

COLLABORATION BETWEEN BUSINESS AND TECHNOLOGY TEAMS USING KNOWLEDGE MANAGEMENT SYSTEMS - LESSONS FROM FINANCIAL SERVICES

S.E.A Skosana^{1*} and B. Emwanu²

¹ University of Witwatersrand, School of Mechanical, Industrial & Aeronautical Engineering, South Africa | 2925618@students.wits.ac.za

² University of Witwatersrand, School of Mechanical, Industrial & Aeronautical Engineering, South Africa | Bruno.Emwanu@wits.ac.za

ABSTRACT

The South African financial services sector, like manufacturing, faces growing pressure to deliver innovative products rapidly while complying with stringent regulatory requirements. Collaboration between business and technology teams becomes essential, yet is often hindered by organisational knowledge silos, inconsistent engagements across specialist teams, and an overreliance on tacit knowledge. Knowledge Management Systems (KMS) are widely adopted across the sector to address these challenges, but their effectiveness in enabling collaboration outcomes remains underexplored. This study examined the role of KMS in supporting cross-functional collaboration within a leading South African banking group. A mixed-methods approach was adopted by surveying KMS users across departments and conducting semi-structured interviews with senior technology and business executives. Most survey respondents believe KMS improve decision-making through shared insights and enhance performance in cross-functional projects. However, training gaps, poor user interfaces, overreliance on tacit expertise and the lack of integration

* Corresponding author

of KMS in users' daily workflows emerged as persistent barriers limiting effectiveness. Executives reinforced these sentiments describing KMS as largely ineffective, static, and non-strategic. Executive sponsorship and organisational culture were noted as a positive driver of adoption, lessons manufacturing can learn. Leaders stressed the strategic imperative of AI-enabled KMS tools to transform static knowledge repositories into interactive decision tools.

Keywords: Knowledge Management System (KMS), cross-functional collaboration, South African financial services, knowledge management, technology adoption

1 INTRODUCTION

The development of financial products and services requires frequent collaboration between business and technical specialists across the organisation. Product development teams often include project managers, product managers, customer support specialists, business analysts, business intelligence analysts, legal and risk managers, software developers, and IT architects, each contributing their distinct domain knowledge. However, this diversity of domain knowledge among these stakeholders often results in communication barriers, knowledge silos, and ineffective decision-making. Enhancing cross-functional collaboration between these teams is, therefore, a crucial factor to the innovation success of new products in financial services [2].

KMS are widely acknowledged as collaboration tools within organisations. KMS can be defined as a class of information systems that facilitate and enhance the transfer of knowledge within an organisation [3]. Early research suggests that organisations that require cross-functional teams to develop products and services could potentially benefit from KMS [4]. More recently, it has been emphasised that Knowledge Management practices that facilitate the sharing and integration of knowledge across functions are essential for collaboration [5].

However, despite the known benefits of KMS in supporting collaboration between knowledge workers in financial services organisations, challenges persist. Domain knowledge in organisations remains largely tacit, embedded in individuals, and therefore difficult to codify, while additional barriers such as cultural resistance, fragmented systems, and siloed practices often limit the effectiveness of KMS in achieving their intended outcomes.

Financial services organisations in South Africa invest in KMS to support their product development efforts. In an early study of the implementation of knowledge management in South African financial organisations, 75% of respondents cited increased value for customers as a reason for investment in KMS [6]. South African authors have primarily addressed KMS themes such as the influence of organisational culture and multiculturalism on knowledge sharing [7], [8]. Another prominent theme is the factors influencing KMS adoption in organisations as reflected

in a recent study which examined the adoption and use of KMS in South African municipalities [9]. Despite this body of work, there remains limited empirical evidence on the effectiveness of KMS in enabling collaboration between cross-functional teams engaged in product development within South African financial services firms.

The urgency of this research is heightened by converging external pressures on South African financial services organisations. The sector is the single largest contributor to the national economy, accounting for 0.8 percentage points of the 0.6% GDP growth in 2024 [1], which places organisational performance under heightened public and regulatory scrutiny. Simultaneously, the speed at which business and technology teams can collaborate to deliver innovations from concept to marketable product has become a critical competitive advantage [10], while the regulatory environment imposes compressed timelines for implementing compliance-driven projects [11]. These pressures, that is, economic significance, competitive speed-to-market demands, and regulatory deadlines converge toward a single organisational imperative: the need for rapid, effective decision-making across cross-functional teams, particularly between business specialists who define customer requirements and technology specialists who architect and build solutions.

KMS are adopted by financial services organisations precisely as a response to this imperative. By facilitating the codification, storage, and retrieval of institutional knowledge, KMS are intended to accelerate decision-making, reduce dependency on individual expertise, and enable distributed teams to access the knowledge required for rapid product development and regulatory compliance. However, the extent to which KMS effectively support cross-functional collaboration specifically, the knowledge transfer between business-focused and technology-focused teams remains underexplored in South African financial services contexts.

Knowledge gaps between collaborating project team members can significantly hinder timely decision-making required to deliver projects at market speed. These knowledge barriers are worsened by the increased dependence on experienced specialist employees' institutional knowledge, which increases operational risks. Although project teams are often staffed with roles such as project managers and business analysts whose purpose

is to translate and coordinate information between business and technical expert contributors, they often lack the essential tacit knowledge required to understand domain specialists. Such roles are broadly characterised as boundary-spanning positions whose function is to import, translate, and transfer knowledge across the boundaries that separate distinct communities of practice within an organisation, such as by Tushman and Scanlan [12]. Levina and Vaast [13] also agree that individuals formally nominated to boundary-spanning positions frequently fail to become effective knowledge intermediaries in practice, because doing so requires legitimate participation in the practices of the specialist domains being bridged.

This research is therefore motivated by the need to find ways in which KMS can be effectively utilised to drive collaboration across cross-functional teams in South African financial services organisations. The South African financial services sector includes banks, insurers, investment managers, and financial technology firms. In 2024, The financial services industry in South Africa was the single largest contributor to GDP growth, adding a reported 0.8 percentage points to the overall 0,6% GDP growth rate [1]. Given its importance, enhancing collaboration and performance within financial services organisations are crucial for both organisational innovation and competitiveness, and the national economic wellbeing.

2 LITERATURE REVIEW

Cross functional collaboration is essential to project success in financial services organisations. Cross-functional integration is identified as a critical success factor in new product development [12]. It is argued in the literature that all forms of collaborative environments are fundamentally rooted in knowledge exchange, and that a strong relationship exists between collaboration and knowledge management [13]. However, such collaborative environments do not emerge automatically. The level of cross-functional collaboration in an organisation is influenced by factors such as the extent to which the organisational structure and culture encourage and promote knowledge sharing among its employees [14], [2]. Financial services organisations rely on knowledge workers to collaborate

and drive innovation. Knowledge workers are defined as highly educated professionals who combine deep expertise in specific domains with broad interdisciplinary understanding, and who focus primarily on the creation, distribution, and application of knowledge [17], [18], [19]. Recognising the value of knowledge workers aligns with the Knowledge-Based View (KBV) of the firm, which is a theory that defines a firm as an institution for integrating knowledge in pursuit of competitive advantage [20].

The growing prominence of knowledge workers in global organisations has influenced the adoption of KMS to support collaboration, knowledge sharing, and enhance innovation in the workplace [21]. KMS can be broadly defined as software-based or process-based organisational systems that facilitate the capturing, transforming, sharing, and usage of knowledge within an organisation. By seamlessly integrating diverse knowledge sources within and outside an organisation, KMS can enhance cross-functional collaboration, and influence decision-making [22]. The management of a firm's knowledge assets is vital for gaining competitive advantage through innovation [23].

Before deploying KMS it is crucial for organisations to understand the different types of knowledge these tools are required to manage. Knowledge in an organisation can be generally classified into explicit and tacit types [24]. Explicit knowledge is unambiguous knowledge which can be easily documented or codified to be stored in information systems for sharing [25]. Examples of explicit knowledge in an organisation include manuals, white papers, and databases [26]. Tacit knowledge is defined as personal insight gained through human experience in a specific context [27]. Tacit knowledge is thus difficult to capture in a standard way without consulting the human source or knowledge holder [28]. Examples of tacit knowledge in an organisation include specialist skills and experience [26].

Organisations deploy various KMS tools to manage explicit knowledge efficiently and effectively. Document Management Systems (DMS) are an example of a KMS tool which serves as a repository for various file types, such as word documents, images, and Portable Document Format (PDF) files. DMS enhance organisational efficiency by streamlining the process of acquiring, organising, sharing, and retrieving data and information [29]. Knowledge portals are another common KMS tool that consolidates an

organisation's data, documents, and services [30]. Atlassian Confluence, Microsoft SharePoint, and Google Workspace are common DMS and knowledge portals brands used in financial organisations.

Given its informal nature and difficulty to codify, managing tacit knowledge requires a different set of KMS tools. Organisations invest in discussion forum platforms that enable employees to informally exchange ideas and insights, therefore promoting a culture of collaboration and knowledge sharing within the organisation [31]. Common discussion forum KMS tools used in organisations include Slack, Microsoft Teams, Stack Overflow for Teams, and Confluence Questions.

While the strategic case for KMS is well documented, adoption and acceptance remain major challenges. Adoption depends not only on technological advancements but also on organisational recognition of knowledge as a strategic asset [32]. Similarly, some authors cite cultural misalignment and user resistance as barriers [33]. The difference between adoption (firm-level decision to implement a system) and acceptance (the behavioural and perceptual shifts of employees toward using it) should be well understood [34]. This distinction highlights why understanding user acceptance is crucial for the success of KMS.

The Technology Acceptance Model (TAM) offers a framework for explaining user acceptance. It posits that acceptance is shaped by two perceptions: whether a system enhances job performance and whether it is easy to use [35]. Later adaptations have reframed these as perceived usefulness and perceived ease of use, with studies showing that perceptions of difficulty or uselessness can drive resistance to new systems [36]. The model's strength lies in its empirical robustness across diverse technologies and its adaptability [37]. Extensions such as TAM2 and TAM3 incorporate external variables including social influence, voluntariness, and cultural dimensions, thus enhancing its predictive power [38].

Figure 1 below illustrates how users come to accept and use a technology through a sequence of interrelated factors. External variables (such as system design, organisational support, or training) influence users' perceptions of Perceived Usefulness and Perceived Ease of Use. A system that is easy to use tends to be perceived as more useful, thereby strengthening Attitude Toward Using the technology. This positive attitude, together with perceived usefulness, shapes the user's Behavioural

Intention to Use, which in turn leads to Actual System Use. In essence, TAM shows that when users find a system both easy to use and beneficial to their performance, they are more likely to adopt and consistently use it.

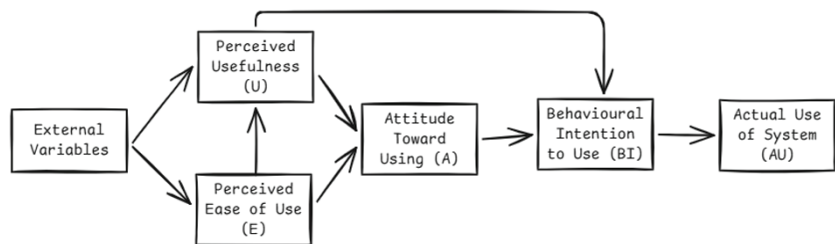


Figure 1: Technology acceptance model [35]

Despite these strengths, TAM faces important limitations in the organisational context of KMS. Its focus on individual-level acceptance overlooks organisational dynamics, reducing its explanatory power for collective adoption decisions [39]. The model is also criticised for being static, failing to capture evolving user behaviour over time [40]. Finally, it inadequately accounts for cultural variations that significantly shape user attitudes toward technology [41]. These critiques suggest that while TAM is useful, it must be complemented by broader frameworks when applied to complex, organisational-level systems such as KMS.

Scholars recommend several best practices to address the challenges of KMS adoption and acceptance. At the organisational level, leadership and strategic alignment are repeatedly emphasised. The importance of top management involvement and the use of incentive programmes to embed knowledge management in organisational culture and processes is emphasised [42]. Some authors advocate for appointing a chief knowledge officer (CKO) to champion the KM agenda [43]. The CKO has a key role to play in linking KM strategy to broader organisational objectives [44]. The agreement in the literature is that KM initiatives are most effective when fully integrated into business strategy and management activities [45], [46].

From a user perspective, research highlights the importance of social connection and perceived value in encouraging participation. Employees are more likely to adopt KMS if they feel socially connected and believe their contributions are valued and reciprocated [47]. Organisations must

foster a culture where knowledge sharing is recognised as a valuable and rewarding activity [48], [49]. Together, these insights suggest that successful KMS adoption requires both strategic leadership from the top and supportive cultural conditions at the user level.

The intersection of collaboration and KMS adoption is particularly significant in financial services organisations. KMS investment supports IT service managers in resolving disruptions efficiently, thereby strengthening collaboration between technology and business functions [50]. South African financial organisations primarily invest in KMS to streamline processes across business units and enhance customer value and reduce costs [51], [6].

Taken together, the literature suggests that collaboration in financial services is both a precursor and a beneficiary of KMS adoption. Collaboration creates the cultural and structural conditions necessary for KMS to be effectively used, while KMS provide the tools that enable more efficient and productive collaboration. This reciprocal relationship underscores the centrality of collaboration-first approaches in conceptualising the role of KMS in South African financial services organisations.

3 METHODOLOGY

A pragmatic research paradigm is followed, chosen for its flexibility and problem-solving orientation in addressing under-researched and complex organisational challenges [52]. Pragmatism is particularly suited to exploratory studies, such as this one, which investigates how KMS drive collaboration between business and technology teams in South African financial services. A mixed-methods design was adopted to combine the breadth of quantitative data with the depth of qualitative insights. Five advantages of such an approach are:

- Triangulation: Cross- validates findings;
- Complementarity: Enables the elaboration of results across methods;
- Development: Uses insights from one method to inform the other;

- Initiation: Reveals contradictions and new perspectives; and,
- Expansion: Broadens the scope of inquiry [51].

In this study, the survey provided an overview of user-level perceptions and behaviours, while interviews offered in-depth exploration of leadership perspectives. This design aligns with a sequential exploratory strategy, where quantitative data offered a foundation that was later deepened through qualitative inquiry [54]. Although this design supported triangulation, the smaller than anticipated survey sample constrained the statistical power of the quantitative strand. As such, the qualitative component played a dominant role in validating and enriching findings.

A questionnaire was administered to 70 employees within a large South African financial services organisation. Fifty-three (53) out of the 70 participants responded to the survey. Respondents represented seven key departments or product areas, that is, EFT payments, insurance, core banking, home loans, corporate banking, vehicle finance, and credit card, and included both business-focused and IT-focused professionals. Business team respondents are defined as individuals whose primary responsibilities involve translating customer needs into documented business requirements, managing product ownership, assessing the operational impact of new innovations, managing operational risk, and overseeing process design. This category includes roles such as business analysts, product managers, business architects, and risk managers. Technology team respondents are defined as individuals primarily responsible for converting business requirements into software architectural designs, developing software applications that meet customer needs, and assessing the impact of new innovations on the organisation's technology portfolio. This category includes roles such as software engineers, solution architects, systems analysts, and system architects.

By targeting respondents in their capacity as active KMS users, the survey captured first-hand experiences of adoption, collaboration practices, and barriers to knowledge sharing. The survey was restricted to a single organisation rather than multiple institutions. While coverage of three departments provided some variation in perspectives, findings cannot be assumed to represent the broader South African financial services industry.

The questionnaire included both closed-ended Likert scale items, to measure perceptions of usefulness, ease of use, managerial encouragement, and collaboration behaviour; and open-ended questions, to identify challenges, enablers, and suggestions for improving adoption. Survey items were informed by established theoretical frameworks, such as the TAM and the KBV of the firm [20].

To complement the survey findings and capture leadership perspectives, four semi-structured interviews were conducted with senior executives across the South African financial services sector: the technology executive at a large South African insurer; head of the business project management office for the EFT payments division at a large South African bank; the chief operations officer (COO) for a retail home loans division of a large South African bank; and the business process optimisation head at the international division of a large South African bank. The interviews explored themes of organisational culture, structural enablers of collaboration, and the alignment of KMS with strategic objectives. Following principles of the Biographic-Narrative Interpretive Method (BNIM) [55], participants were encouraged to share personal narratives and experiences, allowing for emergent insights while maintaining a semi-structured format. Each interview lasted approximately 45 to 60 minutes. Data collection was deemed sufficient when thematic saturation was reached [52]. The interview sample was weighted heavily towards business-side leaders. While this yielded valuable executive leadership insights into KMS adoption, perspectives from technology-focused executives were less represented, limiting the balance of viewpoints.

A purposive sampling strategy was employed to ensure the inclusion of participants with direct knowledge of KMS use and project delivery in financial services. Purposive sampling is a non-random technique that enables researchers to target specific population groups most relevant to the research objectives [56]. For the survey, respondents were drawn from a single large financial services organisation but across diverse departments or product areas including EFT payments, insurance, core banking, home loans, corporate banking, vehicle finance, and credit card, thus offering variation in perspective despite being limited to a single organisation. For the interviews, an expert purposive sampling approach

was used to target executives with strategic oversight of both business and technology functions. Although purposive sampling ensured relevance, the non-random nature of selection introduces potential bias. Respondents with positive or negative experiences may have been more motivated to participate, which could skew results. Results from the questionnaires were analysed using descriptive statistics to capture the frequency and distribution of responses in close-ended questions. This helped identify patterns and trends by showing how frequently specific responses occur in the data [57]. A thematic analysis was applied to categorise the most prevalent themes in the questionnaire and interview responses to open-ended questions. This method is typically used to analyse textual, visual, or audio content to identify patterns and emerging themes [58]. Content analysis typically involves two key steps, namely, coding, which involves categorising text segments using either predetermined or emerging themes, and interpretation, which focuses on finding patterns, as well as similarities and differences within those categories [59].

4 SURVEY RESULTS DISCUSSION

4.1 Profile of survey respondents

The survey respondents represent a diverse set of business and technology professionals within the South African financial services organisation. The most common job titles reported by respondents include systems analyst (14), business analyst (13), and business architect (7), collectively accounting for 64% of all survey participants. Supporting roles such as project managers, software engineers, and product specialists further illustrate a balanced representation across operational, technical, and managerial functions. Approximately 60% of respondents classified their roles as business-focused, while the remaining 40% identifying their roles as technology-focused. This distribution of roles as shown in Figures 2 and 3 below, illustrates that the survey represented both the creators and users of organisational knowledge, that is, those responsible for documenting business requirements and processes, implementing technical systems, and managing cross-functional projects.

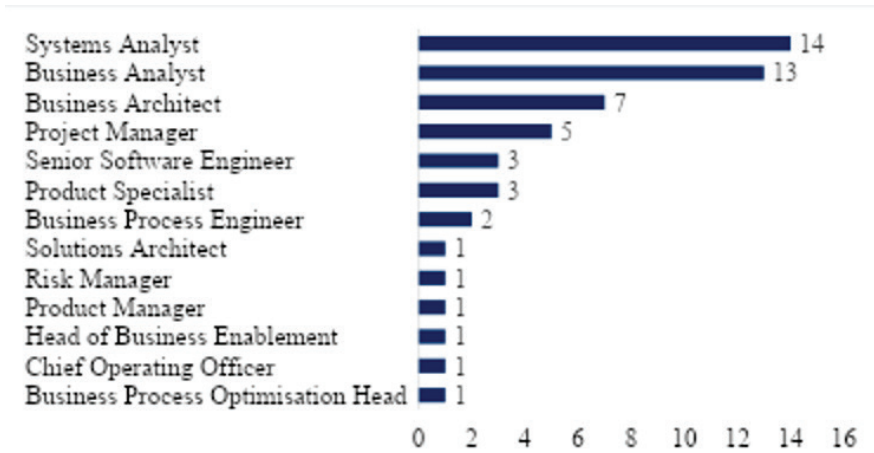


Figure 2: Number of survey respondents by job title

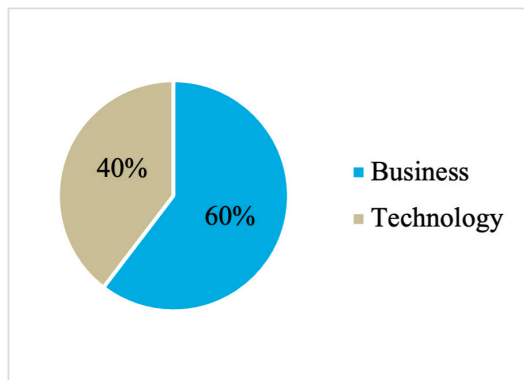


Figure 3: Distribution of respondents according to their organisational focus area

All respondents reported prior exposure to a KMS, with 72% using it daily, indicating both the awareness and experience to assess the practical value of KMS in supporting collaboration. The respondents had a balanced distribution of experience, with 36% of respondents having 5–10 years’ experience, 32% of respondents having 0-5 years’ experience, and another 32% having more than 10 years of experience delivering projects in financial services.

4.2 Reasons for knowledge management system use

The results in Figure 4 below show that collaboration on projects is by far the dominant reason respondents engage with their organisation's KMS, as cited by 51 out of the 53 participants. A substantial share of the participants uses KMS for sharing insights (33 out of 53), learning and development (25 out of 53), and understanding organisational processes (24 out of 53), indicating that the platform plays a dual role in both knowledge dissemination and employee enablement. Other reasons noted by respondents include documenting business and technical requirements, as well as tracking project deliverables. Collectively, these findings highlight that while KMS are strongly embedded in daily collaboration and learning activities, there is an opportunity for them to evolve past their static knowledge repository use cases.

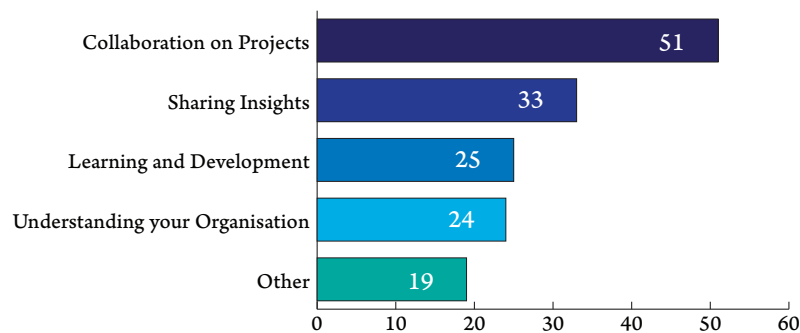


Figure 4: Survey respondents’ reasons for using Knowledge Management Systems in the organisation

4.3 Barriers in Knowledge Management System use

The most frequently cited challenges in using the KMS include lack of system integration into daily workflows (29 responses; 55%) and insufficient user training (26 responses; 49%), highlighting structural and capability-related barriers to adoption. Other common issues include resistance to change from colleagues (24 responses; 45%), lack of incentives to share knowledge (20 responses; 38%), and limited time to contribute content (19

responses; 36%), reflecting cultural and workload constraints that hinder active participation. Less prevalent but still significant concerns are the poor KMS user interface (14 responses; 26%) and miscellaneous technical or procedural issues captured under the “Other” category. Collectively, these findings show that over half of respondents view workflow integration and user capability gaps as the primary impediments to effective KMS use, while nearly half attribute adoption challenges to cultural and motivational factors such as change resistance and limited recognition for knowledge sharing.

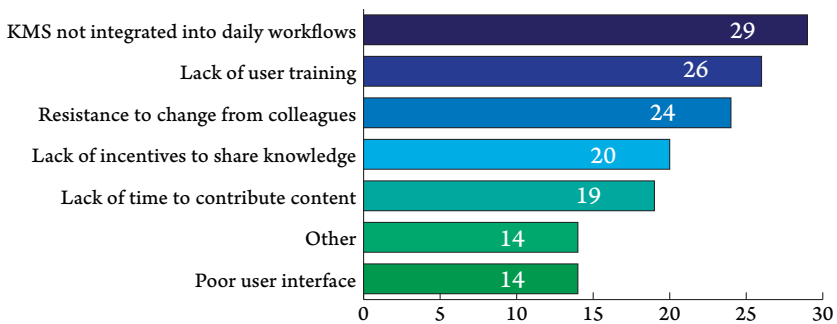


Figure 5: Barriers to effective use of Knowledge Management Systems

4.4 Issues hindering cross-functional collaboration

The leading KM issues hindering cross-functional collaboration, illustrated in Figure 6 below, were reliance on a few key individuals for critical knowledge (40 responses; 75%) and knowledge scattered across multiple unconnected sources (39 responses; 74%), both reflecting structural weaknesses in how knowledge is shared and stored. Other major barriers included inadequate documentation or capture of tacit, experience-based knowledge (35 responses; 66%) and a steep learning curve for understanding technical or business concepts (25 responses; 47%), indicating that both information management and skill accessibility constrain collaboration. Less frequent but still notable challenges were limited social interaction with subject-matter experts (18 responses; 34%) and minor “other” issues (5 responses; 9%). Collectively, these responses

reveal that knowledge fragmentation, over-reliance on key individuals, and insufficient documentation are the primary obstacles to seamless cross-functional collaboration in the organisation.

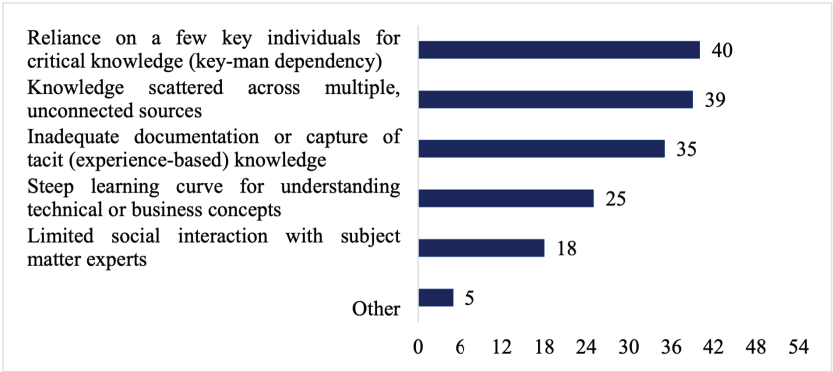


Figure 6: Prevalence of Knowledge Management specific issues hindering collaboration between business and technology teams

4.5 Perceived usefulness of Knowledge Management Systems

The results, in Figure 7 below, reveal a strong consensus among survey respondents that the KMS significantly enhances work performance and collaboration across departments. The highest-rated statement, ‘Using the KMS enhances my performance in cross-functional projects’, achieved a 91% positive response rate, showing that users clearly associate KMS use with improved productivity and collaboration outcomes. Similarly, 87% of respondents agreed that the system improves the quality of collaboration between business and IT, and 83% believed it helps them make better cross-departmental decisions. Interestingly, a little over half of the respondents (55%) agree that KMS helps reduce the time spent resolving cross-departmental issues. This suggests that cross-functional issues supersede the scope of KMS. These findings confirm a high level of Perceived Usefulness of KMS, a core predictor of technology acceptance under Davis’s Technology Adoption Model.

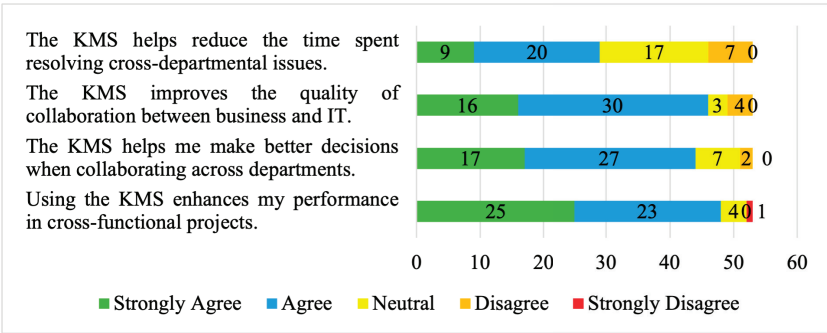


Figure 7: Survey responses to the question ‘To what extent do you believe the Knowledge Management Systems enhances their job performance and supports collaboration?’

4.6 Perceived Ease of Use of Knowledge Management Systems

Respondents generally found their KMS easy to use, with 75–85% agreeing that it is simple to learn and operate, although fewer (around 60%) described it as fully intuitive or easy to navigate. The highest-rated statement, ‘It is easy for me to learn how to use the KMS’, achieved around 85% agreement, suggesting that initial adoption and onboarding are not major barriers. Similarly, 72% agreed that interacting with the KMS requires little mental effort, reinforcing a general sense of usability. However, slightly lower agreement levels for ‘The KMS is intuitive and user-friendly’ (~63%) and ‘It is easy to retrieve the knowledge I need’ (~58%) indicate some challenges in the KMS interface design and search efficiency. Overall, the findings reflect a positive but slightly uneven Perceived Ease of Use, suggesting that interface improvements and enhanced search functionality could further strengthen user experience and adoption.

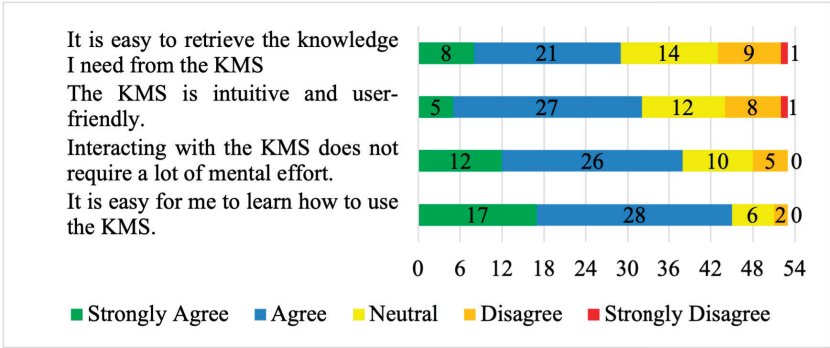


Figure 8: Survey responses to the question ‘To what extent do you agree that Knowledge Management Systems is effortless and intuitive to use?’

4.7 Behavioural Intention to Use (BI) and Actual Use (AU) of Knowledge Management Systems

The results in Figure 9 below show strong behavioural intention to continue using the KMS, coupled with slightly lower levels of actual contribution activity. Almost all respondents (94%) either agreed or strongly agreed that they intend to continue using the KMS for future collaborative projects, and 90% would recommend it to colleagues. However, slightly fewer (~79%) reported actively contributing new or updated content, pointing to a gap between usage and content creation. Overall, these results confirm a strong Behavioural Intention (BI) under the Technology Adoption Model, but suggest that enhancing contribution incentives could strengthen Actual Use (AU) and turn passive users into active knowledge contributors.

The high behavioural intention (94%) contradicts the substantial barriers (55% lack workflow integration, 49% insufficient training) mentioned earlier. Behavioural intention, defined in TAM as an individual’s subjective probability of performing a target behaviour [36], should theoretically be negatively influenced by such structural impediments. We interpret this deviation from classical TAM predictions as evidence that organisational norms and leadership endorsement override individual perceptions of barriers. In the financial services firm studied, KMS use is not discretionary but organisationally mandated and reinforced through

managerial expectations. When technology adoption is subject to strong normative pressures, employees form high behavioural intention regardless of encountered barriers.

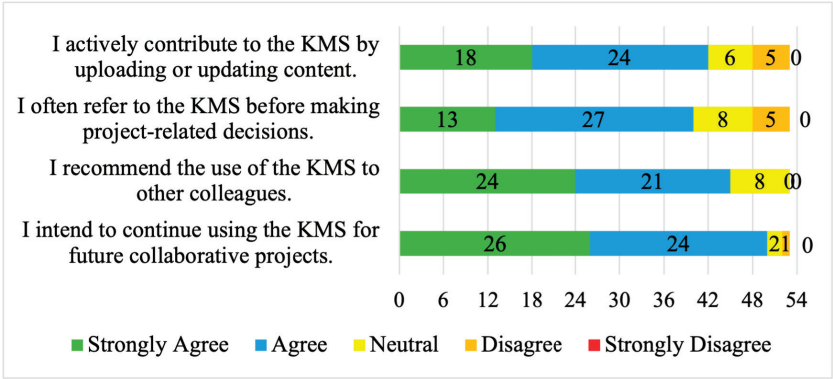


Figure 9: Survey responses to the question ‘To what extent do you agree with the following statements?’

4.8 Organisational factors encouraging Knowledge Management Systems use

Figure 10 below illustrates that the majority of respondents (85%) felt that managers encourage KMS use, and 75% noted that their teams discuss it during project work, showing strong cultural support. However, fewer than half (43%) agreed that adequate training is provided, and only 64% felt the KMS aligns with departmental strategic goals. From a Technology Adoption Model (TAM2/TAM3) perspective, these organisational factors act as external variables influencing both Perceived Usefulness and Ease of Use. While cultural encouragement is clearly present, the limited training and alignment highlight a need for stronger facilitation, onboarding structures, and strategic linkage to sustain and deepen adoption across the organisation.

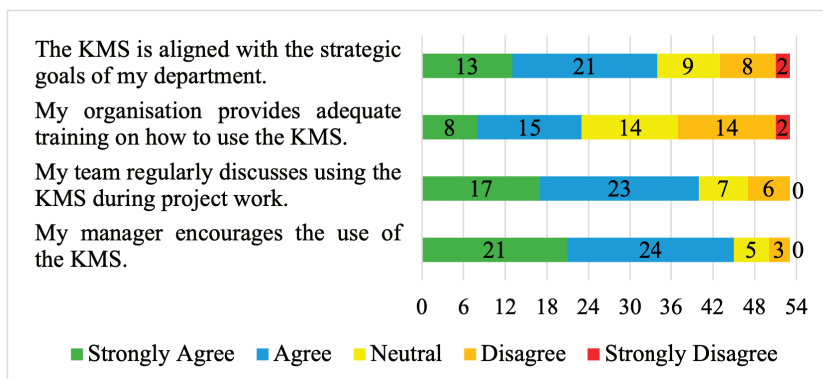


Figure 10: Survey responses to the question, ‘To what extent do you agree with the following statements?’

4.9 Recommendations for Effective Knowledge Management Systems adoption

Most respondents emphasised frequent, practical, and role-specific training as the strongest driver of adoption. Statements like ‘Frequent training and disabling manual operations’ and ‘Make training part of the onboarding process for new joiners’ highlight a need for consistent upskilling across teams. Many participants stressed that visible leadership support and cultural alignment were essential. Responses such as ‘Leaders must use KMS visibly to set the tone’ and ‘Strong leadership support and integration into daily workflows is essential’ indicate that senior endorsement and consistent messaging are critical to changing user behaviour.

Several respondents argued that adoption will improve only when KMS tools are seamlessly integrated into existing platforms like Teams, Outlook, or JIRA. Respondents also suggested incentives, scorecard inclusion, and recognition programmes to drive accountability. One noted, ‘Make it a performance goal in the scorecards and incentivise compliance’, while another called for knowledge champions and curators to maintain clean, relevant content.

Lastly, participants highlighted the importance of content freshness, structure, and user experience. Several urged for a ‘well-structured taxonomy with searchable keywords’, ‘reduction in login barriers’, and ‘AI-enabled summarisation tools. Respondents believe that clean, updated, and

collaboration. She stated that ‘Multiple people may edit documents, but that’s not true collaboration’. Interviewee B, who framed his view from a project management perspective, believes that ‘Effectiveness really depends on who’s driving the project...if leadership enforces documentation, people comply; otherwise, it falls away’.

Their collective views suggest that although KMS are widespread, they are underutilised for interactive collaboration and their effectiveness hinges less on the technology and more on leadership and culture.

5.2 Non-KMS factors influencing cross-functional collaboration

All four interviewees underscored culture and change management as critical determinants of KMS success. Interviewee A linked collaboration quality to ‘the ways of work that you’ve established as a team’, while Interviewee B asserted that ‘if your teams don’t see value in sharing, no system will fix that’. Interviewee C warned that ‘unless people use it and see the benefit, it won’t add value’ and Interviewee D pointed to ‘different teams having different cultures’ that fragment collaboration. The findings reveal that behavioural alignment outweighs technical sophistication.

5.3 Strategic priority of Knowledge Management Systems adoption and leadership’s role in encouraging Knowledge Management Systems use

Each respondent regarded KMS as strategically important but variably implemented. Interviewee A tied it to financial services competitiveness stating that ‘Whoever gets better insights faster will win the game’. Interviewee B viewed it as essential for retention of intellectual property, stating, ‘Knowledge loss is a real issue when people leave’. A shared belief emerged that executive sponsorship and visible champions are critical for KMS adoption. Interviewee C stated, ‘you want to have that champion... who really believes in it and champions it within the right environments’, likening this to the role of the chief knowledge officer explored by Chauke and Snyman (2003).

5.4 Future of Knowledge Management Systems with emerging technologies (GenAI and AI)

All participants were optimistic about AI transforming KMS from static document repositories into interactive intelligent systems. Interviewee A foresaw ‘GenAI making systems smart’ by surfacing insights from large volumes of documents in the KMS repository. Interviewee B envisioned an advanced ‘interactive use’ where AI could ‘draw me a conceptual diagram... something that would take a week is now done in an hour’. Interviewee C cited ‘GPT at Work’ for querying repositories through prompts, and Interviewee D envisioned ‘a chatbot for KMS’ that ‘only helps if documentation is proper’. The shared theme is that AI’s value will depend on the quality of the content.

5.5 Recommendations for Effective Knowledge Management Systems use for cross-functional collaboration

Most interviewees suggested solutions that focus on improving the quality of the content/knowledge stored in KMS. Interviewee A warned that ‘irrelevant data makes even the best KMS useless’. A cultural shift was also suggested as a potential solution, a sentiment echoed by Interviewee D who suggested that employees should ‘intently read through documentation’ rather than rely on others for information.

Respondents also viewed organisational standards for documentation as the remedy for key-man dependency risk. Interviewee B described efforts to build ‘structured onboarding and handover packs’ for knowledge consumers. Interviewee C stressed keeping content ‘updated and relevant’ and Interviewee D advocated a ‘document-first operating model’. Timely, standardised knowledge capture is thus essential for institutional continuity.

6 CONCLUSION

Both survey and interview data revealed that the greatest challenges lie not in the technology itself, but in organisational and behavioural factors such as fragmented systems, reliance on key individuals, lack

of incentives, and limited integration with daily workflows. Executives reinforced that leadership visibility, cultural alignment, and consistent training are essential for turning KMS from passive repositories into active collaboration platforms. The study concludes that effective KMS adoption requires embedding the systems into existing processes, incentivising knowledge sharing, and ensuring high-quality, up-to-date content.

Future research should focus on designing a structured decision-making framework that enables executives to systematically assess the maturity, effectiveness, and strategic alignment of their organisation's KMS. By combining organisational performance measures with technology acceptance dimensions, such a framework would help leaders identify whether their KMS operates merely as a document repository or as an active enabler of cross-functional collaboration. The model could further provide diagnostic tools to highlight specific gaps in training, governance, and technological integration, guiding investment decisions and prioritisation of improvement efforts. Importantly, future studies could validate the framework across multiple financial institutions to establish its robustness and generalisability within the South African financial services sector and beyond.

7 REFERENCES

- [1] Statistics South Africa, "SA economy grows in the fourth quarter," Mar. 4, 2025. [Online]. Available: <https://www.statssa.gov.za/?p=18124> [Accessed: Mar. 21, 2025].
- [2] C. Kolling, C. M. Lima-Cruz, and J. F. de Medeiros, "The organisational communication role to the cross-functional collaboration on the product development process," *International Journal of Business Innovation and Research*, vol. 29, no. 1, pp. 105–126, Sept. 2022, doi: 10.1504/IJBIR.2022.124897.
- [3] D. Stenmark, "Knowledge management systems," in *Encyclopedia of Library and Information Sciences*, 4th ed., J. D. McDonald and M. Levine-Clark, Eds. Boca Raton, FL: CRC Press, 2017, pp. 449-460.

- [4] M. Mohamed, M. Stankosky, and A. Murry, "Applying knowledge management principles to enhance cross-functional team performance," *Journal of Knowledge Management*, vol. 8, no. 3, pp. 127–142, Jun. 2004, doi: 10.1108/13673270410541097.
- [5] K. H. Collins, "Understanding collaboration," in *Human Collaboration in Homeland Security*, R. I. Desourdis and K. H. Collins, Eds. Hauppauge, N. Y.: Nova Science Publishers, 2017, pp. 15–22.
- [6] M. M. Squier and R. Snyman, "Knowledge management in three financial organisations: A case study," *Aslib Proceedings*, vol. 56, no. 4, pp. 234–242, Aug. 2004, doi: 10.1108/00012530410549268.
- [7] N. Finestone and R. Snyman, "Corporate South Africa: Making multicultural knowledge sharing work," *Journal of Knowledge Management*, vol. 9, no. 3, pp. 128–141, Jun. 2005, doi: 10.1108/13673270510602827.
- [8] N. Muganda-Ochara, K. Sewchurran, M. Ndlovu, and A. Pillay, "Assessing the application of the knowledge management success paradigm in South Africa," *Communications of the IBIMA*, vol. 3, pp. 122–132, 2008.
- [9] T. T. Matshwane, M. M. Phahlane, and N. M. Ochara, "KMS adoption and use in a municipality: A proposed framework based on organizational culture theory (OCT)," in *2019 Open Innovations (OI)*, Cape Town, South Africa, 2019, pp. 362–367, doi: 10.1109/OI.2019.8908184.
- [10] R. Venkata-Rao, "Modeling and optimization of rapid prototyping processes," in *Advanced Modeling and Optimization of Manufacturing Processes: Springer Series in Advanced Manufacturing*, Dec. 2010, pp. 317–338, doi: 10.1007/978-0-85729-015-1_5.
- [11] D. Gozman and W. Currie, "Managing governance, risk, and compliance for post-crisis regulatory change: A model of IS capabilities for financial organizations," in *2015 48th Hawaii International Conference on System Sciences*, Kauai, HI, USA, 2015, pp. 4661–4670, Doi: 10.1109/HICSS.2015.555.
- [12] M. L. Tushman and T. J. Scanlan, "Boundary spanning individuals: Their role in information transfer and their antecedents," *Academy of Management Journal*, vol. 24, no. 2, pp. 289–305, 1981, doi: 10.2307/255842.

- [13] N. Levina and E. Vaast, "The emergence of boundary spanning competence in practice: Implications for implementation and use of information systems," *MIS Quarterly*, vol. 29, no. 2, pp. 335–363, Jun. 2005, doi: 10.2307/25148682.
- [14] A. Engelen, M. Brettel, and G. Wiest, "Cross-functional integration and new product performance - The impact of national and corporate culture," *Journal of International Management*, vol. 18, no. 1, pp. 52–65, Mar. 2012, doi: 10.1016/j.intman.2011.07.001.
- [15] M. I. Muntean and D. Târnavăanu, "Some considerations about collaborative systems supporting knowledge management in organizations," *WSEAS transactions on computers*, vol. 8, no. 8, pp. 1378-1387, Aug. 2009.
- [16] D. De Clercq, N. Thongpapanl, and D. Dimov, "A closer look at cross-functional collaboration and product innovativeness," *Journal of Product Innovation Management*, vol. 28, no. 5, pp. 680–697, Sept. 2011, doi: 10.1111/j.1540-5885.2011.00830.x.
- [17] E. F. PolICASTRO, "Untapped knowledge, hidden sweet spot," *Tech*, vol. 54, no. 11, pp. 18–22, 2007.
- [18] R. Todericiu and A. Boantă, "The challenge of managing knowledge workers and their skills," in *Emerging Issues in the Global Economy: 2017 International Economics Conference*, Sibiu, Romania, 2018, pp. 363–370, doi: 10.1007/978-3-319-71876-7_32.
- [19] H. J. de Weerd, Y. Khadir, and P. Peters, "Shaping the knowledge worker through a T-shaped Skills Profile framework," in *Proceedings of the 25th European Conference on Knowledge Management (ECKM)*, 2024, pp. 182–189.
- [20] R. M. Grant, "Toward a knowledge-based theory of the firm," *Strategic Management Journal*, vol. 17, no. S2, pp. 109–122, 1996 doi: 10.1002/smj.4250171110.
- [21] S. Veeravalli and V. Vijayalakshmi, "Understanding individual knowledge seeking behaviors in the context of Knowledge Management Systems," in *European Conference on Knowledge Management*, Sep. 2018, pp. 1115-XXVIII.

- [22] T. Karaulova, S. Kramarenko, and E. Shevchenko, "Knowledge management for network of enterprises," in *Proceedings of the 17th International DAAAM Symposium: Intelligent Manufacturing & Automation: Focus on Reconstruction and Development of the Manufacturing Industry*, Vienna, Austria, 2006, pp. 197–198.
- [23] N. Hassan and A. Raziq, "Effects of knowledge management practices on innovation in SMEs," *Management Science Letters*, vol. 9, no. 6, pp. 917–928, 2019, doi: 10.5267/j.msl.2019.4.008.
- [24] I. Nonaka, "A dynamic theory of organizational knowledge creation," *Organization Science*, vol. 5, no. 1, pp. 14–37, Feb. 1994, doi: 10.1287/orsc.5.1.14.
- [25] M. Alavi and D. E. Leidner, "Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues," *MIS Quarterly*, vol. 25, no. 1, pp. 107–136, Mar. 2001, doi: 10.2307/3250961.
- [26] IBM, "What is knowledge management?," N.d. [Online]. Available: <https://www.ibm.com/think/topics/knowledge-management> [Accessed: May 4, 2025].
- [27] S. Natek and D. Lesjak, "Knowledge management systems and tacit knowledge," *International Journal of Innovation and Learning*, vol. 29, no. 2, pp. 166–180, 2021, doi: 10.1504/IJIL.2021.112994.
- [28] S. Khan, U. Rani, B. V. N. Prasad, A. K. Srivastava, S. Selvi, and D. K. Gautam, "Document management system: An explicit knowledge management system," in *2015 2nd International Conference on Computing for Sustainable Global Development (INDIACom)*, New Delhi, India,, 2015, pp. 402–405.
- [29] D. Georgiev and A. Antonova, "Enhancing knowledge sharing processes via automated software documentation management systems using Gen AI software tools," in *2024 XXXIV International Scientific Symposium Metrology and Metrology Assurance (MMA)*, Sozopol, Bulgaria, 2024, pp. 1–6, doi: 10.1109/MMA62616.2024.10817681.
- [30] R. Maier, "From knowledge portals to knowledge infrastructures," *IT-Information Technology*, vol. 48, no. 2, pp. 71–82, Feb. 2006 doi: <https://doi.org/10.1524/itit.2006.48.2.71>.

- [31] C. Heavin, "Cases in five small to medium sized software enterprises (SMEs)," *Journal of Decision Systems*, vol. 20, no. 4, pp. 397–415, 2011, doi: 10.3166/jds.20.397-415.
- [32] L. -P. Pinto-Prieto, L. -E. Becerra-Ardila, and L. -C. Gómez-Flórez , "Carencias en los sistemas de gestión del conocimiento: una revisión bibliográfica," *Profesional de la Información*, vol. 21, no. 3, pp. 268–276, 2012 , <https://doi.org/10.3145/epi.2012.may.07>.
- [33] A. Rangamiztousi and N. T. Kian, "Identifying barriers of knowledge sharing in Malaysian small and medium sized enterprises (SMEs)," *International Journal of Management and Enterprise Development*, Jan. 2012.
- [34] A. Kaldi, A. Aghaie, and F. Khoshalhan, "KMS adoption in organizations," in *2008 IEEE International Conference on Industrial Engineering and Engineering Management*, Singapore, 2008, pp. 37–41, doi:10.1109/IEEM.2008.4737828.
- [35] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, 1989, doi: 10.2307/249008.
- [36] M. Kirlidog and A. Kaynak, "Technology acceptance model and determinants of technology rejection," *International Journal of Information Systems and Social Change (IJISSC)*, vol. 2, no. 4, pp. 1–12, 2011, doi: 10.4018/jissc.2011100101.
- [37] Y. H. Al-Mamary and A. Shamsuddin, "Testing of the technology acceptance model in context of Yemen," *Mediterranean Journal of Social Sciences*, vol. 6, no. 4, pp. 268-273, Jul. 2015, doi: 10.5901/mjss.2015.v6n4p48.
- [38] E. C. Chang and C. Y. Huang, "Technology acceptance model, consumer personality and smartphone users' satisfaction," in *Proceedings of the Academy of Marketing Science*, 2015, pp. 710–712 doi: 10.1007/978-3-319-10912-1_227.
- [39] P. Ajibade, "Technology acceptance model limitations and criticisms: Exploring the practical applications and use in technology-related studies, mixed-method, and qualitative researches," *Library Philosophy and Practice*, 2018. [Online]. Available: digitalcommons.unl.edu/libphilprac/1941 [Accessed: November 2025].

- [40] E. Mogaji, G. Viglia, P. Srivastava, and Y. K. Dwivedi, "Is it the end of the technology acceptance model in the era of generative artificial intelligence?" *International Journal of Contemporary Hospitality Management*, vol. 36, no. 10, pp. 3324–3339, Sept. 2024, doi: 10.1108/IJCHM-08-2023-1271.
- [41] F. Ishengoma, "Revisiting the TAM: Adapting the model to advanced technologies and evolving user behaviours," *The Electronic Library*, vol. 42, no. 6, pp. 1055–1073, Oct. 2024, doi:10.1108/EL-06-2024-0166.
- [42] S. Picker, A. Ruhnke, and J. Leker, "Developing knowledge management – What makes the success?," *International Journal of Technology Management*, vol. 45, no. 3–4, pp. 380–389, 2009, doi: 10.1504/IJTM.2009.02266.
- [43] K. C. Chauke and M. M. M. Snyman, "Position and role of the chief knowledge officer in South Africa – A discrepancy between theory and practice?" *South African Journal of Information Management (SAJIM)*, vol. 5, no. 1, 2003. [Online]. Available: https://hdl.handle.net/10520/AJA1560683X_376 [Accessed: November 2025].
- [44] K. C. Desouza and J. J. Raider, "Cutting corners: CKOs and knowledge management," *Business Process Management Journal*, vol. 12, no. 2, pp. 129–134, 2006, doi: 10.1108/14637150610657486.
- [45] P. Kraus and M. Bornemann, "A guideline enabling knowledge managers to communicate better with business managers," *Journal of Knowledge Management Practice*, vol. 25, no. 2, pp. 50–63, 2025, doi: 10.62477/jkmp.v25i2.515.
- [46] A. du Toit and C. Human, "Formulating a knowledge management strategy," in *Service Science Research, Strategy and Innovation: Dynamic Knowledge Management Methods*, 2012, pp. 484–498, doi: 10.4018/978-1-4666-0077-5.ch027.
- [47] S.-Y. Hung, H.-L. Wu, and Y.-Y. Chen, "Factors influencing user acceptance of the knowledge management system," *International Journal of Business and Systems Research*, vol. 8, no. 3, pp. 213–227, Jul. 2014, doi: 10.1504/IJBSR.2014.063933.
- [48] N. Ali, M. M. Mustaffa, G. Alkaws, and L. F. Capretz, "If you build it, will they come? Exploring the success factors of knowledge management systems in the Malaysian public sector," *Heliyon*, vol. 10, no. 6, Mar. 2024, doi: 10.1016/j.heliyon.2024.e27093.

- [49] W. N. A. I. W. Zarilla, M. N. Ismail, and M. R. M. Rosman, "Investigating the critical human behaviour elements and their implications for knowledge management systems: A literature review," in *2022 International Conference on Decision Aid Sciences and Applications (DASA), Chiangrai, Thailand, 2022*, pp. 1526–1530, doi: 10.1109/DASA54658.2022.9765022.
- [50] C. J. P. Niemand and J. Langerman, "Knowledge sharing in financial institutions to assist with IT service management: A thematic analysis," in *Proceedings of the 16th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (IC3K 2024)*, Porto, Portugal, 2024, pp. 305–315, doi: 10.5220/0012998600003838.
- [51] F. Cebi, O. F. Aydin, and S. Gozlu, "Benefits of knowledge management in banking," *Journal of Transnational Management*, vol. 15, no. 4, pp. 308–321, Jul. 2010, doi: 10.1080/15475778.2010.525486.
- [52] J. W. Creswell, "Mapping the field of mixed methods research," *Journal of Mixed Methods Research*, vol. 3, no. 2, pp. 95–108, 2009, doi: 10.1177/1558689808330883.
- [53] J. C. Greene, V. J. Caracelli, and W. F. Graham, "Toward a conceptual framework for mixed-method evaluation designs," *Educational Evaluation and Policy Analysis*, vol. 11, no. 3, pp. 255–274, 1989, doi: 10.3102/01623737011003255.
- [54] J. T. DeCuir-Gunby and P. A. Schutz, *Developing a Mixed Methods Proposal: A practical guide for beginning researchers*. Sage Publications, 2017.
- [55] T. Wengraf and P. Chamberlayne, *Interviewing for life-histories, lived situations and personal experience: The Biographic-Narrative Interpretive Method (BNIM)*, 2006.
- [56] J. M. Guarte and E. B. Barrios, "Estimation under purposive sampling," *Communications in Statistics: Simulation and Computation*, vol. 35, no. 2, pp. 277–284, 2006, doi: 10.1080/03610910600591610.
- [57] J. L. Green, S. E. Manski, T. A. Hansen, and J. E. Broatch, "Descriptive statistics," in *International Encyclopedia of Education*, 4th ed., R. Tierney, F. Rizvi, and K. Ercikan, Eds. Amsterdam, NL: Elsevier, 2022, pp. 723–733.

- [58] L. M. Hatfield, “Content analysis,” in *Encyclopedia of Sport Management*, P. M. Pedersen, Ed. Cheltenham, UK.: Edward Elgar Publishing, Sep. 2024, pp. 205–207, doi: 10.4337/9781035317189.ch118.
- [59] M. Puppis, “Analyzing talk and text I: Qualitative content analysis,” in *The Palgrave Handbook of Methods for Media Policy Research*, H. Van den Bulck, M. Puppis, K. Donders, and L. Van Audenhove, Eds. Cham, Swiz.: Palgrave Macmillan, Aug. 2019, pp. 367–384, doi: 10.1007/978-3-030-16065-4_20.