles, construction type, project scale, location, age of the building, special constraints, contract type, client details, and building use)	(Nyqvist et al., 2024)
6	Agent name, client analysis, solution architect feedback, and instructions	(Cinkusz et al., 2025)
7	No specific input to Generative AI	(Boubakri & Nafil, 2024)
8	Team personality data	(Chan & Li, 2024)
9	No specific input to Generative AI	(A. Kumar et al., 2024)
10	User story information and acceptance criteria	(Nafil & Lefdaoui, 2024)
11	Early-stage Work Breakdown Structure	(Zhen et al., 2024)
12	No specific input to Generative AI	(Chen et al., 2025)
13	Questions from the PMI PMP Exam Prep book (multiple-choice and open-ended)	(Karnouskos, 2024)
14	No specific input to Generative AI	(Georgiev et al., 2024)
15	No specific input to Generative AI	(AbuAlfateh et al., 2024)
16	Daily meeting transcripts in text form, Custom prompts, Annotated data for constraints classification, Advanced prompts for insight extraction	(He et al., 2024)
17	Application project specifications, PMI PMBOK guidelines, Initial prompts and follow-up prompts	(Barcaui & Monat, 2023)

Source: (Research Results, 2025)

Key Considerations for Safe Utilization of Generative AI Identified from Literature

In addition to input-related considerations, the literature also reveals several issues that need to be considered when adopting Generative AI. These issues are not only related to security and confidentiality, but also encompass policy, ethical, and governance aspects of

technology use. The reviewed literature is not limited to a single industry. It includes various industry, such as Education & Academics (Abuadas & Albikawi, 2025)(Scott-Kennel et al., 2025), Emergency Services (Song et al., 2025), Government (Koné et al., 2024) (J. Xu et al., 2024), Marketing & Consumer (V. Kumar et al., 2024), Media, Journalism, and Public Opinion (Thomson et al., 2024)(Yadlin & Marciano, 2024), Organizations, Corporations, and HR (Jo & Park, 2024) (J. Liu, 2025), Tourism (S. Kumar & Malhotra, 2025)(Kim et al., 2023), and also Information Technology itself (Xie et al., 2025)(Niu & Mvondo, 2024). From the literature across these various industries, key considerations for adopting Generative AI were identified. Table 5 presents the categories and their contexts related to the use of Generative AI.

Table 5. Categories and Contextual Considerations in Generative AI Usage

No	Category	References
1	Disinformation/ Misinformation	(Kim et al., 2023), (S. Kumar & Malhotra, 2025), (Smith et al., 2025), (Song et al., 2025), (Thomson et al., 2024), (V. Kumar et al., 2024)
2	Ethics/ Ethical Considerations	(Abuadas & Albikawi, 2025), (C. Xu et al., 2025), (Cheng & Lee, 2024), (Goher, 2025), (Goher, 2025), (Jeon et al., 2025), (Kim et al., 2023), (Koné et al., 2024), (Lao & You, 2024), (Lin & Ng, 2024), (Niu & Mvondo, 2024), (Rana et al., 2024), (Rice, 2025), (Scott-Kennel et al., 2025), (Shao et al., 2025), (Smith et al., 2025), (Spennemann et al., 2024), (Sýkorová et al., 2024), (Thomson et al., 2024), (Y. Liu & Du, 2025), (Zhu et al., 2024), (Zou & Liu, 2024)
3	Privacy & Data Protection	(Abuadas & Albikawi, 2025), (Cheng & Lee, 2024), (Kim et al., 2023), (Lin & Ng, 2024), (Sýkorová et al., 2024), (Y. Liu & Du, 2025)
4	Regulation & Policies	(Goher, 2025), (J. Liu, 2025), (J. Xu et al., 2024), (Jeon et al., 2025), (Lao & You, 2024), (Rice, 2025), (Scott-Kennel et al., 2025), (Smith et al., 2025), (Song et al., 2025), (Spennemann et al., 2024), (Sýkorová et al., 2024), (Thomson et al., 2024), (Yue et al., 2024)
5	Risk Management	(C. Xu et al., 2025), (Goher, 2025), (Khan et al., 2024), (Smith et al., 2025), (Song et al., 2025), (Spennemann et al., 2024), (V. Kumar et al., 2024), (Yadlin & Marciano, 2024)
6	Social Implications	(Bozkurt & Gursoy, 2025), (Goher, 2025), (Lin & Ng, 2024), (Saffarizadeh et al., 2024), (Yadlin & Marciano, 2024), (Zou & Liu, 2024)
7	Technology & Infrastructure	(V. Kumar et al., 2024)
8	Training & Literacy	(Goher, 2025), (Lao & You, 2024), (Thomson et al., 2024), (Yue et al., 2024)
9	Workforce & Organization	(Bozkurt & Gursoy, 2025), (Jo & Park, 2024), (Korzyński et al., 2024), (Lao & You, 2024), (Marimon et al., 2025), (Somià & Vecchiarini, 2024), (V. Kumar et al., 2024), (Xie et al., 2025), (Yue et al., 2024)

Source: (Research Results, 2025)

Overall, Table 5 contains nine categories, which are as follows:

1. Disinformation/Misinformation: false or misleading information, AI hallucinations, content manipulation, and information quality.
2. Ethics/Ethical considerations: moral values, ethical principles, responsibility, and human considerations in using AI.
3. Privacy & Data Protection: data security, privacy, and data/information protection.
4. Regulations & Policies: rules, policies, regulations, organizational guidelines, standards for managing the use of AI.
5. Risk Management: potential harm or threat from the use of AI.
6. Social Implications: the impact of AI on society at large, public interaction, public trust, and conspiracy theories or public opinion.
7. Technology & Infrastructure: systems, technological infrastructure, and data access.
8. Training & Literacy: education, training, literacy about AI.

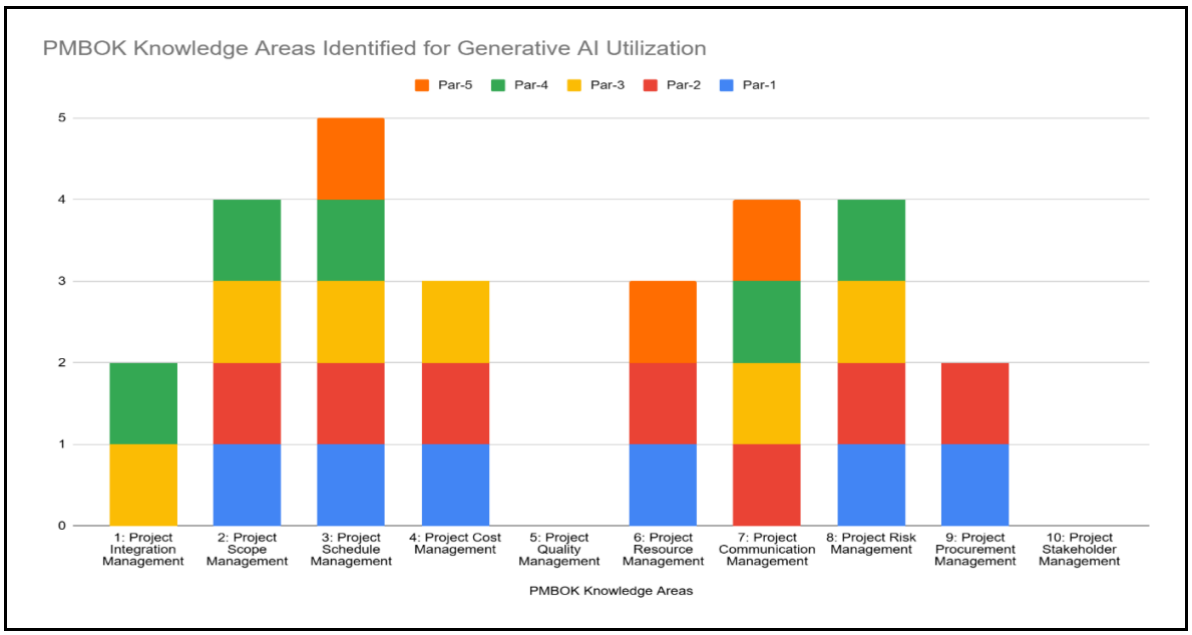
9. Workforce & Organization: the impact of AI on jobs, employees, resistance in organizations, management, and adoption of AI in organizations.

These nine categories serve as the conceptual foundation for the expert assessment, which aims to validate their relevance, priority, and applicability in the context of IT project management.

Expert Assessment on the Utilization of Generative AI Across PMBOK Knowledge Areas

Figure 2 illustrates the results of expert assessments on the utilization of Generative AI, mapped across the PMBOK Knowledge Areas. Project Schedule Management was selected by all experts, while Project Quality Management and Project Stakeholder Management were not selected. Although Generative AI may be used to generate drafts or provide recommendations, the quality and final decisions remain dependent on human judgement. Similarly, stakeholder engagement continues to rely on active human interaction.

Although not identified in the literature, experts considered Generative AI applicable to Project Procurement Management. These findings provide a basis for further analysis of how confidentiality and security considerations affect the types of information and input used in Generative AI, which will be discussed in the next section.



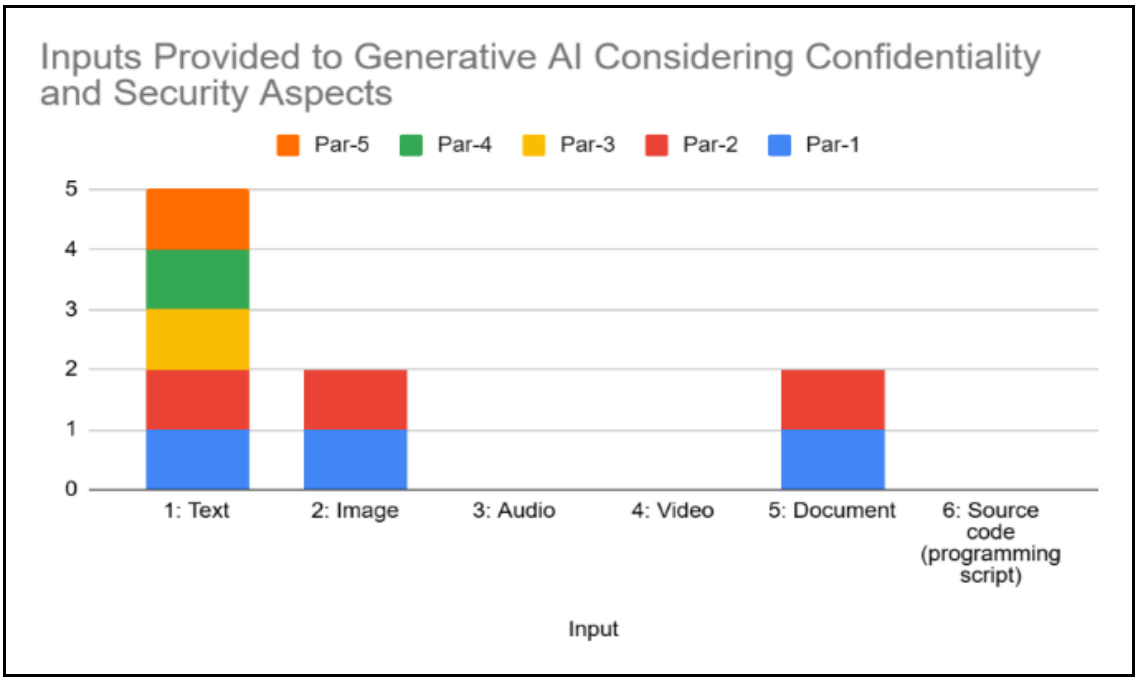
Source: (Research Results, 2025)

Figure 2. PMBOK Knowledge Areas Identified for Generative AI Utilization

Expert Assessment of Safe Input Types for Generative AI

Figure 3 illustrates the results of expert assessment regarding the types of inputs provided to Generative AI, considering confidentiality and security aspects. The results indicate that text input was selected by all experts, suggesting that it is perceived as the safest input type. Text is considered the safest input type because it is easier to control and anonymize. For example, when providing prompts, users can specify instructions clearly and limit the inclusion of sensitive information. In contrast, three types of input, which are audio, video, and source code were not selected by any of the experts, indicating a high level of concern regarding their potential confidentiality and security risks. In IT projects, source code is a critical asset that must be protected, as it may contain proprietary business information. Similarly, audio and video inputs are more difficult to anonymize, increasing the risk of exposing sensitive information. In addition, image and document were considered

acceptable by some experts, reflecting differing perceptions regarding the associated level of risk when using these input types in Generative AI.



Source: (Research Results, 2025)

Figure 3. Inputs Provided to Generative AI Considering Confidentiality and Security Aspects

Expert Assessment of Safe Information Types

Table 6 illustrates the result of expert assessments regarding information types that are considered safe to share with Generative AI.

Table 6. Expert Assessment on Information Types Safe to Share with Generative AI

Types of Information	Agree	Disagree	Agree	Disagree
1: project title, objectives, and location	2	3	40%	60%
2: project scope	5	0	100%	0%
3: project requirements/specifications	5	0	100%	0%
4: project risk information	3	2	60%	40%
5: risk mitigation strategies	4	1	80%	20%
6: project stakeholder information	1	4	20%	80%
7: client information	1	4	20%	80%
8: user stories	4	1	80%	20%
9: acceptance criteria	4	1	80%	20%
10: work breakdown structure (WBS)	3	2	60%	40%
11: daily meeting transcripts	2	3	40%	60%
12: general prompts (for gathering information)	5	0	100%	0%
13: contextual prompts (specific instruction related to the project)	4	1	80%	20%
14: audio - project meeting recordings	1	4	20%	80%
15: video - project meeting recordings	1	4	20%	80%
16: field report video (e.g. on-site report)	1	4	20%	80%
17: project legal documents (e.g. contracts)	1	4	20%	80%

Types of Information	Agree	Disagree	Agree	Disagree
18: early-stage project documents (e.g. draft project charter)	4	1	80%	20%
19: final project documents (e.g. final project charter)	1	4	20%	80%
20: anonymized project documents (conceal confidential data)	3	2	60%	40%
21: code snippets	3	2	60%	40%
22: full program code	1	4	20%	80%

Source: (Research Results, 2025)

The findings indicate that project scope, project requirements/specifications, and general prompts were accepted by all experts. In contrast, no information type reached full agreement in the disagreement category. The highest level of disagreement (80%) was observed for information related to project stakeholder & client information, meeting recordings (audio/video), field report video, legal documents, final project documents, and full program code. In addition to the quantitative results, experts provided qualitative feedback regarding the types of information considered safe to input or share with Generative AI while maintaining confidentiality and security. This feedback indicates that data related to personal information and project-confidential information should not be shared. Moreover, certain types of information can be safely shared with Generative AI, if they are properly anonymized and do not contain confidential or sensitive data, such as testing workflows, PMO templates, and communication plans. To reduce project risks, any input should not include personal data, customer data, source code, and financial information.

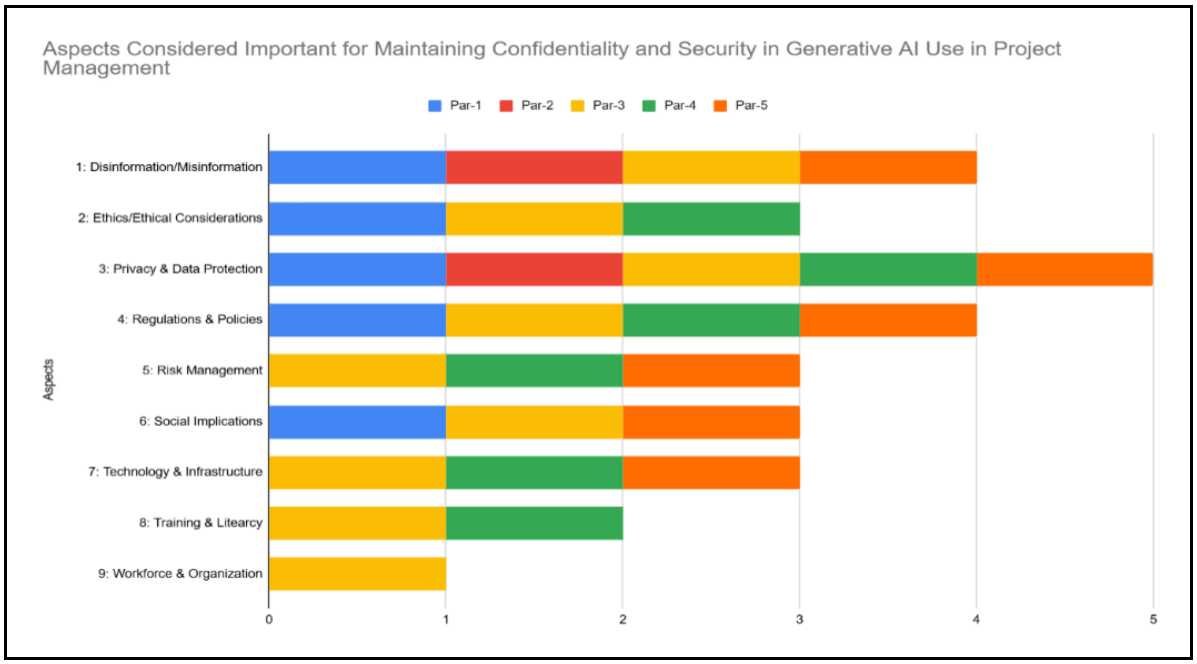
Expert Assessment of Key Aspects to Maintain Confidentiality and Security

Figure 4 illustrates the result of expert assessment on aspects considered important for maintaining confidentiality and security in Generative AI use in project management. The findings indicate that privacy and data protection was selected by all experts as the most important aspect that companies should consider when utilizing Generative AI. These results reflect a strong rationale for the importance of protecting sensitive information related to projects. In addition, disinformation or misinformation and regulations and policies were identified as the second most frequently selected aspects. These findings suggest that, beyond data protection, experts also recognize the risks associated with inaccurate or misleading outputs and the need for clear organizational and regulatory frameworks to govern the use of Generative AI in project management.

Prioritization of Confidentiality and Security Aspects

All experts were required to choose one aspect that they considered the most important for maintaining confidentiality and security when utilizing Generative AI in project management. The results indicate that all experts selected Privacy & Data Protection as the most important aspect. These findings reinforce the results presented in previous section regarding privacy and data protection in secure Generative AI implementations. In addition to the aspects presented in Figure 4, experts also identified several additional considerations that companies should pay attention to maintain confidentiality and security when utilizing Generative AI in project management. These aspects include access control to limit who can use AI tools and what they can input, vendor security to ensure AI providers protect data properly, usage monitoring to track and prevent misuse, and output validation to verify that AI results are accurate and do not create risks.

Discussions



Source: (Research Results, 2025)

Figure 4. Aspects Considered Important for Maintaining Confidentiality and Security in Generative AI Use in Project Management

The literature review indicates that Generative AI has the potential to support multiple PMBOK Knowledge Areas, but expert assessments reveal differences in practical utilization, with Project Schedule Management widely selected while Project Quality Management and Project Stakeholder Management were not, and Project Procurement Management emerging instead as a potential area. Although the literature suggests that Generative AI can process various input types, experts adopt a more selective approach due to confidentiality concerns, prioritizing text as the safest input and emphasizing privacy and data protection as the most critical consideration for its implementation in IT project management. Overall, the utilization of Generative AI in IT project management has broad potential. However, its implementation needs to be conducted selectively by considering input types, the level of information confidentiality, and organizational policies, to gain the benefits of the technology without compromising confidentiality and security.

CONCLUSION

This study focuses on the use of Generative AI in IT Project Management, with a particular emphasis on maintaining confidentiality and security. By combining findings from the literature and expert assessments, the study provides an overview of its application in project management, along with the associated concerns and considerations for its safe use. Based on literature reviews, Generative AI can be applied across several PMBOK Knowledge Areas. The findings also indicate that the adoption of Generative AI varies across industries. Despite these differences in usage, concerns regarding confidentiality and security emerge across all industries. This study also identifies various types of information that are used as inputs for Generative AI, ranging from simple text prompts to formal documents. Although many types of information are used, not all of them are considered safe inputs, especially for confidentiality and security.

Expert assessments reinforce the results of the literature findings. Experts agree that Generative AI can be applied in several PMBOK Knowledge Areas. Regarding input types,

text input is considered the safest, while audio, video, and source code are the riskiest. In terms of information types, experts agree that general project information such as project scope and requirements can be shared. In contrast, sensitive data should be avoided or carefully anonymized before use.

Finally, both the literature and expert assessments emphasize that privacy and data protection are the most important aspects for maintaining confidentiality and security when utilizing Generative AI in project management. These findings highlight the importance of appropriate governance in ensuring the safe use of Generative AI.

Theoretical Implications

This study contributes theoretically by mapping the use of Generative AI within PMBOK Knowledge Areas, which have been relatively underexplored in prior research. It also integrates confidentiality and security considerations in the use of Generative AI in IT project management. These insights extend existing research that has primarily focused on the positive impacts of Generative AI in project management.

Practical Implications

This research provides practical guidance for organizations and project managers to adopt Generative AI more securely. Organizations should prioritize privacy and data protection through clear policies on input types, access control, and data anonymization, while restricting sensitive data such as personal, client, source code, and legal information. Additionally, governance mechanisms and AI literacy programs are needed to ensure effective monitoring and responsible use.

Limitations

This study has several limitations, including a literature review that may not capture the rapid evolution of Generative AI and a limited number of expert participants, which affects generalizability. Additionally, the focus on confidentiality and security means that other aspects, such as performance evaluation and impacts on project effectiveness, are not explored in depth.

Future Research Directions

Future research should involve a larger and more diverse group of experts and conduct empirical studies on real projects to validate the classification of safe and risky inputs. It could also develop guidelines for the safe and ethical use of Generative AI in IT project management and assess its long-term impact on project performance and decision-making.

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