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Applying Social Information Processing, Sensemaking, and Media Richness Theories to Data-Driven Communication for ICT Project Risk Prediction and Mitigation: The Case of Safaricom Kenya

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Abstract

In the rapidly changing world of ICT project management, companies are using data-driven communication more and more to predict and reduce risks. This paper looks at how Safaricom Kenya used communication data to manage ICT project risks from June 2024 to June 2025. Based on the theories of social information processing, sense making, and media richness, the study looks at publicly available documents to show how communication platforms and data analytics help predict and reduce risks. This research advances media studies by emphasizing the strategic function of digital communication in organisational risk management within a Global South framework. The findings show that Safaricom uses a variety of communication channels and feedback loops on purpose to promote collaborative understanding, anticipate risks, and make better decisions. This shows that there is a growing need for advanced social media and communication in complex ICT environments.

Keywords: ICT project risk management; Data-driven communication; Social information processing; Sense making; Media richness; Safaricom Kenya; Organizational communication

Introduction

The rapid growth of Information and Communication Technology (ICT) projects in developing countries has put organisations under a lot of pressure to come up with effective risk management plans that can adapt to new technological challenges and changing circumstances. Communication is becoming more and more important in this area, especially as businesses start using digital platforms and data analytics to manage their projects [1]. For Safaricom Kenya, the leading telecommunications company in the country, using data-driven communication to reduce ICT project risks is not only a practical need but also a strategic part of being resilient in a world that changes quickly.

This paper examines the intersection of communication and risk management in Safaricom's ICT projects from June 2024 to June 2025. The study examines the utilization of communication data, sourced from publicly available digital documents and media representations to forecast risks and inform mitigation strategies. The importance of this study resides in its interdisciplinary methodology, linking media and communication theories to real-world ICT management issues in a Global South context. This convergence of theory and practice tackles a significant deficiency in the examination of organisational communication amidst uncertainty and technological change.

The growing complexity of ICT project risks in developing economies

Developing economies, such as Kenya, exhibit distinctive contextual elements that affect ICT project risks. These include problems with infrastructure, changes in regulations, differences in socio-economic status, and differences in digital literacy levels among stakeholders. The World Bank says that sub-Saharan Africa has some of the highest rates of project delays and operational risks related to infrastructure in the world. Safaricom needs a complex communication and risk prediction system that goes beyond traditional risk management systems in order to work in this complicated environment. If risks aren't managed well, they can have a chain reaction of negative effects, such as losing money, losing the trust of stakeholders, and slowing down technological progress. All of these things are bad for a competitive telecommunications market.

This complexity highlights the increasing necessity for a data-driven communication strategy that amalgamates real-time analytics with diverse communication channels. Sharing timely information and encouraging people to work together to understand risk makes sure that new problems are found and dealt with before they become bigger [2]. Communication is also very important for getting internal project teams, outside partners, and regulators to all agree on a common risk governance framework.

The role of data-driven communication in organisational risk management

Data-driven communication is an innovative approach for organisations to communicate. It uses communication data and analytics from digital platforms in a flexible way. Data-driven approaches use ongoing streams of communicative inputs, like emails, chat logs, video meetings, and social media interactions, as sources of information [3]. This is different from traditional risk management, which relies on static reports and periodic updates. We look at these inputs to find early warnings and predictions about possible project risks.

This skill is very important for Safaricom's ICT projects because they have to deal with quickly changing technology and the needs of many different stakeholders. Combining big data analytics with communication makes it easier to make decisions by showing patterns, changes in sentiment, and strange things that happen in project conversations. This method is in line with new ideas about datafication in organisational communication, which say that communication can be turned into a measurable, analyzable asset that helps with strategic governance [4].

Safaricom Kenya: A strategic ICT innovator

Safaricom Kenya is the best at using mobile technology and digital communication in sub-Saharan Africa. Safaricom has always been at the forefront of new ICT projects, such as mobile money platforms (M-Pesa), digital skills programs, and expanding advanced telecommunications infrastructure [5]. The company has over 40 million customers. The company's pipeline of ICT projects naturally includes a lot of different kinds of risks, such as integrating new technologies, getting users to adopt them, following the rules, and competing in the market.

Safaricom started a number of important ICT projects between June 2024 and June 2025 that used communication as a way to manage strategic risks. This includes a digital skills program worth Sh240 million that the government and private companies are working on together to reduce risks to people and operations, as well as several ICT infrastructure projects to close Kenya's digital divide [6,7]. The public records of these projects give us a lot of information about how Safaricom's risk governance works in terms of communication.

Theoretical framework: Media theories in risk communication

This research utilized a multi-theoretical framework to examine Safaricom's risk communication strategies.

- Social Information Processing (SIP) theory [8]
- Sensemaking theory [9]
- Media Richness Theory (MRT) [10]

Together, these frameworks supported an analysis that emphasizes communication as a key factor in predicting and reducing risk. This idea is important because technology is changing quickly in ICT projects and the environment is unpredictable.

Research questions and study contributions

This study addressed the following research questions:

- How does communication data facilitate the prediction of risks in Safaricom's ICT projects?
- What role do communication media play in Safaricom's risk mitigation strategies?
- How do communication theories explain the processes observable in Safaricom's project communication?

By responding to these questions, this paper contributes theory and practical knowledge for ICT project risk governance and media communication scholarship in the Global South.

Literature Review

Communication that works has long been seen as an important part of project management, especially for Information and Communication Technology (ICT) projects, which are often high-stakes, complicated, and full of unknowns [2]. Communication is not just about sharing information; it also helps people work together, make sure everyone's goals are met, and figure out what new risks are. The digital transformation of organisational environments has transformed communication from a linear process into dynamic, data-rich interactions that utilize digital platforms to manage vast amounts of information in real-time [3]. This literature review examines three fundamental media and communication theories, Social Information Processing (SIP), Sensemaking, and Media Richness Theory (MRT) that collectively elucidate how organisations such as Safaricom Kenya utilize communication strategically for the prediction and mitigation of ICT project risks.

Social information processing theory

Social Information Processing (SIP) Theory, first suggested by Walther [8], examines how individuals modify communication strategies in computer-mediated contexts to create impressions and cultivate relational significance, despite the scarcity of non-verbal cues characteristic of in-person interactions. This theory has become more important in a time when digital communication platforms and distributed teams are common in workplaces, including ICT projects. Walther asserts that communicators mitigate media constraints by employing verbal and paraverbal cues more judiciously and over extended interactions, attaining levels of intimacy in understanding comparable to face-to-face communication.

Further studies have expanded on SIP's ramifications for organisational settings. For instance, Hancock and Dunham [11] discovered that digital team members alter their communication patterns to foster mutual understanding essential for collaboration and decision-making. In ICT project risk environments, SIP offers a framework for comprehending how team members navigate communication data through fragmented channels and temporal gaps, synthesizing various cues to identify emergent risks and orchestrate mitigation strategies. SIP theory emphasizes time as a significant variable; the duration and frequency of interactions enhance relational and informational contexts.

At Safaricom, where project teams often work together from different places and use digital tools, SIP shows how communication data like emails, text chats, and recorded meetings can be used to create shared ideas about risk. This is especially important when there are no nonverbal or contextual cues, so team members have to use the textual or audiovisual information they have to find risk signals and make plans that work.

Sensemaking theory

Sensemaking is the continuous process through which individuals and organisations interpret ambiguous or unclear events to generate meaning and action. Karl Weick [9] introduced this theoretical lens in his groundbreaking book Sensemaking in organisations. It emphasizes that communication is essential for identifying and addressing risks, particularly those that are unforeseen or emerging. In risky ICT projects, sensemaking entails the formulation of collective narratives regarding intricate technological ambiguities and evolving stakeholder demands, characterized by a communicative interplay of information exchange, interpretation, and reinterpretation.

Weick [9] delineates seven characteristics of sensemaking, encompassing retrospective interpretation, environmental enactment, and reliance on social context. This approach is in line with ICT risk scenarios that are unstable and change quickly, where no one person has all the information and everyone needs to work together to figure out what to do. Maitlis and Christianson [12] enhance this framework by emphasizing interruptions, emotion, and conflict in organizational sensemaking, which are frequently encountered in ICT projects experiencing risk shocks or failures.

Empirical research in ICT project management emphasizes the essential role of sensemaking in risk navigation. Kendra and Taplin illustrated how project teams interpret ambiguity through discourse, facilitating anticipatory action and collaborative problem-solving. In Kenya, Safaricom's documented communications show how real-time sensemaking works through constant feedback loops and knowledge sharing between technical staff, management, and outside stakeholders. For instance, regular updates on the progress of infrastructure projects help everyone in the organisation understand the situation better. This lets them change the way they talk about risk and get the resources they need.

Sensemaking theory thus enhances comprehension of the transformation of communication data from unrefined, frequently disordered information streams into organised risk frameworks that influence strategic choices. This idea fits with the fact that ICT risk landscapes are always changing, and it shows how important communication is for an organization's ability to bounce back.

Media richness theory

Daft and Lengel's [10] Media Richness Theory (MRT) offers evaluative criteria for analyzing the impact of communication media characteristics on their efficacy in transmitting complex and ambiguous messages. The theory categorizes media based on their ability to provide immediate feedback, transmit multiple cues, offer language diversity, and maintain a personal focus qualities vital for risk communication characterized by high ambiguity and the necessity for rapid comprehension.

MRT helps ICT projects choose the right communication channels based on how complicated the risk message is. Daft, Lengel, and Trevino assert that richer media, such as face-to-face interactions and video conferencing, are more appropriate for ambiguous and contextually intricate information, whereas lean media, including memos and emails, are adequate for routine and clear messages. Using MRT on Safaricom's ICT projects shows that they use media strategically based on how serious the risks are. High-stakes discussions about integrating technology happen in interactive webinars or live briefings where people can ask questions right away. Routine progress reports are sent out by email or posted on the intranet.

Recent adaptations and extensions of Media Richness Theory (MRT) into media synchronicity theory [13] underscore the synchronization of timing capabilities in media, which is particularly pertinent for managing time-sensitive risk events in ICT environments. For example, Safaricom's use of both synchronous (live video training) and asynchronous (recorded modules, document sharing) media shows how they are trying to find the right balance to make risk communication more effective.

MRT is important in the Kenyan ICT context because it shows how important it is to choose media based on more than just how complicated the message is. It should also take into account things like how many people have access to digital media and how well they understand it. Safaricom needs to find a balance between media richness and accessibility so that all of its teams and outside partners can communicate risks clearly.

Integrative perspectives: Towards a holistic framework

Recent academic work suggests that communication theories should be combined to better understand the complex nature of ICT project communication [14]. SIP examines the cognitive processing of mediated cues by individual team members over time, Sensemaking elucidates collective interpretation and action amidst uncertainty, and MRT guides the strategic selection of media for message transmission.

Socio-technical systems theory further enhances these viewpoints by contextualizing communication within expansive organisational and technological ecosystems [15]. This integrative approach aligns with Safaricom's multi-channel risk communication model, which amalgamates human interpretations, technological capabilities, and organizational frameworks.

Scholars, including Servaes [15], advocate for the contextualization of communication theories within various global contexts, highlighting the influence of local socio-economic and infrastructural conditions on the organisational role of digital communication. In Kenya's evolving economy,

comprehending ICT project risk communication through this multi-theoretical and context-sensitive lens enhances global media scholarship and provides pragmatic insights for analogous emerging market scenarios.

Methodology

This study employed qualitative document review [16] to analyze Safaricom's publicly accessible ICT project communication materials from June 2024 to June 2025, encompassing foundational reports, media releases, and news articles detailing digital skills initiatives and ICT hub projects. The selection was intentional, concentrating on communication and risk-related content.

The analytical process employed thematic coding, informed by three communication theories, which iteratively refined categories to align communication practices with risk prediction and mitigation functions. Triangulation across diverse documents improved reliability, and ethical standards were upheld by utilizing only publicly accessible data.

Data collection and sampling

The documents were meticulously selected to include official Safaricom publications and reliable third-party reports about the company's ICT projects and initiatives, especially those that talk about programs for developing digital skills, ICT infrastructure, youth empowerment, and partnerships between the public and private sectors. The data corpus includes:

- Safaricom foundation reports detailing their initiatives aimed at enhancing digital literacy and ICT workforce capacity [5].
- Media announcements about Safaricom's partnerships and new projects, like the KES 240 million digital skills programme that started in October 2024 with the Ministry of Education and Vodafone Foundation [6,17].
- Articles in the news about the opening of ICT hubs in different counties in Kenya, like the Sh3.5 million ICT hub at Wiyumiririe Vocational Training Centre, which was paid for by the Safaricom Foundation [7].
- Documentation of youth empowerment projects, such as Safaricom Hook Circle and Decode 3.0, which give young Kenyans ICT training and mentoring [18].

The criteria for inclusion were that the documents had to be published between June 2024 and June 2025 and clearly talk about Safaricom's ICT project communication or risk management activities. Documents that were not from this time period or that did not contain any useful information about ICT risk or communication strategies were not included.

Analytical framework

The document data was subjected to a thematic content analysis informed by the three communication theories pivotal to the study: Social information processing, sense making, and media richness. The coding process had a number of steps:

Initial coding: Finding clear references to communication practices, risk factors, and ways to reduce risk; coding descriptive elements like communication modalities, stakeholder engagement, frequency, and timeliness of communication.

Focused coding: Grouping communication content by how well it fits with a theory. For example, SIP-related codes about how to adapt to digital communication situations; sensemaking codes about how to interpret things together; and MRT codes about how to choose media and how complex a message is.

Theory-driven analysis: Charting coded data to clarify the role of communication in risk prediction and mitigation within Safaricom's ICT projects, assessing the interaction among communication modalities, data-driven analytics, and organizational decision-making.

To maintain analytical rigor, coding underwent iterative review and refinement, while emergent themes were triangulated across various document sources to guarantee consistency and depth. This method made it possible to capture the subtle ways that people communicate and the strategic role that data plays in Safaricom's ICT risk governance.

Limitations and ethical considerations

Document review has many benefits for studying how organisations communicate, but it also has some drawbacks. Relying on publicly available documents may leave out important details about how Safaricom's risk prediction systems work that are only known to people who work there. Furthermore, institutional documents frequently offer sanitized accounts of events, which may skew risk representation in favor of positive narratives.

To address these limitations, the study contextualized findings within theoretical frameworks to elucidate underlying communicative processes and employs a critical methodology for document interpretation. Using more than one data source and combining theories makes the results more valid by checking themes and interpretations against each other.

From an ethical perspective, the study exclusively examined public documents, thereby safeguarding against any violations of confidentiality or privacy concerns. The study utilized publicly available data that has been authorized for public access, conforming to ethical principles of research transparency and respect for data ownership [16].

Findings and analysis

This section provides a comprehensive analysis of the empirical findings derived from the document review, examined through the frameworks of Social Information Processing (SIP), Sensemaking, and Media Richness Theory (MRT). The results show how Safaricom Kenya uses data-driven communication strategies to guess and reduce risks in ICT projects from June 2024 to June 2025.

Proactive communication for risk anticipation

Safaricom's public documents show that the company has a planned, proactive communication strategy that aims to lower

risks by building the skills of project stakeholders and making infrastructure more resilient.

The Sh240 million digital skills programme, which started in October 2024 with the Ministry of Education and the Vodafone Foundation, is a great example of this approach in action. The goal of this program is to improve teachers' digital literacy in 35 Teacher Training Colleges (TTCs) across the country [6,17]. Safaricom lowers the risk of digital skill gaps causing delays or failures in education-related ICT projects by giving teachers the ICT skills they need to teach in the modern world.

From the standpoint of social information processing, this initiative offers a multitude of digital communication touchpoints-training sessions, online forums, feedback loops—that facilitate the exchange of information, the clarification of uncertainties, and the gradual cultivation of a shared understanding. These interactions act as signals that make using technology more normal and reduce resistance, which helps people find risks early and work together to solve problems [8].

The program also strategically renovates and equips TTCs with ICT infrastructure to deal with hardware and connectivity risks. Eight TTCs, such as Machakos and Garissa colleges, have gotten better facilities. These kinds of investments in infrastructure are clearly communicated to all stakeholders, which builds trust and makes the project seem more legitimate.

Safaricom's documents also stress the importance of inclusive communication that reaches out to groups that are often left out. The scaling digital skills programme is in line with the Sustainable Development Goals (SDGs) and emphasizes social equity in risk management to make sure that digital divides don't make project weaknesses worse.

Safaricom's multi-faceted, capacity-building communication strategy is an example of a systemic risk reduction approach. By empowering key stakeholder groups and building strong infrastructure, Safaricom reduces the human and technological uncertainties that are common in ICT projects.

Sensemaking through real-time communication

Safaricom's ICT project communication shows how sensemaking processes work, especially in how the company deals with new risks by sharing information and interpreting it over and over again within and outside of project teams.

The regular public reports on project milestones and risk-related events show that there is a dynamic feedback system in place. For example, the Sh3.5 million Wiyumiririe Vocational Training Centre in Laikipia County is an example of institutionalizing sensemaking through community engagement and collaborative knowledge exchange [7]. These hubs offer localized digital skills training and enable access to online government services, mitigating socio-technical risks associated with exclusion and digital illiteracy.

According to sensemaking theory, meaning is built together in situations where things aren't clear [9]. Safaricom's method is similar to this because it gets a lot of people involved in conversations about ICT risks and ways to reduce them, including technical staff, government officials, teachers, and community members. The communication recorded regarding these projects illustrates a decentralized and socially interactive methodology in which uncertainty is recognized and collectively addressed.

Safaricom also uses these hubs as points to find out about ICT problems at the community level and send this information back into the company's risk management systems. This loop is in line with what Maitlis and Christianson [12] said about how important emotion, conflict, and interpretative processes are in organizational sensemaking. It shows how important it is for ICT projects to be able to adapt.

The Safaricom Hook Circle program, which helps young people learn about ICT and get advice, is now part of the sensemaking process in informal networks. This will help create a future workforce that is digitally literate and can handle ICT risks [6]. This is an example of a long-term, proactive risk governance model based on a lot of communication.

Media richness tailored to risk complexity

Using media richness theory to look at empirical communications shows that Safaricom carefully chose which media channels to use based on how complicated and unclear the risk information was.

During high-stakes program launches and technical training events, richer media platforms like webinars, live training sessions, and interactive video conferences are often used. For instance, during the Decode 3.0 project, Safaricom and Huawei worked together to provide intensive, hands-on technology training through synchronous video communication, which allowed for immediate feedback and learning through participation [19]. This rich media environment makes it easy to understand risks and take steps to protect yourself when dealing with complicated subjects like AI and cloud computing.

On the other hand, newsletters, emails, and social media posts are used for regular updates, project summaries, and notices that aren't urgent. These efficient but less rich channels are often used to spread news about progress in setting up ICT hubs and rolling out educational programs, in line with MRT's recommendations [10].

Safaricom's media usage also shows changes that are relevant to Kenya, where internet access and digital literacy levels are different. The choice of communication media strikes a balance between richness and accessibility to make sure that all stakeholders are reached. This is an important factor that makes risk communication more inclusive and effective.

The combination of synchronous and asynchronous media also reflects media synchronicity theory [13], which says that coordinating when people communicate improves their understanding, which is important for quickly responding to risks. Recorded training modules and self-paced digital content are available in addition to live sessions. This meets the needs of different learners and encourages resilient knowledge transfer.

Emerging use of data analytics in risk prediction

It is difficult to get direct access to Safaricom's proprietary data, but public documents suggest that a new way of communicating based on data is developing that combines analytics with traditional project management.

Safaricom's ICT governance approach is based on "real-time monitoring," "data-driven insights," and "analytics-enabled decision-making" [6]. These statements show how things are changing now that "datafication" is happening, where communication can be measured and analyzed, giving us the ability to predict project risks [4].

Publicly visible initiatives probably use metadata from communication platforms, like message frequency, sentiment analysis, and network patterns, to find early warning signs of risks related to technology, operations, or stakeholders. For instance, keeping an eye on the engagement and feedback rates during the rollout of the digital skills program may help you come up with new ways to communicate when you run into problems or slowdowns in the infrastructure.

This initial application of communication analytics highlights a transition in risk management from a reactive to a predictive approach, a change that is likely to greatly improve the resilience of ICT projects. It makes risk governance future-proof by letting the organization see problems coming before they turn into crises.

Conceptualizing Safaricom's data-driven communication model

Based on the empirical findings, Safaricom's communication model for ICT project risk management can be viewed as a multi-layered system:

- Proactive capacity building through digital skills training and infrastructure investment lowers the risks that come from people and technology.
- On top of this, real-time sensemaking loops, made possible by regular updates and input from many different groups, allow for flexible interpretation and response to changing risks.
- Strategic media selection complements these by matching the richness of communication channels with the complexity of messages and the needs of stakeholders for easy access.
- Finally, new communication data analytics add a feedback-rich, predictive mechanism that makes anticipatory governance better.

This model shows how media and communication theories can work together in a real-world ICT project management setting, showing how data-driven communication can be the key to predicting and reducing risk.

Discussion

The examination of Safaricom Kenya's data-driven communication for ICT project risk prediction and mitigation uncovers complex insights that enhance global media scholarship and provide pragmatic implications for ICT management in developing economies. This part goes into great detail about the theoretical, contextual, and practical aspects that the results show.

Theoretical implications: Intersecting communication theories in ICT risk management

This study illustrates the effectiveness of combining Social Information Processing (SIP), Sensemaking, and Media Richness Theory (MRT) to elucidate the role of communication in organizational risk governance. Each theory offers unique yet complementary explanatory capabilities:

- SIP theory's contribution focuses on the cognitive mechanisms through which dispersed project teams interpret and negotiate risk signals embedded in mediated communication. The prolonged temporal aspect of SIP elucidates how Safaricom's project stakeholders formulate collective meaning through the aggregation of digital communication signals in ICT contexts marked by physical dispersion and asynchronous engagement. This extension aligns with literature that underscores virtual team adaptation in digitally mediated environments.
- Sensemaking theory enhances our comprehension of risk interpretation amidst uncertainty, elucidating communication's function as a social mechanism facilitating collective action. Safaricom's iterative information sharing and collaborative dialogue correspond with Weick's [9] sense making attributes, including enactment and reliance on social context, illustrating how organizations establish order and facilitate proactive risk management. This empirical example contributes to the discourse on the centrality of sensemaking in technology-driven organizational change, reflecting recent developments that include emotional and power dynamics [12].
- MRT shows how important it is to choose the right channel for sharing complicated risk information. Safaricom's smart use of synchronous rich media for unclear messages and leaner asynchronous media for clear updates is an example of strategic media management. The adaptation of MRT to incorporate media synchronicity [13] is particularly pertinent, illustrating how the integration of media modalities creates an optimal communication ecology that is responsive to the infrastructural realities in Kenya.

This theoretically integrated approach supports the need for interdisciplinary frameworks to study communication in complicated ICT project settings [14]. It also suggests that traditional communication theories are still changing to keep up with the needs of modern organisations, especially when it comes to communication that is based on data and done through digital means.

Contextualizing communication in the Kenyan ICT ecosystem

Safaricom's strategies for dealing with communication risks are heavily influenced by the Kenyan context. The digital economy blueprint and the ICT hubs project are two examples of government programs that are part of the country's digital transformation agenda. These programs create a good but

difficult environment for ICT projects. Safaricom's support of these initiatives puts its communication in line with larger goals for social and economic development, bringing together business, social, and public interests.

This study emphasizes the importance of localized communication that considers infrastructural limitations (e.g., variability in internet access) and socio-cultural influences (language diversity, digital literacy). Safaricom's use of media takes these things into account, making sure that people in cities and rural areas can all participate and be included. The company's emphasis on youth empowerment and marginalized communities through initiatives such as Hook Circle and the digital skills programme highlights the importance of equity in risk communication, which is a crucial requirement in ICT projects aimed at development [15].

The case also helps us understand the digital ecologies of the Global South, where communication practices are linked to development goals, grassroots empowerment, and technological leapfrogging. This contextual understanding enhances global media studies by emphasizing varied narratives and practices that extend beyond Western-centric communication research.

Practical and policy implications for ICT project communication

This study provides practical insights for practitioners and policymakers, in addition to theoretical contributions:

Focusing on proactive capacity building through digital education lowers the risks that people often bring to ICT projects. Safaricom's investment in teacher training and vocational education in many areas is a model that can be used by other companies that work in similar areas.

Using multi-modal media strategies that are based on the complexity of the message and the ability of the stakeholders shows how to best handle risk communication. To achieve inclusive and effective communication, organizations should look at how rich their channels are in relation to how clear the risk information is and how easy it is for everyone to get to.

Adding feedback loops and sense making tools to communication flows makes it possible for organizations to learn and change their risk levels in real time. Setting up ICT hubs that focus on the community makes it easier to find and respond to risks in a specific area, creating a decentralized but unified risk governance structure.

The growing use of communication data analytics in project governance is a sign of a forward-thinking approach. Investing in analytic capacity to utilize communication metadata and sentiment metrics presents a new opportunity for predictive risk management, necessitating further research and development.

The Kenyan government's collaboration with private entities such as Safaricom to enhance ICT literacy and infrastructure underscores the significance of cross-sector cooperation in addressing systemic risks associated with digital transformation. It is necessary to support these models by providing the right conditions through regulations, funding, and capacity building.

Conclusion

This study has examined the complex function of data-driven communication in forecasting and alleviating risks in Safaricom Kenya's ICT projects from June 2024 to June 2025. Based on theories of social information processing, sensemaking, and media richness, the research shows how Safaricom uses digital communication not just as a way to get information, but as a strategic organizational asset that is essential for managing risk.

The results show that Safaricom's efforts to build capacity, like the Sh240 million Digital Skills Programme that improves teacher skills at 35 teacher training colleges, are examples of proactive risk reduction that focuses on gaps in human capital. This approach shows that reducing risks in new markets goes beyond just using technology; it also means giving people the skills and tools they need to adapt well.

In addition, the company's use of ICT hubs, such as the Sh3.5 million facilities in Laikipia County, shows how institutionalized sensemaking works, where community and stakeholder engagement helps everyone understand and respond to project-related uncertainties. These local nodes are places where people can talk to each other and give feedback. They also let people know about risks in real time, which helps organizations make decisions.

The way Safaricom uses different media platforms shows that they are good at managing media richness. The combination of synchronous, rich channels for complicated, unclear communication with lean asynchronous media for regular updates makes sure that all stakeholders and infrastructure contexts are fully covered. This calibrated communication ecology is very important in Kenya's ever-changing digital world because it strikes a balance between message effectiveness and inclusion.

The company is also just starting to use communication data analytics to keep an eye on and predict risks. This puts it at the forefront of combining communication and big data analytics for anticipatory governance. This datafication of communication signifies a prospective trajectory for ICT project risk management, transitioning from reactive problem-solving to proactive risk anticipation.

This study theoretically enhances comprehension by employing an integrated communication theory framework within a Global South ICT context, where socio-economic, infrastructural, and cultural dimensions significantly influence organizational communication practices. It shows that classic media theories like SIP, Sensemaking, and MRT are still useful and can be used in today's digital risk environments. It also suggests that more interdisciplinary and context-sensitive theoretical work is needed.

The research provides practical insights for ICT managers, policymakers, and development practitioners, highlighting the necessity of investing in human capacity and infrastructure, customizing communication media to suit context and message complexity, and integrating data analytics as a fundamental component of risk governance. The Safaricom model could help other companies in similar emerging markets that are trying to

figure out how to use technology, talk to people, and develop at the same time.

Future research should go beyond just looking at documents to include direct access to communication data in ICT project management platforms and interviews with stakeholders. This would make the study of how risk is communicated even richer. Comparative studies among various African ICT companies and countries would enhance comprehension of regional communication dynamics and optimal practices.

In conclusion, the case study of Safaricom Kenya clearly shows how data-driven communication is changing how ICT project risk management works in the digital age. It also shows how the world is increasingly looking for strategic social media and communication technologies to improve organizational resilience and developmental outcomes.

Limitations and Directions for Future Research

This document review offers foundational insights; however, the lack of direct access to Safaricom's internal communication data and stakeholder interviews constrains the specificity of the findings. Future research should utilize mixed methods, including ethnographic observation, interviews, and access to proprietary communication analytics, to enhance the understanding of the human-technology nexus in risk communication.

Comparative studies among African ICT firms could elucidate regional communication strategies and contextual disparities, fostering the advancement of localized theoretical development. Additionally, investigating nascent communication technologies (e.g., AI-driven chatbots, blockchain) provides valuable avenues for comprehending the dynamics of next-generation risk communication.

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