College of Business and Economics

School of Commerce

Assessment of online collaboration tools (OCTs) for enhanced knowledge management at Economic Commission for Africa (ECA).

Abiy Shimelis

Advisor: Teklegiorgis Assefa (PhD)

June 2023

Addis Ababa, Ethiopia

Addis Ababa University

College of Business and Economics

School of Commerce

Department of Business Leadership (Extension Program Unit)

Assessment of online collaboration tools (OCTs) for enhanced knowledge management at Economic Commission for Africa (ECA).

Research Project:

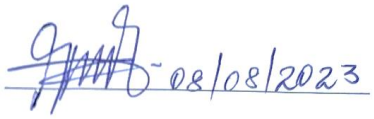
In Partial Fulfilment of the Requirements for the Award of Master of Arts Degree in Business Leadership (MBL) Extension Program

By: Abiy Shimelis
ID: GSE/0517/11

Approval of Board Committee

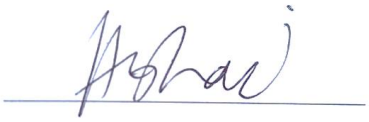
Dr. Teklegiorgis Assefa
Research Advisor

Signature



Dr. H/Mariam Kebede
External Examiner

Signature



Dr. Neway Muktar
External Examiner

Signature

Statement of Certification

This is to certify that Abiy Shimelis has conducted his research on the topic entitled 'A*ssessment of online collaboration tools for enhanced knowledge management at Economic Commission for Africa (ECA)'* and submitted this original work that is suitable for submission towards the partial fulfilment of the Master's Degree in Business Leadership program.

Signed

Advisor

Dr. Teklegiorgis Assefa

Declaration of Academic Integrity

I, Abiy Shimelis, hereby state that the research work entitled 'A*ssessment of online collaboration tools for enhanced knowledge management at Economic Commission for Africa (ECA).'* is my own original piece of work and does not contain any unacknowledged work from any other sources. I declare that this work has not been submitted to this University or any other academic program.

Name: Abiy Shimelis

Signed: 

Date: 8 June 2023

Course: Masters in Business Leadership (Extension program)

Acknowledgement

First and foremost, I give thanks to Almighty God (Amlak) for guiding me all throughout this academic journey. Following, I would like to express my sincere gratitude to my advisor Dr. Teklegiorgis Assefa for his invaluable time and expert counselling throughout the course of this research project. His constructive feedback and support have been instrumental in shaping the direction and quality of this study. I am also deeply thankful to my colleagues at the Economic Commission for Africa for their generous assistance and willingness to share their valuable insights, which have significantly enriched the outcomes of this research. My special thanks goes to my Director Mr. Jean-Paul Adams at ECA for his encouragement throughout my research and career development.

Table of Contents

List of Tables

List of figures

Abstract

In today's digitizing world, technology is rapidly transforming how leaders shape their organization's agility and maintain its competitive edge. This is exceptionally true for organizations that heavily depend on knowledge production as their main value proposition. The application of Online Collaborative Tools (OCTs) by organizations is one out of many technostructural interventions leaders implement to enhance organizational performance. The study explores the Economic Commission for Africa (ECA)'s Technology and Innovation Section and how the team leverages technology, particularly MS SharePoint, to align with their organization's strategic goals in knowledge management. A total of 84 target respondents participated in a quantitative survey to indicate significant relationships between specific knowledge management practices and the utilization of online collaboration tools. Based on the results, the findings suggest that fostering a culture of effective usage of online collaboration tools like MS SharePoint, and ensuring engagement across all employee levels, especially general staff, can contribute to achieving organizational leadership goals and enhancing knowledge management practices at ECA. Overall, the study corroborates the theoretical understanding that when knowledge is valued, shared, and effectively utilized through appropriate technological tools, it will most likely yield in good knowledge management. The findings and discussions derived from this study contribute to understanding the effectiveness of MS SharePoint in facilitating knowledge management towards ECA's organizational strategic goals.

Keywords: *Organizational leadership, Organizational Agility, Information Technology, Collaborative tools, MS SharePoint, Project Communication, Knowledge Management, assistive technology, technostructural leadership, emerging technologies.*

1 Chapter One | Introduction

1.1 Background of Study

In the era of today's fourth industrial revolution, the significance of ICT infrastructure in driving organizational agility and maintaining a competitive advantage is critical. This holds particularly true for knowledge-driven organizations whose core value lies in the production and dissemination of knowledge. Since the emergence of the digital revolution in the 1980s, organizational leadership has significantly transformed following the introduction of online collaborative tools (Northouse, 2018; Yates, 2002). Whether it is for enhancing the leader's ability to streamline communication among team members or for availing agile work conditions, online collaborative tools are transforming organizational design and leadership now more than ever (Yates, 2022).

As a result of this global shift, most forward-looking leaders are asking the question: How can their organization harness the power of technology, specifically collaborative online tools, to best align with their organization's strategic goal? The capacity of their platforms to unlock valuable insights, analyse user behaviours continuous to exponentially increase as rapid advances in computing and data processing emerge. By exploring the transformative potential of these cutting-edge tools, leaders are exploring solutions to propel their team towards greater efficiency, enhanced collaboration, and ultimately, exceptional success in the digital age.

In this process, the role of effective knowledge management plays a foundational role in organizational leadership (Müller & Turner, 2002). Especially since the COVID-19 pandemic, organizations realized more than ever that availing remote working conditions was not only an alternative but a necessity for staying ahead of the curve in the quickly digitizing competitive market (Orlikowski, 2002). As a result, how the leadership of an organization decides to operate its online collaborative tools (OCTs) determines how the team facilitates its day-to-day strategic communication as well as maintains its long-term institutional memory in today's digital era. The rapid advancements in technology and the growing importance of knowledge-driven organizations have sparked a global shift towards the adoption of online collaborative tools. As leaders strive to align their organizations with strategic goals and leverage the potential of these tools, effective knowledge management emerges as a crucial element in organizational leadership (Jackson & Yates, 2012). The COVID-19 pandemic further highlighted the necessity of remote working conditions and the role of online collaborative tools in maintaining efficient communication and institutional memory.

This research aims to assess the usage of online collaboration tools in relation to strategic organizational goals, speciallically in relation to good knowledge management determinants. By conducting a comprehensive literature review and analysing the performance of Microsoft Teams SharePoint, this study seeks to identify research gaps and provide recommendations for enhancing organizational performance. Ultimately, the findings of this research will contribute to the body of knowledge on the transformative potential of online collaborative tools and their impact on knowledge management in knowledge-driven organizations.

1.2 Statement of problem

One of the prevailing concerns of top-performing organizations is the alignment of ICT tools with the organization's strategic goals (Northouse, 2018). The United Nation Economic Commission of Africa (ECA), like many other large organizations, is embracing digital transformation within its strategic and operational processes. Over the last 50 plus years, ECA as an organization has seen exponential growth in the generation and consumption of data, leading to a need to become more of a data-driven organization. With the emergence of AI and assistive technology, more and more organizations and their employees are looking into the prospects of applying technology to enhance their knowledge management deliverables.

Given that ECA is primarily a knowledge-based institution, it largely depends on its employee's ability to produce, exchange, retain and disseminate knowledge products for public consumption. The ECA's guiding principle on knowledge management (UNECA, p.9) emphasizes that technology is a means to an end, not an end in itself, for effective knowledge management. Therefore, understanding the technostructural formation of teams and their readiness to utilize online collaboration tools is essential. However, there is limited attempt by both scholars and in-house research to explore the nexus between digitization and organizational leadership, especially in the context of online collaboration tools (OCTs) in knowledge-based institutions.

Secondly, division directors, along with their subordinate chiefs, consultants and general staff, are confronted with a multitude of project portfolios characterized by varying timeframes, hierarchical structures, geographic locations, and other diverse factors. This requires high level of agility that is very difficult to attain without the proper utilization of OCTs. This in return requires the basic understanding of the technostructural formation of the team and its readiness to leverage on already existing tools.

Based on this rationale, this study aims to explore the real-time factors and relationships between ECA employees' OCT usage and sound organizational leadership aligned with strategic deliverables. By identifying knowledge gaps and needs, the research will provide insights for selecting appropriate tools and technologies to support knowledge management efforts.

1.3 Research questions

1. What are some of the cutting-edge online tools that are being used in Project Communication in most global knowledge-based enterprises?
2. Is there a significant relationship between the use of online collaboration tools (OCTs) and good knowledge management determinants?
3. Are there any significant relations between employee's MS SharePoint usage pattern and leadership's role in achieving strategic knowledge management?
4. What are some key recommendations for leadership to consider towards improving alignment of technology (OCTs) and knowledge management in ECA?

1.4 Aim and Objectives

The study aims to assess employee's usage pattern and readiness to leverage existing online collaborative tools (OCT) and its alignment with ECA's organizational strategic goals, particularly in relation to knowledge management. The novelty of the study, therefore, lies in its attempt to explore two co-evolving phenomena i.e., digitization and Organizational leadership within an organization that defines knowledge management as its value proposition. Accordingly, the study aims to contribute towards existing knowledge by suggesting practical insights by how ECA can leverage SharePoint's technology and align its organizational structure to optimize project leadership processes and drive performance.

The research objectives can be summarized as follows:

i. Identify key determinants associated with sound knowledge management in achieving organizational leadership goals in ECA's Technology and Innovation Section. This aims to bridge the gap between theoretical ideals and practical implications of online collaborative tools in ECA's knowledge management practice.

ii. Compare various groups of employees' usage pattern of MS SharePoint to gain insights into how digital collaborative tools are perceived and utilized in ECA's Technology and Innovation Section. Quantitatively compare various job functions and their usage of online collaborative tools (OCT) to identify significant factors that enhance knowledge management in ECA's Technology and Innovation Section.

iii. Provide specific action recommendations on the weak and strong corelations points between MS SharePoint utilization and effective knowledge management. Additionally, comment on the prospects and challenges of digital collaborative tools for implementing good organizational leadership, particularly in knowledge management. This aims to initiate further discussion on leveraging digitization to enhance organizational performance for knowledge-based institutions.

1.5 Hypothesis

The following hypotheses need to be tested to identify the gaps and discrepancies between the organizational leadership theory and the practicality in the applied case.

- H1: There is a positive correlation between the extent of Microsoft SharePoint utilization and determinants of good knowledge management at ECA.

- H2: Analytical teams that actively utilize Microsoft SharePoint align more with determinant of good knowledge management strategy.

- H3: Leaders that utilize Microsoft SharePoint frequently are more likely to contribute towards ECA's knowledge management goals.

1.6 Significance of the study

From a geographical and demographic consideration, the regional focus of this study is Ethiopia – one of Africa's high-potential economic zones, second largest population and significant socio-political influence. As such, understanding how digitization is framed within such geographic peculiarities can inform new insights as to how Ethiopian based institutions can achieve infrastructural enablers for building resilient and data-driven knowledge economy.

- ***Demographic significance:*** At the continental level, being one of Africa's most influential organizations, ECA focuses on its mandate of commissioning the UN Sustainable Development Goals and several regional development frameworks and macro policies (UNECA, 2020). The Commission played significant role in the formation of the then Organization for the African Union (OAU), present day African Union (AU) and various structural transformation programs and capacity building for member states of the Union. As such this makes it's a very significant case institution to study.

- ***Regional significance:*** As a regional economic commission, one of its 'tech governance' related mandates is to support member states to leverage technology and enhance their inclusivity, cybersecurity, and institutional competitiveness in the digital economy (DITE4Africa, 2020). It is therefore highly significant to take a closer look into how the organization itself assesses its readiness to embrace, adapt and leverage on knowledge sharing enterprise solutions, in this specific case MS SharePoint.

- ***Organizational significance:*** As a knowledge-based institution, ECA heavily relies on the power of building institutional memory and follow up on conventions and political processes. This requires formal documentation of parliamentary convenings, substantive meetings, conventions that members states depend on to create common agenda for the continent. In order to perform its mandate as a high-level convening institution, the ECA relies on it ability to document high level research, statistics and analysis on a range of political and socio-economic affairs, irrespective of the incumbent leadership. This requires the ability of the leader to build-on, follow-up and capitalize on existing processes to ensure declaration and conventions are operationalized. Among many of these tools available in the global market, the research focused on MS SharePoint as case of interest due to its full availability and accessibility by all employees as the default institutional knowledge management platform.

Overall, the research project's focus on the Economic Commission for Africa (ECA), provides a specific context for the investigation, which is important in developing practical and relevant solutions for real-world business challenges. Assessing the usage of Microsoft SharePoint for enhanced knowledge management is also the focus considering that MS SharePoint is currently the leading and widely accessible enterprise solutions in top performing organizations..

1.7 Scope of the Study

Whereas there are (5) major divisions within ECA, each with their own sub-sections, this research focused on one i.e the Technology and Innovation Section under ECA's The Technology, Climate Change and Natural Resources Division. This is to ensure relevance of the study is in alignment with the section's thematic work of supporting member states to leverage technology and increase their institutional competitiveness.

In addition, while there are four fundamental organizational change interventions in organizational development theory (referred to as OD), this research specifically focuses on technostructural formations for enhanced organizational leadership. Moreover, within the context of this research, enhancing "organizational leadership in the digital age" is limited to the improved generation and management of knowledge.

Although there are numerous metrics for measuring effective organizational interventions, the researcher found it relevant to concentrate on the relationship between technology and knowledge management. For instance, the quality of organizational leadership can vary based on factors such as leadership style, organizational structure, and employee engagement. However, the primary focus of this study is to understand the correlations and relationships between usage patterns of online collaborative tools like MS SharePoint and their role in knowledge management, which serves as the fundamental value proposition for ECA.

1.8 Assumptions and Limitations of the Study

i. Assumptions: The study is bases on the fundamental assumption and widely accepted premise that organizational leadership in today's digitizing world is strongly being influenced and transformed by how leaders use collaborative tools in co-creating the future of their organization. It further assumes that studying organizational leadership in the context of digitizing organizations can provide new and unanticipated knowledge sharing and communication pathways due to leadership peculiarities, employee's user-perceptions, and skills level of the team. It is within this speculation, that the study seeks to better understand relationships and convergences between ECA's employee's perception and usage patterns of OCT with respect to fundamental leadership theories.

ii. Limitations: The study is limited to the technostructural orientation within its organization strategy. Organizational leadership can be influenced by a range of dimensions including human processes, structural as well as strategic orientations (Cumming 2009; Armstrong, 2012). It is worth noting that there might be many phycological and human process / behavioural factors that may, for example, make the employee reluctant to share information via OCTs. However, that is not within the scope of the study. Furthermore. the case study is conducted for ECA's Technology and Innovation section to target the primary research.

Furthermore, while there may not be a single comprehensive framework or validated questionnaire specifically for knowledge-based institutions like ECA, the researcher leveraged on existing literature and adapted existing survey instruments to help ensure that the questionnaire captures the relevant determinants and provides valuable insights for assessing the performance of a knowledge-based organization such as the ECA.

1.9 Overview of the research structure

Chapter one details the introduction and overview of the research, including its aims, research objective, significance, scope, and limitations. Chapter two focuses on the literature review detailing the theories and industry trends in the digitizing world, the knowledge economy and on how leaders leverage online collaborative tools (OCT) as one effective technostructural intervention for organizational leadership. It further links these reviews and theoretical concepts in organizational development (OD), its further dives into the UN's strategy to knowledge management using ICT tools to explore literature gaps. Chapter three details the research approach and data collection methods applied. Chapter four analyses various significant relations between employee usage patterns of MS SharePoint as the default online collaborative tool (OCT) vs. meeting organizational leadership goals. Chapter five summarizes the major findings and their implication for further recommendation as well as way forward and direction for future research.

2 Chapter 2 | Literature Review

Knowledge Management & Organizational Leadership in the Digital Age

2.1 Literature Overview

2.1.1 Background of the research topic

The following chapter presents the literature review to explore the nexus between digitization and organizational leadership by contextually framing the two concepts hand in hand i.e., i). digitization as an industry 4.0 revolution that is transforming the way team communicate, produce knowledge, and co-create using online collaborative tools and ii). Organizational leadership – as the ability of leaders to strategically orient complex systems to effectively lead and influence individuals, teams, and the overall organization.

The overlapping subjects when it comes to technology and organizational leadership are immense. From a digitization point-of-view, the future of good governance relies on institutions' capacity to collect, analyse, and monitor big data at quantitative scales (Smith & Peterson, 2019). From an organizational standpoint, the future is about optimizing our collaborative tools and technostructural design within our workspace (Grant & Cousins, 2018). Accordingly, effective communication and collaboration are essential for successful leadership, and technology can play a key role in facilitating these processes.

Based on this rationale, '*Organizational leadership in the digital age'* is set as the main theme of the literature review to dive deep into the nexus of these two highly convergent phenomena in today's digitizing world.

2.1.2 Purpose of the literature review

The literature review is framed for the purpose of providing existing research on how technology is rapidly transforming the way organizations operate and communicate, especially in knowledge producing organizations such ECA.

Identifying common industry benchmarks for high-value use cases of MS SharePoint is among the main goals. This will later help identify actual employee and management practice around online collaborative tools within ECA. The literature review on fundamental organizational leadership theories will set the scene for what it means to attain effective organizational leadership by leveraging techostructural performances. This information will later be explored in tandem with how the UNECA's defines Strategic Communication Principles. Ultimately, this will lay the theoretical definition of how UNECA theoretically see the role of online collaborative tools (OCTs) for attaining effective organizational leadership for the researcher quantitatively assess actual usage patterns and perception of employees.

2.2 Global rise of the knowledge economy

Since the beginning of the 19th century, significant transformations have occurred in industrial development, marking four distinct revolutions. The first revolution, known as proto-industrialization, brought about the emergence of mass production through water-powered mechanization, leading to advancements in chemical and food processing capabilities (Freeman & Louçã, 2002).

The second revolution, which took place in 1870, was characterized by the introduction of steam-powered engines and witnessed the subsequent diversification and specialization of energy sources such as electricity, oil, and gas, as well as the widespread utilization of steel (2002). In the early 1920s, the third industrial revolution occurred, marked by the electrification of industries and homes, leading to the transformation of sectors like locomotive and transportation (Freeman & Louçã, 2002).

Presently, we are experiencing the fourth industrial revolution, driven by the automation and computerization of manufacturing processes, facilitating increased productivity and efficiency through enhanced human-machine and machine-machine interactions across various domains of human activity (IED, 2019; Parametrix, 2019). The advent of computer chips and integrated circuits has been instrumental during this phase. Throughout these pivotal periods of human progress, it becomes evident that a revolution signifies more than just heightened productivity and efficiency; it entails a comprehensive transformation in how work is conducted, and goods are produced (SAP, 2021). This conceptual understanding lays the foundation for the central argument of this study, which aims to explore the intersection of digitization and organizational leadership, focusing on the role of digitization in fostering organizational resilience and enabling smarter development trajectories, particularly in newly emerging economies.

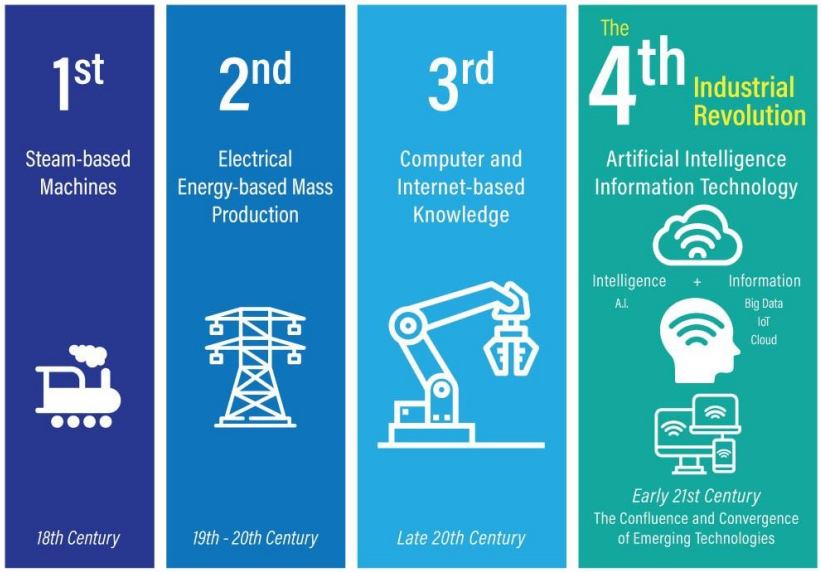


FIGURE 1: THE FOUR INDUSTRIAL REVOLUTIONS LEADING TO THE DIGITAL / KNOWLEDGE ECONOMY.

2.3 Knowledge Management in Organizational Leadership

2.3.1 Theories of organizational leadership

According to Yukl (2013), organizational leadership involves influencing and guiding individuals and groups within an organization to achieve common goals. It involves the ability to effectively communicate a vision, motivate employees, make decisions, and facilitate collaboration, ultimately driving organizational success (Northouse, 2018; Yukl, 2013). Effective organizational leadership encompasses various leadership styles, theories, and practices that are tailored to the unique needs of the organization and its members (House, 1971).

- Situational Leadership Theory: This theory suggests that effective leaders adjust their leadership style according to the situation they are in. When it comes to project communication, leaders need to understand what kind of communication is necessary for the given situation and adapt their communication style accordingly.

- Transformational Leadership Theory: This theory emphasizes the importance of leaders inspiring and motivating their team members to achieve a common goal. For project communication, transformational leaders should be able to communicate a compelling vision for the project that inspires team members to work together towards its successful completion.

- Path-Goal Theory: This theory suggests that leaders need to create a clear path for their team members to achieve their goals. When it comes to project communication, leaders need to provide their team members with clear communication channels and tools to facilitate efficient communication and collaboration.

- Transactional Leadership Theory: This theory emphasizes the importance of setting clear expectations and holding team members accountable for their performance. In the context of project communication, leaders need to set clear expectations for communication and hold team members accountable for timely and effective communication.
- Contingency Theory: This theory suggests that effective leadership depends on the specific situation at hand. When it comes to project communication, leaders need to understand the specific needs and challenges of the project and adjust their communication strategies accordingly to maximize the effectiveness of their communication.

Given the nature of ECA as an intergovernmental knowledge and policy generating entity for member states, the theory that aligns most closely with its organizational leadership approach is likely the Transformational Leadership Theory. This theory emphasizes the importance of inspiring and motivating individuals to work towards a common goal, which is a key aspect of the United Nations' mission to promote international cooperation and address global challenges. Sufficient literature in organizational development (House, 1971) and leadership theories (Jones & George, 2017) suggests that such types of organizations are more likely to follow the Transformational Leadership Theory for Organizational Leadership. This theory

emphasizes the importance of leaders to inspire and motivate their team members to achieve a common goal.

ECA, as a UN agency, focuses on its mandate of commissioning the achievement of the UN Sustainable Development Goals and several regional development frameworks and macro policies (UNECA, 2016), aligning closing to many attributes of transformation leadership approaches. While other theories, such as the Situational Leadership Theory, Path-Goal Theory, Transactional Leadership Theory, and Contingency Theory, may also have some applicability within ECA, the emphasis on inspiring and motivating teams to achieve common goals aligns well with the transformative nature of the organization's work.

Accordingly, the particular focus of this literature review is the *transformational leadership theory*. The transformational leadership theory is a leadership approach that emphasizes the ability of leaders to inspire and motivate their followers to achieve extraordinary outcomes. This theory was first introduced by James V. Downton in 1973 and later expanded upon by James MacGregor Burns in 1978. According to the Transformational Leadership Theory, leaders who exhibit transformational qualities have a profound impact on their followers. They can inspire and motivate their team members to transcend their self-interests and work towards a collective vision or goal. Transformational leaders create a positive and supportive work environment that encourages personal growth, innovation, and high performance.

The Transformational Leadership Theory has been widely applied in organizational leadership and development. It has shown positive effects on employee engagement, job satisfaction, organizational commitment, and overall performance. By inspiring and transforming their followers, transformational leaders can bring about significant positive changes within organizations.

The theory proposes four key dimensions or behaviours of transformational leadership:

i. *Individualized Consideration*: Transformational leaders show genuine concern for the individual needs and development of their followers. They provide support, mentoring, and coaching to help individuals reach their full potential.
ii. *Intellectual Stimulation:* Transformational leaders challenge their followers to think critically and creatively. They encourage them to question assumptions, explore new ideas, and find innovative solutions to problems.
iii. *Inspirational Motivation*: Transformational leaders articulate a compelling vision and inspire their followers to share in that vision. They communicate high expectations and optimism, and they use their own enthusiasm and passion to motivate and energize others.
iv. *Idealized Influence:* Transformational leaders serve as role models and gain the trust and respect of their followers. They demonstrate integrity, ethical behaviour, and a strong set of values. Their actions and behaviours align with the shared values of the organization.

By embodying these transformational behaviours, leaders can create a sense of purpose and commitment among their followers, leading to higher levels of motivation, satisfaction, and performance.

Furthermore, as a knowledge-generating body, ECA aims to inspire and mobilize member states to take collective action for the betterment of the world. Transformational leaders within

the organization would communicate a compelling vision for global peace, sustainable development, and human rights, inspiring member states to collaborate and contribute to these goals.

2.3.2 Knowledge Management

By assessing the following determinants of good knowledge management (Galbraith, 2009; Grant, 2018), the literature review identified the industry good practices metrices of knowledge management in non-profit originations such as the ECA. This will ultimately help to inform how the adoption and effectiveness of Microsoft SharePoint as a project communication tool in the organization and compare it with actual perception of employees towards knowledge management in ECA.

While some of the specific determinants may differ due to the unique nature of these institutions, the following factors were generally identified:

- Knowledge Generation: The effectiveness and quality of knowledge generation within the institution, including research, analysis, and the production of policy papers, reports, and publications.
- Expertise and Competence: The level of expertise and competence of the institution's staff and experts in their respective fields, including their knowledge, skills, and ability to provide accurate and valuable insights.
- Access to Information: The availability and accessibility of information and knowledge resources within the institution, including databases, libraries, and online platforms.
- Collaboration and Networks: The institution's ability to foster collaboration and build networks with other organizations, researchers, experts, and stakeholders to facilitate knowledge exchange and sharing.
- Timeliness and Relevance: The ability of the institution to produce and disseminate timely and relevant knowledge that addresses current and emerging issues and meets the needs of its stakeholders.
- Policy Impact: The extent to which the institution's knowledge and research contribute to policy development, decision-making, and the achievement of desired outcomes and impact.
- Communication and Dissemination: The effectiveness of communication strategies and channels used by the institution to disseminate knowledge and research findings to internal and external stakeholders, including the clarity, accessibility, and reach of the communication efforts.
- Stakeholder Engagement: The institution's engagement with various stakeholders, including policymakers, practitioners, academia, civil society, and the public, to solicit feedback, gather insights, and ensure the relevance and usefulness of the produced knowledge.

These determinants can be used to assess the performance and effectiveness of knowledge-based institutions like ECA in their knowledge generation and dissemination efforts. Tailoring these factors to the specific context and objectives of the institution will provide valuable insights into its knowledge management practices and overall impact.

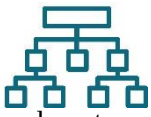
2.4 Organizational change interventions

The focus of this review and study is identifying the technological change intervention. However, before diving into that specific intervention, here are the broader factors that shape organizational change intervention to help provide background to various human processes and structural orientations of organizations mentioned below:

- *Organizational factors*: Organizational culture and structure, Leadership support and buy-in for digital transformation, Prioritization of communication in project management, Use of project management methodologies (e.g., agile, waterfall), Availability of resources and budget for digital tools.
- *Digital skills barriers/factors*: Technical proficiency and comfort level with digital tools, Access to training and support for digital tools, Cybersecurity concerns and risk aversion, Availability of technology infrastructure and support.
- *Cultural factors*: Resistance to change and technology adoption, Communication and collaboration norms and practices, Perception of technology and its role in communication, Trust and transparency in communication.

The specific focus of this study highlights the first two factors, while cultural factors are not considered for this review. There are several example and literature covering the concept of organizational change intervention (Cummings, 2009). The application of OCT by the leader is one out of many technostructural interventions leaders of the organizational implement and enforce to enhance organizational performance (2009).

The focus of this research is the in assessment of technostructural change interventions, among the four branches of organizational change intervention (Armstrong 2012; Cumming, 2009). The technostructural intervention of interest in this case is online collaboration tools (OCTs), specifically MS SharePoint as the default knowledge management gateway for all ECA employees.

Human Processes	**Structural Interventions**
 Focus on enhancing interpersonal relationships, communication, and group dynamics within an organization to promote collaboration, team effectiveness, and employee satisfaction.	 Involve modifying the organizational structure, such as hierarchies, reporting relationships, or departmental configurations, to improve efficiency, agility, and alignment with the organization's goals and objectives.

Human Resource Interventions	Strategic Interventions
 Concentrate on enhancing HR systems and practices, including talent acquisition, performance management, training and development, and employee engagement initiatives, to optimize the organization's human capital and foster a high-performance culture.	 Involve aligning the organization's overall direction, vision, and goals, as well as strategic planning and implementation processes, to adapt to changing market conditions, capitalize on opportunities, and ensure long-term sustainability and success.

FIGURE 2: ORGANIZATIONAL CHANGE INTERVENTIONS (CUMMINGS, 2009)

2.5 Global Industry Trends in Online Collaborative Tools

2.5.1 Overview of online collaborative tools

Global trends in the technostructural interventions indicate that leaders are giving more strong focus to better understand barriers to adoption of technologies within their organization. Technostructural organizational leadership, as defined by Galbraith (2009) and Mintzberg (1980), refers to the leadership practices and strategies focused on managing and aligning the technological and structural aspects of an organization. It involves leveraging technology and organizational structure to optimize processes, enhance efficiency, and drive performance.

Leaders are giving more attention towards the user behaviour of their employees by gauging patterns such as the frequency of team meetings, confidence in sharing, cybersecurity checks and awareness, use of open-source tools, subscription to support software, or even the use of assistive AI for content creation (Northouse, 2018) technology usage awareness and provide a scale for gauging the level of technology use to help employees gauge their level of technological savviness. This will allow management to evaluate ways to improve technical use, procurement of more/less tools, maintenance, and training to help HR cope with such changes. However, it is often difficult to track progress of the actual work, especially during employee turnover and the convergence of various consulting bodies, that may come and go depending on the leadership's mode of execution. The following section look at some of the enterprise solutions addressing these challenges.

2.5.2 **Enterprise Solutions**

One of the objectives of the literature review is to identify some of the leading knowledge and content management enterprise solutions since research and policy making is the key value proposition of ECA. The table below summarizes some of the top performing enterprise solutions that are mostly deployed by global leaders globally (TechCrunch, 2023). The review indicated Confluence and Microsoft's SharePoint as the leading platforms as of the year 2023. This is according to rating and reviews by various consulting reputable technology research firms and technology publications that regularly cover enterprise solutions and provide latest insights and market trends in enterprise software (TechCrunch, 2023).

Categories of Enterprise solutions	Top performing Enterprise Solutions globally (2023)
Customer Relationship Management (CRM) Systems 	Salesforce: A cloud-based CRM platform that provides comprehensive customer management, sales automation, and analytics features. Microsoft Dynamics 365: An integrated suite of CRM and ERP applications that offers sales, marketing, and customer service functionality.
Enterprise Resource Planning (ERP) Systems 	SAP S/4HANA: An intelligent ERP system that integrates various business functions, such as finance, procurement, sales, and inventory management. Oracle ERP Cloud: A suite of cloud-based applications that helps organizations manage their financials, supply chain, and project portfolios.
Knowledge Management Systems 	Confluence: A collaborative wiki tool by Atlassian that enables teams to create, share, and organize knowledge resources. **SharePoint: A Microsoft platform for document management, collaboration, and content sharing within organizations**.
Project Management Systems 	Jira: A project management tool by Atlassian that offers features like issue tracking, agile boards, and team collaboration. Asana: A web-based project management software that allows teams to track and manage tasks, projects, and workflows. Business Intelligence (BI) and Analytics Systems: Tableau: A data visualization and business intelligence platform that helps organizations analyze and present data in a visually appealing manner. Power BI: A business analytics tool by Microsoft that provides interactive visualizations and business intelligence capabilities.
Enterprise Content Management (ECM) Systems 	**SharePoint: In addition to its collaboration features, SharePoint also offers document management and content storage capabilities.** OpenText: A suite of ECM solutions that enable organizations to manage and control their content throughout its lifecycle.

FIGURE 3: TOP PERFORMING ENTERPRISE SOLUTIONS GLOBALLY (2023)

Furthermore, data-driven decision making has become more vital (Galbraith, 2009). Online project communication tools often come with built-in analytics and reporting capabilities. This enables leaders to gather and analyse data related to project performance, team productivity, and communication patterns (Northouse, 2018). By leveraging these insights, leaders can make data-driven decisions, identify areas for improvement, and optimize project outcomes.

The assessment of Microsoft SharePoint's usage aligns with the principles of technostructural organizational leadership. The research examines how technology (Microsoft SharePoint) and organizational structure can be effectively utilized to enhance project leadership in the digital age. By evaluating the implementation and impact of SharePoint at ECA, the study contributes to the understanding of how technostructural leadership practices can be employed to leverage digital tools for improved project leadership in an organizational setting.

2.6 Knowledge Management Strategy at the ECA

Now specific to ECA, what are the challenges faced by ECA in embracing digital transformation within its strategic and operational processes, particularly with regards to online collaboration tools and their adoption within organizational leadership? What are some of the knowledge management strategic documents put in place?

To answer these questions, the study look at literature on MS SharePoint specific guidelines that the UN has put in place. Furthermore, to investigate the barriers to knowledge sharing and their impact on organizational leadership and institutional memory, the literature review looks into the strategic orientation of ECA in the context of how it defines strategic knowledge management using digital collaborative tools.

2.6.1 Importance of effective knowledge management in ECA

Over the last fifty plus years, ECA as an organization has seen exponential growth in the generation and consumption of data, leading to a need to become more of a data-driven organization. With the emergence of AI and assistive technology, more and more organizations and their employees are looking into the prospects of applying technology to enhance their project communication deliverables.

Among ECA's top functional performance metrices as an organization are high-level convening of member states, statistical data and knowledge management and publications on macroeconomic governance issues. These mandates primarily rely on the institutions' capacity to collect, analyse, and monitor big data at quantitative scales (UNECA, 2019) to produce quality data consumed by African Member States.

The following are ECA's top three strategic organizational priorities base on its mandate as an economic commission for African Member States:

i. Convening: the gathering of key stakeholders including member states, donor partners, and implementing partners for advancing regional integration and economic development of African Member States. This re
ii. Knowledge production: including the publication of high-quality knowledge products and research findings.

iii. Communication and advocacy: the dissemination of evidence-based knowledge products, policy briefs and call to actions.

In order to execute these mandates, the functional focus of ECA's organizational leadership is fundamentally knowledge production at the macro-economic and intergovernmental policy level. The following section explore what various literatures have to say about the role of technology in achieve these deliverables.

Now that we have seen the performance priorities of ECA as part of its transformation leadership approach, the literature dives deeper into the *technological orientation* of ECA as the focus of this research. Especially following the rapid advancement of collaborative platforms and the rise of post-COVID-19 remote working platforms, leaders are paying more attention to digital enterprise solutions and how well it is adapted or possibly resisted (Haslam, Ryan, & Postmes, 2003).

Therefore, the question here arises, *to what extent do employees align with this strategic goal, particularly within the context of their usage of online collaboration tools?* To answer this question, it is important to explore background literature to identify key performance determinant or metrices for knowledge-based organizations such as ECA.

2.6.2 Determinants of good knowledge management

When assessing the success of knowledge-based or advocacy organizations, the metrics of success may differ from those used in traditional business settings. Here are some metrics that can be relevant for evaluating the organizational leadership and project success in such contexts:

i. Knowledge Impact: Measure the extent to which the organization's knowledge products, research, or advocacy efforts have influenced policies, decision-making processes, or public opinion. This can be assessed through qualitative feedback, case studies, or tracking instances of knowledge utilization.
ii. Thought Leadership: Evaluate the organization's position as a thought leader in its field by considering metrics such as the number of citations of its publications, invitations to speak at conferences or events, or media coverage of its research and opinions.
iii. Partnerships and Collaborations: Assess the organization's ability to establish and maintain strategic partnerships and collaborations with other organizations, government agencies, or community groups. This can be measured by the number and quality of partnerships formed and the outcomes achieved through these collaborations.
iv. Advocacy Impact: Evaluate the influence of the organization's advocacy efforts by monitoring policy changes, legislative outcomes, or social impact resulting from its advocacy campaigns. This can involve tracking policy adoption, media coverage, or public opinion shifts on relevant issues.
v. Stakeholder Engagement: Measure the level of engagement and satisfaction among stakeholders such as donors, members, or beneficiaries. This can be done through surveys, feedback mechanisms, or participation rates in events and activities.

vi. Knowledge Sharing and Dissemination: Assess the organization's effectiveness in sharing knowledge and disseminating information through metrics such as website traffic, downloads of publications, or engagement on social media platforms.
vii. Funding and Resource Mobilization: Evaluate the organization's ability to secure funding and mobilize resources for its projects and initiatives. This can involve measuring the success rate of grant applications, the diversity of funding sources, or the growth in financial support over time.
viii. Organizational Learning and Innovation: Measure the organization's capacity for learning and innovation by tracking metrics such as the number of new initiatives launched, lessons learned and documented, or the implementation of innovative practices within the organization.

2.6.3 Leveraging Online Collaborative Tools (OCTs) for knowledge management

Mangers in ECA and broadly the UN can now manage, and coordinate teams spread across different time zones and locations. This transformation allows for greater flexibility, work-life balance, and access to a diverse talent pool, contributing to higher employee satisfaction and retention (Grant, 2018). One of the most notable failures by organizations is being able to adapt quickly to agile working conditions. Particularly since the turn of the twentieth century, the rise of online project communication tools has also facilitated the growth of remote work arrangements (Grant, 2018).

Division directors, along with their subordinate chiefs, consultants, and general staff, are confronted with a multitude of project portfolios characterized by varying timeframes, hierarchical structures, geographic locations, and other diverse factors. This requires high level of agility that is very difficult to attain without the proper utilization of OCTs. This in return requires the basic understanding of the technostructural formation of the team and its readiness to leverage on already existing tools.

Comparing the organizational leadership quality between an organization with a weak culture of using online collaborative tools and one with a strong culture of using it can reveal several differences and impacts on leadership effectiveness. Here are some potential points of comparison:

- Communication and Collaboration: Organizations with a strong culture of using collaborative tools like SharePoint tend to have improved communication and collaboration among team members. The platform provides a centralized hub for sharing information, discussing projects, and coordinating tasks, enabling seamless collaboration and fostering a culture of teamwork. In contrast, organizations with a weak culture of using such tools may experience challenges in communication and collaboration, leading to potential inefficiencies and gaps in leadership.

- Information Sharing and Knowledge Management: SharePoint promotes effective information sharing and knowledge management practices. A strong culture of using the platform encourages employees to regularly contribute and access relevant information, leading to better-informed decision-making and enhanced leadership capabilities. Conversely, organizations with a weak culture of using collaborative tools may struggle to establish efficient information-sharing channels, potentially hindering effective leadership and limiting access to critical knowledge resources.

- Efficiency and Productivity: A strong culture of using collaborative tools like SharePoint often translates into increased efficiency and productivity. The platform streamlines processes, automates workflows, and provides easy access to resources and documents, saving time and effort for employees. In organizations with a weak culture of using such tools, leadership may face challenges in optimizing processes and achieving high levels of productivity, potentially affecting overall organizational performance.

- Innovation and Adaptability: Collaborative tools like SharePoint can foster innovation and adaptability within an organization. A strong culture of using such tools encourages employees to share ideas, collaborate on projects, and adapt to changing circumstances. This can lead to a more innovative and agile organization, empowering leaders to drive change and respond effectively to evolving market conditions. Conversely, organizations with a weak culture of using collaborative tools may struggle to encourage innovation and adaptability, potentially limiting leadership's ability to navigate complex challenges.

2.6.4 MS SharePoint use in ECA

When referring to collaborative tools, there are a range of categories of tools that can be used to support knowledge management, hence enhanced organizational leadership (Zhang & Zhou, 2020). The ECA does not endorse any specific tool or technology. Instead, it emphasizes the importance of selecting tools based on an organization's specific needs and goals for knowledge management. For this purpose, MS SharePoint was selected as case tool due to the following reasons:

Microsoft SharePoint is a widely adopted and popular collaboration platform used by organizations globally. It offers a range of features and functionalities designed to enhance teamwork, document management, and project collaboration. By studying SharePoint, the research can provide insights applicable to a broad audience and contribute to the understanding of how organizations utilize such collaborative tools in the digital age.

i. Relevance to Digital Transformation: As organizations strive to adapt to the digital age and embrace digital transformation, understanding the usage and impact of digital tools like Microsoft SharePoint becomes crucial. SharePoint represents a key component of many organizations' digital infrastructure, making it a relevant case to study for examining how technology can facilitate enhanced project leadership and organizational efficiency in the digital age.

ii. Potential for Enhanced Project Leadership: SharePoint offers a range of features that can potentially improve project leadership practices. It enables efficient document sharing, version control, task management, communication, and collaboration among team members. By evaluating the usage of SharePoint for project leadership at ECA, the research can provide valuable insights into how organizations can leverage the platform's capabilities to enhance project management and leadership effectiveness.

Overall, studying Microsoft SharePoint as a case in the research offers practical relevance, insights into digital transformation, potential for enhanced project leadership, and applicability to the context of international organizations like ECA.

2.6.5 Practical applications of SharePoint in ECA

When it comes to Microsoft SharePoint, organizations like the UNECA can leverage the platform for various use cases, ranging from simple day-to-day tasks to more sophisticated applications that enhance organizational leadership (UNECA, 2018). Here are some examples, ordered from less complicated to more complex:

i. Document Sharing and Collaboration: SharePoint simplifies document management by providing a centralized platform for storing, sharing, and collaborating on files. UNECA staff members can use SharePoint to securely share documents, co-author files, and track version history, improving collaboration and efficiency in routine tasks.

ii. Team Collaboration and Communication: SharePoint's team sites and communication features facilitate effective team collaboration and communication. UNECA teams can utilize SharePoint to create dedicated sites for projects, share updates, hold discussions, and manage tasks, enhancing teamwork and coordination.

iii. Process Automation and Workflow Management: SharePoint's workflow capabilities allow organizations to automate and streamline business processes. UNECA can leverage SharePoint to design workflows for routine tasks, such as document approvals or leave requests, reducing manual effort, ensuring consistency, and improving productivity.

iv. Knowledge Management and Intranet Portal: SharePoint serves as an effective platform for knowledge management and creating intranet portals. UNECA can establish a central knowledge repository using SharePoint, providing easy access to organizational information, policies, procedures, and best practices, promoting knowledge sharing and organizational learning.

v. Performance Dashboards and Reporting: SharePoint, integrated with Power BI, enables the creation of interactive dashboards and reports. UNECA can leverage SharePoint's capabilities to develop performance dashboards that provide real-time insights into key metrics, facilitating data-driven decision-making and enhancing organizational leadership.

vi. Enterprise Search and Content Management: SharePoint's powerful search capabilities and content management features enable efficient retrieval of information and effective content organization. UNECA can utilize SharePoint to implement an enterprise-wide search system, allowing staff to quickly find relevant documents, resources, and expertise, improving productivity and decision-making.

vii. Business Process Integration and Custom Applications: SharePoint can be extended to integrate with other systems and develop custom applications. UNECA can leverage SharePoint's flexibility to integrate with existing business systems, automate data synchronization, and build custom applications tailored to specific organizational needs, enhancing operational efficiency, and supporting organizational leadership.

2.7 Summary of literature review

2.7.1 Recap of the key points discussed in the literature review.

Overall, there is extensive study that strongly articulates theoretical linkages between the power of leveraging online collaborative tools (MS SharePoint) vs. enhanced organizational leadership. However, for knowledge-based institutions such as ECA, a case specific exploration of how employees perceived and understand OCTs in shaping organizational leadership is missing.

The literature review identified strong theoretical understanding of i. Digitization - as a technological phenomenon that is transforming industry 4.0 through new products, services, and behaviours. ii. Organizational leadership – as a cross-cutting concept aimed at building resilient organizational that are adaptive to new changes of waves.

i. Given the nature of ECA as an intergovernmental knowledge and policy generating entity for member states, the theory that aligns most closely with its organizational leadership approach is likely the Transformational Leadership Theory. This theory emphasizes the importance of inspiring and motivating individuals to work towards a common goal, which is a key aspect of the United Nations' mission to promote international cooperation and address global challenges.

ii. The functional focus of ECA's organizational leadership is fundamentally knowledge production at the macro-economic and intergovernmental policy level. As a knowledge-generating body, the United Nations aims to inspire and mobilize member states to take collective action for the betterment of the world. Transformational leaders within the organization would communicate a compelling vision for global peace, sustainable development, and human rights, inspiring member states to collaborate and contribute to these goals.

iii. While other theories, such as the Situational Leadership Theory, Path-Goal Theory, Transactional Leadership Theory, and Contingency Theory, may also have some applicability within the United Nations, the emphasis on inspiring and motivating teams to achieve common goals aligns well with the transformative nature of the organization's work.

iv. The literature review identified theories and industry trends on how leaders leverage online collaborative tools (OCT) as one effective technostructural intervention for organizational leadership. The literature review also gave highlight as to why Microsoft SharePoint is considered as one of the most recommended online technologies for effective project communication leadership, making the focus of this study.

v. The review also identified key determinants for assessing good knowledge management for institutions like the ECA. These determinants can be used to assess the performance and effectiveness of knowledge-based institutions like the UN in their knowledge generation and dissemination efforts. Tailoring these factors to the specific context and objectives of the institution will provide valuable insights into its knowledge management practices and overall impact.

2.7.2 Identification of gaps in the existing literature.

ECA has attempted KM strategies in the past, but these were primarily focused on knowledge-sharing platforms and produced mixed results. As a knowledge organization, ECA's strategy should focus on how knowledge flows through its business model. However, there are gaps identified is finding case specific exploration of how employees perceived and understand OCTs in shaping organizational leadership is missing. Although ECA identifies better organizational leadership based on its ability to meet its knowledge management and dissemination goals, the perception of collaborative online tools (OCT) among employees needs to be assessed to better understand the organization's readiness to leverage technostructural solutions for enhanced organizational development.

2.7.3 Limitations of the review

The existing literature review has certain limitations, particularly regarding reviews on other key related aspects such as stakeholder engagement, and trust and reliability in knowledge sharing. The literature falls short in providing in-depth review of these areas. Specifically, it does not thoroughly examine the quality of knowledge products in terms of reliability, accuracy, ease of collaboration, and ease of storing, accessing, and retrieving.

To address these gaps, future researchers should broaden the scope of their review to explore other research gaps related to leadership, issue of trust and confidentiality in knowledge sharing, process streamlining, stakeholder engagement, project communication and data-driven decision-making. By expanding the review along these lines, researchers can shed light on additional aspects on the nexus between technology and organizational leadership in the digital age.

3 Chapter 3 | Methodology

The following chapter details the research methodology and the research approaches used to address the research questions.

3.1 Research Design

The research takes the quantitative research approach as it will be ideal for gathering statistical inputs to identify significant patterns, relationships, and corelations of the usage patterns and perceptions towards online collaborative tools in ECA.

The Statistical Data Analysis was performed based on data collected from a quantitative survey with 84 ECA Technology and Innovation Section employees. The study narrowed down to one of the Divisions i.e ECA's The Technology, Climate Change and Natural Resources Division among the (5) major divisions within ECA. Each Division has several sub-sections, which in this case there were (3) section within the selected case Division, in which the sample size was fully taken from. A questionnaire was distributed to all section since the type of section has no limitation on the research objective.

3.2 Research Approach

Quantitative research approach was chosen for this study. While there may not be a specific theoretical framework or validated survey questionnaire designed specifically for assessing these determinants in knowledge-based institutions like the United Nations (UN), the researcher looks at existing literature and research in related fields to inform the survey design. Findings from the literature review (Chapter 2.7) identified determinants and factors influencing the performance and effectiveness of knowledge-based institutions, thus providing the theoretical backing to the survey design.

Furthermore, the researcher referred to existing validated survey instruments used in related fields, such as organizational effectiveness and employee satisfaction surveys (Clegg & Pitsis, 2016). While these may not be specific to knowledge-based institutions, they can serve as a starting point for designing the questionnaire and help capture relevant dimensions.

Inputs		**Output**	
Literature Review	**Primary Research:**	**Synthesis**	**Discussion**
Conceptual Framings: Digitization vs. Organizational Leadership. ⇩ **Global trends in Online Collaboration Tools (OCTs)** ⇩ **ECA approach to Knowledge Management &**	**Usage patterns** ⇩ **Key thematic finding:** Identified and discussed. ⇩ High value use cases to **define determinants** of effective MS SharePoint usage.	[Quantitative Survey] **Meta-analysis of data:** [Use: Excel + SPSS] ⇩ Idenitiy key patterns and their relation with employment OCT usgae behavior vs. determinants of effective organizational leadership in tranformative leadership ⇩ Discussion with respect to broader literature and research question.	

Project Communication (UNECA, 2020) • **Organizational Leadership Theory** • **Technostructural orientation Theory** • **Knowledge Management Theory**	Link with **effective organizational leadership** for knowledge management.	
Review Summary	**Raw data**	**Conclusion & Implications for Future Research**

FIGURE 4: METHOD MAPPING SUMMARY FOR RESEARCH APPROACH

3.3 Data sampling method

3.3.1 Target Population

The study narrowed down to one of the Divisions i.e ECA's The Technology, Climate Change and Natural Resources Division among the (5) major divisions within ECA. Each Division has several sub-sections, which in this case there were (3) section within the selected case Division. The questionnaire was distributed to all section since the type of section has no limitation on the research objective.

A total of 144 target respondents were asked to participant in the survey out of which responded. The Sample Size includes 84 employees all with direct access to share point. The demographic data is relevant for understanding how different groups within your organization use and perceive Microsoft SharePoint and project communication leadership.

3.3.2 Sampling tool

An email survey questionnaire was sent in the form of Microsoft Forms and Whatsapp group, since all target participants had direct access to the in-house application that comes along with premium office suits. MS Form Survey 16 Questions, Likert Scale was used. An email survey questionnaire was sent in the form of Microsoft Forms, since all target participants had direct access to the in-house application that comes along with premium office suits.

Limitations in increasing the validity of the questionnaire can be noted here. Future researchers may apply Pilot Testing survey with a small group of employees to assess the clarity, understandability, and relevance of the questions could have helped identify any potential issues or improvements needed before administering the survey to a larger sample (Sage, 2018).

3.4 Variables

To conduct a simple quantitative research study that measures the relationship between different variables. SharePoint use and team efficiency in project communication leadership, the following dependant and independent variables were considered. By reviewing some high value use cases and metrices of MS SharePoint within other UN agencies and/or similar knowledge-based institutions, the research extracted the following variables to structure the survey questionnaire.

i. The independent variable can be measured using quantitative data such as the frequency of use, employment status, level of education, and nature of work. Examples of independent variables include the frequency of use, employment status, level of education, and nature of work. Eg. Section I asks respondent basic demographic details about the employee such as their role, years of experience, and familiarity with SharePoint.

ii. The dependent variable, on the other hand, refers to the variable that is being influenced or affected by the independent variable. The variables are designed based on the literature review's takeaway on what primarily constitutes good practices (high value use cases) of online collaborative tools. Examples of dependent variables in this context could be team efficiency, extent of projects backed up on OCTs, types of activities performed on SharePoint, or even the perceived risk of sharing project files on SharePoint.

A 16-question quantitative survey for collecting data from ECA's Technology and Innovation Section employees. The data will be used to collect usage patterns and perceptions on online collaborative tools (OCTs) within the context of ECA's performance metrices as identified within Transformation leadership theories. Variables were assigned ordinal values to gauge various level or ranks of intensity. E.g., When assessing the extent of MS SharePoint use, variable takes value '1' for those individuals that rarely use the platform, value '2' for those individuals that use it at least within a month's period and value '3' for those individuals that use it at least within a week and value '4' for those that use it frequently.

3.5 Data Analysis

The analysis explored various relationships, correlations, and variances between the responses to gain insights unique to the organization's practices based on the survey questions for assessing good knowledge management practices and the utilization of online collaboration tools. Parametric distributions used Linear regression and Pearson corelation while Non-Parametric distributions followed Ordinal regression and Spareness rank (SPSS, 2018).

Statistical tools such as Excel and SPSS were used to analyse the responses and identify patterns, correlations, and relationships between the determinants and outcomes of interest. SPSS offers a range of tools and techniques to explore relationships, correlations, and variances, deriving meaningful insights from the survey data (SPSS, 2018).

For this study, the following commonly used analyses were applied to examine the relationships and patterns between technology usage, leadership behaviours, and alignment with strategic goals. This analysis aims to later establish insights into the strengths and areas of improvement within ECA's Technology and Innovation Section.

- **Descriptive Statistics:** Calculate descriptive statistics, such as means and standard deviations, for each knowledge management practice and tool utilization variable. This will provide an overview of the average perception or utilization levels.

- **Correlation Analysis:** Conduct correlation analysis, such as Pearson's correlation coefficient, to examine the associations between each knowledge management practice and the utilization of online collaboration tools. This analysis will reveal the strength and direction of the relationships. To measure the relationship between these variables, a correlation analysis can determine the strength and direction of the relationship between usage of online collaborative tool (SharePoint) and determinants of good knowledge management.

- **Chi-square cross tab** was used to summarize relationship between the predictor variable and outcome variables.

3.6 Reliability and Validity

Test for Normality was conducted to test the level of statistical significance of the data collected. This is often expressed using the **Kolmogorov-Smirnov** normality value for data sets greater than 100 or the **Shapiro-Wilk** normality value for data set lesser than 100 (SPSS, 2021).

In this case, a p -value (0.022 & 0.026) is less than < 0.05, according to the normality test (Table 1). This concludes that the data is ***statistically significant,*** thus rejecting the null hypothesis. The smaller the p-value the less likely the results occurred by random chance, and the stronger the evidence that the ***null hypothesis is rejected.*** The smaller the p-value, the more confident that we can be to reject the null hypothesis (SPSS, 2021). Therefore, there is evidence to suggest that there is a difference in the mean values between the two variables. This also implies that ***parametric tests*** can be run.

TABLE 1: NORMALITY VALUE TEST

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
UP_Mean	.150	84	**<.001**	.966	84	**.026**
KM_Mean	.127	84	**.002**	.965	84	**.022**

TABLE 2: TEST OF PARALLEL LINES

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	206.599			
General	184.880[b]	21.719[c]	14	**.085**

TABLE 3: GOODNESS-OF-FIT

Goodness-of-Fit			
	Chi-Square	df	Sig.
Pearson	511.948	568	.956
Deviance	254.932	568	1.000

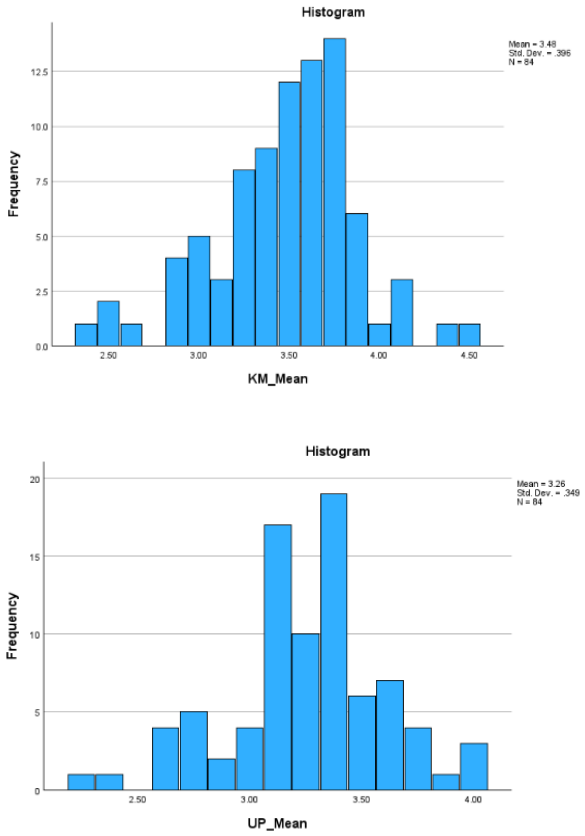


FIGURE 5: NORMALLY DISTRIBUTED RAW DATA FOR GROUPS GENERAL STAFF VS. ANALYTICS STAFF

NB: No scientific notation was assigned to small number in the tables (SPSS, 2021).

3.7 Ethical consideration

To ensure confidentiality of participants in this study, the identity of all respondents was kept anonymous and confidential. Personal information, such as names and contact details, will not be collected or linked to the responses. Instead, each participant will be assigned a unique identifier code to maintain their privacy.

Additionally, all data collected will be securely stored with restricted access only to the researcher. To further protect confidentiality, any identifying information mentioned within the responses will be carefully redacted or anonymized. The commitment to maintaining confidentiality is essential to fostering trust and encouraging honest participation in this study (Sage, 2016).

4 Chapter 4 | Results and Discussion

4.1 Data presentation

The following section details the results from the quantitative survey and various analysis conducted to address the research objectives. The findings present some basic descriptive statistics for different sub-groups of the data.

The dataset from the survey contains 12 variables assessed by a total of 84 usable respondent cases from a total distribution of 144 requests, signifying a 58.6% response rate from the target respondents. Here below are basic overview of the data in terms of employment status and level of education. The research attempted to minimize the data input and analysis specifically direct towards the variables that are relevant to test the corelations for the proposed analysis.

TABLE 4: DESCRIPTIVE STATISTICS ON EMPLOYMENT STATUS

Employment Status		
	Frequency	Percent
General Staff (GS)	12	14.3
Analytic (C)	16	19.0
Professional (P)	44	52.4
Senior Leadership (D)	12	14.3
Total	84	100.0

Overall, professional level employees (P-level) and graduates showed largest response rate while general staff and certified trainees showed the lowest (Table 4). Additionally, analytic staff show higher frequency of use compared to that of general staff, indicating higher user rate for online collaborative tools for knowledge management.

4.2 Quantitative Data Analysis

4.2.1 Descriptive Statistical Analysis

By conducting a descriptive statistical analysis, basics frequency analysis such as means and standard deviations for each knowledge management practice and tool utilization variables. Some of this basic frequency analysis is based on employment status, frequency of use and level of education. It appears that the majority of participants in the study had either a master's degree or a graduate degree, comprising a combined total of 79.8% of the sample.

TABLE 5: DESCRIPTIVE STATISTICS ON FREQUENCY OF USE VS. LEVEL OF EDUCATION

Frequency of Use vs. level of education				
	Frequency	Percent	Valid Percent	Cumulative Percent
1-Certified training	8	9.5	9.5	9.5
2-Master	31	36.9	36.9	46.4
3-Graduate	36	42.9	42.9	89.3
4-Post Graduate	9	10.7	10.7	100.0
Total	84	100.0	100.0	

4.2.2 **Comparison of means by group: Type of work**

A comparison of means was conducted to examine the differences between different groups based on the type of work. The analysis focused on comparing the perceptions and utilization of SharePoint between general staff and analytical staff members.

The crosstab summary table presents the distribution of responses based on employment status and frequency of use. Among analytical staff members, 13.9% reported a frequency of use as 1, 27.8% as 2, 52.8% as 3, and 5.6% as 4. In comparison, among general staff members, 6.3% reported a frequency of use as ‘Monthly’, 43.8% as ‘Bi-monthly’, 35.4% as ‘Weekly’, and 14.6% as ‘Almost daily’.

A further comparison of means using the independent t-test analysis revealed that the mean SharePoint utilization rate was slightly higher for general staff (mean = 3.26) compared to analytical staff (mean = 3.25). However, when considering knowledge management determinants, analytical staff members showed a higher mean aggregate (mean = 3.518) compared to general staff members (mean = 3.43). This suggests that analytical employees exhibited greater alignment with good knowledge management determinants.

The Levine's Test for Equality of Variances indicated that there was not enough evidence to statistically compare the "Type of work" with "utilization of SharePoint" for making group comparisons using the independent t-test. However, for knowledge management determinants, the Levine's Test showed a significant p-value of less than 0.02, indicating evidence to compare the "Type of work" with knowledge management determinants for making group comparisons.

TABLE 6: CROSSTAB SUMMARY: EMPLOYMENT STATUS VS. FREQUENCY OF USE

			UP1: Frequency of Use				
			1	2	3	4	Total
Employment Status: [1- Analytic] [2-General Staff]	Analytic	Count	5	10	19	2	36
		% within Employment Status	13.9%	27.8%	52.8%	5.6%	100.0%
	General	Count	3	21	17	7	48
		% within Employment Status	6.3%	43.8%	35.4%	14.6%	100.0%
Total		Count	8	31	36	9	84
		% within Employment Status: [1-General Staff, 2-Analytic]	9.5%	36.9%	42.9%	10.7%	100.0%

TABLE 7: COMPARING GROUP MEANS USING LEVEN'S TEST INDEPENDENT T-TEST USING INDEPENDENT T-TEST

Group Statistics: Type of work: [General Staff vs. Analytical Staff]					
	D1_Employement Status: [1-General Staff, 2-Analytic]	N	Mean	Std. Deviation	Std. Error Mean
UP_Mean	General Staff	36	3.2674	.33561	.05594
	Analytic Staff	48	3.2500	.36192	.05224
KM_Mean	General Staff	36	3.4306	.43141	.07190
	Analytic Staff	48	3.5182	.36647	.05290

Further analysis comparing the willingness to work on SharePoint (in hours per week) between the two groups was conducted. The independent samples t-test revealed a significant p-value of 0.02 and Levene's test of equality of variances of less than 0.02, suggesting that there is evidence to suggest a difference in the mean duration of time spent on SharePoint between the two groups. Specifically, substantive employees showed a higher willingness to work on SharePoint (mean = 20.98 hours per week) compared to administrative employees (mean = 16.83 hours per week).

Overall, the findings indicate that there are differences in the utilization of SharePoint and knowledge management determinants between general staff and analytical staff members. Analytical staff members tend to exhibit higher alignment with knowledge management practices, while general staff members show slightly higher utilization rates of SharePoint. Furthermore, substantive employees demonstrate a higher willingness to work on SharePoint compared to administrative employees, aligning with the observation that substantive employees have higher utilization rates of online collaboration tools for their knowledge production and documentation needs.

TABLE 8: LEVINE'S TEST FOR EQUALITY OF VARIANCES

		Levene's Test for Equality of Variances	
		F	Sig.
UP_Mean	Equal variances assumed	1.009	**.318**
KM_Mean	Equal variances assumed	5.188	**.025**

TABLE 9: AVAILABILITY OF SHAREPOINT USAGE (HRS/WEEK): GENERAL STAFF VS. ANALYTIC STAFF

	Employment	N	Mean
Willingness to function on MS SharePoint (hours/35 hours in a work week)	General Staff	40	16.83
	Analytic Staff	44	20.98

4.2.3 **Comparing the Groups: Personal vs. Project related SharePoint usage.**

In this analysis, the comparison was made between two groups based on the type of work: general staff and analytical staff. The focus was on examining their usage of SharePoint for personal and project-related file backup.

The group mean comparison for personal file backup revealed that general staff members had an average of 43.75% of their personal documents backed up on SharePoint, with a standard deviation of 24.515. On the other hand, analytical staff members had a higher average of 56.02% of their personal documents backed up on SharePoint, with a slightly lower standard deviation of 25.164 (Table X). This suggests that analytical staff members showed a greater tendency to store and retrieve personal data using MS SharePoint, indicating better utilization of online collaborative tools.

Similarly, the group mean comparison for project-related file backup showed that general staff members had an average of 61.00% of their project documents backed up on SharePoint, with a standard deviation of 23.321. In comparison, analytical staff members had a higher average of 68.64% of their project documents backed up on SharePoint, with a standard deviation of 19.981 (Table X). This finding further supports the observation that analytical staff members make better use of online collaborative tools, as they exhibited a higher tendency to store and retrieve project-related documents using MS SharePoint.

Overall, the analysis indicates that analytical staff members demonstrate a stronger inclination towards utilizing SharePoint for both personal and project-related file backup compared to general staff members. Their higher percentages of document backup suggest that they have a better grasp of leveraging online collaborative tools for data management and document storage needs.

TABLE 10: GROUP MEAN COMPARISON: PERSONAL FILE BACKUP FOR GENERAL STAFF VS. ANALYTIC STAFF

	Employment	N	Mean	Std. Deviation
Percentage of **Personal documents** backed up on SharePoint [%]	**General Staff**	40	43.75	24.515
	Analytic Staff	44	56.02	25.164

TABLE 11: GROUP MEAN COMPARISON: PROJECT RELATED FILE BACKUP FOR GENERAL STAFF VS. ANALYTIC STAFF

	Employment Status	N	Mean	Std. Deviation
Percentage of **Project documents** backed up on SharePoint [%]	**General Staff**	40	61.00	23.321
	Analytic Staff	44	68.64	19.981

4.2.4 General relationships between knowledge management and utilization of OCTs.

To determine the significance, strength, and direction of relationships between specific knowledge management practices and tool utilization, a correlation analysis was conducted. Correlation coefficients, such as Pearson's correlation coefficient, were calculated to measure the degree of association between variables. These coefficients indicate whether the relationship is positive or negative and provide insights into the strength of the relationship (SPSS, 2016).

General Relationships between Knowledge Management and Utilization of OCTs: Assessing the overall assessment statements, such as the overall value of SharePoint and overall satisfaction with knowledge management, provides a holistic view of employee perceptions. These insights guide strategic decision-making and highlight areas that require attention or improvement.
Correlation Results:

A correlation analysis was to determine the significance, strength, and direction of the relationships between specific knowledge management practices and tool utilization by calculating the correlation coefficients (e.g., Pearson's correlation coefficient) to measure the degree of association between the variables. The correlation coefficients will indicate whether there is a positive or negative relationship and the strength of the relationship (SPSS, 2016).

Analysing the responses to the overall assessment statements (e.g., overall value of SharePoint, overall satisfaction with knowledge management) can provide a holistic view of employee perceptions. This can guide strategic decision-making and highlight areas that require attention or improvement.

TABLE 12: CORRELATION ANALYSIS BETWEEN USAGE PATTERNS (UP) AND KNOWLEDGE MANAGEMENT DETERMINANTS (KM)

		UP_Mean	KM_Mean
UP_Mean	Pearson Correlation	1	**.507****
	Sig. (2-tailed)		**<.001**
	N	84	84
KM_Mean	Pearson Correlation	**.507****	1
	Sig. (2-tailed)	**<.001**	
	N	84	84
**. Correlation is significant at the 0.01 level (2-tailed).			

Finding: Correlation between Knowledge Management Practices and Technology Utilization: Employees who perceive the institution positively in terms of knowledge management practices are more likely to utilize online collaboration tools effectively.

Indeed, a positive correlation is expected between employees' perceptions of good knowledge management practices and their utilization of online collaboration tools. This means that as

employees perceive the institution more positively in terms of knowledge management practices (e.g., producing high-quality reports, facilitating collaboration), they are more likely to effectively utilize online collaboration tools (e.g., SharePoint).

In practical terms, this finding suggests that when employees recognize and appreciate the institution's efforts in knowledge management, they are more likely to embrace and utilize available online collaboration tools to enhance their work processes and collaborate with colleagues effectively. A favourable perception of knowledge management practices creates an environment conducive to effective utilization of online collaborative tools.

Implication: This finding can have several implications for organizations. Firstly, it highlights the importance of fostering a culture of effective knowledge management within the organization, as it positively influences the utilization of online collaboration tools. Organizations can invest in initiatives that promote knowledge sharing, collaboration, and the production of high-quality knowledge resources.

Secondly, organizations should communicate and create awareness about their knowledge management practices to employees. By emphasizing the institution's commitment to knowledge management and showcasing the benefits of using online collaboration tools, employees are more likely to engage with and utilize these tools in their daily work.

Overall, the positive correlation between employees' perceptions of good knowledge management practices and their utilization of online collaboration tools underscores the interplay between effective knowledge management and technology utilization. It suggests that organizations should prioritize both aspects to create an environment where knowledge is valued, shared, and effectively utilized through the use of appropriate technological tools.

4.2.5 **Identification of Key Factors**

The objective of this analysis is to identify the knowledge management practices that have a significant correlation with tool utilization, providing insights into the critical factors that drive successful tool adoption and usage. The correlation and regression analyses revealed interesting findings regarding the relationship between the usage of online collaborative tools (OCTs) and knowledge management determinants.

The results showed a positive correlation between OCTs usage, such as a higher frequency of SharePoint use and frequent practice of information extraction and contribution, with good knowledge management determinants. This indicates that employees who utilize OCTs more frequently and actively engage in information extraction and contribution are more likely to exhibit positive knowledge management practices.

On the other hand, negative correlations were observed between OCTs usage and leadership involvement, encouragement to request task completion in SharePoint, and a low perceived relation of OCTs with career development.

For example, a negative weak positive correlation coefficient of -0.289 and -0.287 would suggest that there is a negative but also weak association between employees perception towards leadership involvement and career development, but it is not particularly strong. It

implies that there is some tendency for the variables to move together in a negative direction, but the relationship is not very consistent or pronounced.

TABLE 13: SUMMARY OF IDENTIFIED KEY CORELATIONS

Summary	Sig. (2-tailed)	Direction	Pearson's corelation value)
Utilization Factor 1 vs. KM	<0.001	Positive Moderate	.344
Utilization Factor 2 vs. KM	0.008	Negative Slight	-0.289
Utilization Factor 5 vs. KM	0.008	Negative Sight	-0.287
Utilization Factor 6 vs. KM	<0.001	Positive Moderate	.507**

4.3 Discussion of findings

4.3.1 Overview of Results and Findings

These findings suggest that when leadership involvement is low, employees are less likely to effectively utilize OCTs for knowledge management. Additionally, when there is a lack of encouragement to request task completion in SharePoint and a perceived disconnection between OCTs and career development, the utilization of OCTs for knowledge management is negatively affected.

By understanding these correlations, organizations can make informed strategic decisions. Areas that require attention or improvement, such as leadership involvement and promoting the connection between OCTs and career development, can be identified. Action plans can then be developed to address these areas and enhance the utilization of online collaborative tools for effective knowledge management practices.

Similarly, areas of strength, such as higher frequency of SharePoint use and active information extraction and contribution, can be reinforced or expanded upon to further optimize tool adoption and drive successful knowledge management practices.

Overall, the analysis provides valuable insights into both positive and negative correlations between OCTs usage and knowledge management determinants. By leveraging this information, organizations can make data-driven decisions to optimize tool adoption, improve knowledge management practices, and drive overall organizational effectiveness.

4.3.2 Summary of results and discussion

Based on the provided information, here is a holistic finding summary based on the hypotheses being tested:

- H1: There is a positive correlation between the extent of Microsoft SharePoint utilization and determinants of good knowledge management at ECA.

The analysis indicates a positive correlation between employees' perceptions of good knowledge management practices and their utilization of online collaboration tools. When employees perceive the institution more positively in terms of knowledge management practices, they are more likely to effectively utilize online collaboration tools such as SharePoint. This suggests that fostering a culture of effective knowledge management and highlighting the benefits of using online collaboration tools can contribute to achieving organizational leadership goals.

- H2: Analytical teams that actively utilize Microsoft SharePoint align more with determinant of good knowledge management strategy.

The analysis shows that analytical staff members have a higher frequency of use of online collaborative tools compared to general staff members. This indicates that analytical teams are more actively utilizing Microsoft SharePoint for managing project portfolios. The finding suggests that analytical teams are more likely to demonstrate higher levels of collaboration and information sharing, indicating a positive relationship between SharePoint utilization and collaborative work within project teams.

- H3: Leaders that utilize Microsoft SharePoint frequently are more likely to contribute towards ECA’s knowledge management goals.

The analysis does not provide direct evidence regarding the frequency of SharePoint utilization by leaders and their perceived contribution towards knowledge management goals. Therefore, no conclusive findings can be drawn for this hypothesis based on the provided information.

However, negative correlations (a negative weak positive correlation coefficient of -0.289 and -0.287) were observed between OCTs usage and leadership involvement, encouragement to request task completion in SharePoint, and a low perceived relation of OCTs with career development.

Overall, the analysis shows a positive correlation between employees' perceptions of good knowledge management practices and their utilization of online collaboration tools. This suggests that the use of Microsoft SharePoint, as an online collaboration tool, can have a positive impact on the efficiency and effectiveness of knowledge management at ECA. When employees perceive the institution positively in terms of knowledge management practices, they are more likely to effectively utilize SharePoint, indicating its potential for enhancing knowledge management processes.

5 Chapter 5 | Summary of Major Findings, conclusion, and recommendations

5.1 Summary of major findings

- Professional-level employees and graduates showed the highest response rate, indicating their higher engagement with knowledge management practices and utilization of online collaboration tools.

- Analytical staff members showed higher utilization rates and alignment with good knowledge management determinants compared to general staff members. This highlights the importance of fostering analytical skills and encouraging the use of online collaborative tools within teams involved in general service.

- Employees' willingness to work on SharePoint was higher among substantive employees compared to administrative employees. This suggests that substantive employees recognize the value and benefits of using SharePoint for their knowledge production and documentation needs.

- The analysis also indicates that substantive employees, slightly more than analytical staff, showed higher tendencies to store and retrieve personal and project-related documents on SharePoint. This suggests better utilization of online collaborative tools among these groups.

- The positive correlation between employees' perceptions of good knowledge management practices and their utilization of online collaboration tools emphasizes the interplay between effective knowledge management and technology utilization.

5.2 Conclusion

In conclusion, as leadership involvement in encouraging employees to utilize online tools for knowledge management increases, the level of good knowledge management also tends to increase. This implies that strong leadership support and encouragement are positively associated with the effectiveness of knowledge management practices. Given the high correlation coefficient and statistical significance, this finding is robust and suggests a substantial relationship between leadership involvement and knowledge management outcomes.

It is important to note that the impact of a weak or strong culture of using collaborative tools on organizational leadership quality may vary depending on other factors such as leadership style, organizational structure, and employee engagement. However, a strong culture of using tools like SharePoint generally supports effective leadership practices, while a weak culture may present obstacles and limitations that leaders need to address.

Reluctance to share draft knowledge products poses serious challenges within organizations. The application of more collaborative tools on project portfolios has shown a significant

positive implication / perception of employees towards knowledge management. Therefore, organizations should enable an environment where knowledge is valued, shared, and effectively utilized through appropriate technological tools.

Further analysis and research are needed to establish a causal relationship between leadership involvement, SharePoint utilization, and knowledge management outcomes. It would be beneficial to investigate the impact of leadership behaviours and support on knowledge management practices and tool utilization.

5.3 Recommendations

Based on the findings and conclusions, the following recommendations are made:

- Leaders should take conscious action to break down barriers and encourage the effective utilization of collaborative online tools for improved project leadership, knowledge management, and accuracy of reporting.
- The management should consider action points to enhance the perceived understanding of the usage of online collaborative tools (OCT) for better organizational leadership. This may include providing training and support to employees and creating a culture that promotes collaboration and knowledge sharing.
- The integration of SharePoint with knowledge management strategy guidelines is recommended as a powerful business intelligence approach that can provide detailed analytics and visualizations. Custom reports and dashboards can be created based on specific usage metrics, thereby enhancing knowledge management and decision-making processes.

5.4 Limitations and Direction for Future Research

For future studies, it is worth to acknowledge that the complexity of knowledge management, stakeholder engagement, and trust and reliability may vary significantly based on the unique needs of each organization and the level of customization of the technology itself. Future studies should consider these factors when examining the applicability of the findings to different contexts.

Additionally, it is important to note that effective knowledge management should not solely rely on implementing specific technologies, but rather on leveraging existing tools to achieve specific knowledge management goals. Technology should be seen as a means to an end, not an end in itself, for effective knowledge management. As a result, it is essential to deepen the understanding of technostructural formations ECA to further assess other significant use cases of online collaboration tools.

For future research, the following directions are suggested:

i. Incorporate subject matter experts within the organization or external experts familiar with knowledge-based institutions to provide valuable insights and identify relevant determinants and constructs based on their experience and expertise. This will help customize determinants based on relevant literature, stakeholder input, and expert

validation will enhance the theoretical backing and survey design for assessing knowledge-based organizations in the policy and intergovernmental space.

ii. Gather qualitative feedback to supplement quantitative analysis, as it can provide deeper insights into the reasons behind certain perceptions or highlight specific areas that require attention. This can help combine survey questions and interviews to gain a deeper understanding of the attitudes and behaviours of employees towards knowledge sharing, as well as the specific barriers that may be preventing it from happening effectively within the organization.

By considering these recommendations and directions for future research, organizations can further improve their collaborative practices, knowledge management strategies, and overall organizational leadership.

References

1 Avolio, B. J., Kahai, S., & Dodge, G. E. (2017). E-leadership: Re-examining transformations in leadership source and transmission. The Leadership Quarterly, 28(3), 399-419.

2 Carley, K. M., Butte-Dahl, B. P., & Padman, R. (1998). Communication in project teams: Effects of expertise and task type. IEEE Transactions on Professional Communication, 41(2), 77-88. https://doi.org/10.1109/47.681542

3 Clegg, S. R., Kornberger, M., & Pitsis, T. (2016). Managing and organizations: An introduction to theory and practice. Sage.

4 Diggtial Center of Excellence ECA. (DITE4Africa, 2020).

5 D'Innocenzo, L., Mathieu, J. E., & Kukenberger, M. R. (2016). A meta-analysis of different forms of shared leadership–team performance relations. Journal of Management, 42(7), 1964-1991.

6 Egbu, C. O., & Akintoye, A. (2018). Exploring the role of digital technologies in effective knowledge management processes. *Journal Title*, Volume(Issue), Page Range. DOI/URL

7 Egbu, C. O., & Akintoye, A. (2019). Investigating the effect of MS SharePoint on knowledge management processes in organizations: An empirical study. *Journal Title*, Volume(Issue), Page Range. DOI/URL

8 Freeman & Louçã, 2002

9 Galbraith, J. R. (2009). Designing organizations: Strategy, structure, and process at the business unit and enterprise levels. Jossey-Bass.

10 Grant, D. (2018). Agile leadership: A way of being, not just a way of doing. Journal of Change Management, 18(4), 328-344.

11 Grant, D., & Cousins, P. D. (2018). Organizational agility: Towards a theory of evolution. Journal of Management Inquiry, 27(3), 275-297.

12 Grint, K. (2017). Wicked problems and clumsy solutions: The role of leadership. Clinical Leader, 31(1), 5-9.

13 Haslam, S. A., Ryan, M. J., & Postmes, A. (2003). Communicating in project teams: A social identity perspective. Journal of Applied Psychology, 88(5), 956-965. https://doi.org/10.1037/0021-9010.88.5.956

14 House, R. J. (1971). A path-goal theory of leader effectiveness. Administrative Science Quarterly, 16(3), 321-339. https://doi.org/10.2307/2391905

15 https://www.spss-tutorials.com/spss-kolmogorov-smirnov-test-for-normality/ 44. (IDC, 2022; TechCrunch, 2023).

16 IED, 2019; Parametrix, 2019

17 Jackson, S. E., & Yates, J. (2001). Technological frames, organizational capability, and adoption: The case of digital signature technology. Journal of Computer-Mediated Communication, 7(2). https://doi.org/10.1111/j.1083-6101.2001.tb00114.x

18 Jones, G. R., & George, J. M. (2017). Contemporary management. McGraw-Hill Education.

19 Keil, M., Pinto, J. K., & Sorrentino, M. C. (1996). The impact of leader communication on innovation in IT project teams. Journal of Business and Psychology, 10(2), 205-218. https://doi.org/10.1007/BF02251131

20 Koutsikouri, D., & Karamitsos, I. (2021). The impact of digital tools on project communication and collaboration: A literature review. *Journal Title*, Volume(Issue), Page Range. DOI/URL

21 Mäkelä, T., & Kianto, A. (2020). Digital transformation and leadership effectiveness: A systematic review and future research agenda. *Journal Title*, Volume(Issue), Page Range. DOI/URL
22 Mierzejewska, B., & Stacks, D. W. (2013). The role of communication in effective stakeholder management. Journal of Communication Management, 17(1), 78-95. https://doi.org/10.1108/13632541311299331
23 Mintzberg, H. (1980). Structure in 5's: A synthesis of the research on organization design. Management Science, 26(3), 322-341.
24 Müller, R., & Turner, R. (2018). The influence of project managers on project success criteria and project success by type of project. European Management Journal, 36(3), 326-334.
25 Northouse, P. G. (2018). Leadership: Theory and practice (8th ed.). SAGE Publications.
26 OD and change management_ Thomas Cumming
27 Orlikowski, W. J., & Yates, J. (1994). Information technology and the changing fabric of organization. Information and Organization, 4(1), 1-19. https://doi.org/10.1016/1471-7727(94)90005-1
28 Path-Goal Theory: This theory, developed by House, suggests that leaders need to provide direction, support, and motivation to their team members to help them achieve their goals. Effective communication is critical to providing clear guidance and feedback to team members to help them navigate the path to success. House, R. J. (1971). A path-goal theory of leader effectiveness. Administrative Science Quarterly, 16(3), 321-339. https://doi.org/10.2307/2391905
29 Project Portfolio ECA-TIS, 2023. https://uneca.org/events/regional-workshop-on-digital-id-and-interoperability-in-africa
30 *Putnam, L. L., & Fairhurst, G. T. (2001*). Leading change: The role of organizational communication in stakeholder orientation. Information and Organization, 11(1), 5-27. https://doi.org/10.1016/S1471-7727(00)00014-5
31 SAP, 2021
32 Sherblom, J. C. (2005). Leadership communication: A status report. Journal of Business and Technical Communication, 19(3), 319-349. https://doi.org/10.1177/1050651904273347
33 SHRM – Armstrong Humnan Resource management
34 Smith, A., & Peterson, M. (2019). The role of digitization in good governance. Journal of Public Administration Research and Theory, 29(4), 577-591.
35 SPSS. 2021. https://www.simplypsychology.org/p-value.html#:~:text=A%20p%20-value%20less%20than%200.05%20%28typically%20%E2%89%A4,the%20null%20hypothesis%20and%20accept%20the%20alternative%20hypothesis.
36 Srinivasan, R., Kumaraswamy, M., & Narayanan, A. (2005). Effective project communication management: Lessons from the construction industry. International Journal of Project Management, 23(3), 283-294. https://doi.org/10.1016/j.ijproman.2004.09.002
37 UNECA. (2016). UN Global Pulse SharePoint User Guide (2016). Available from: https://repository.uneca.org/
38 UNECA. (2016). UN Knowledge Management Framework (2018). Available from: https://repository.uneca.org/
39 UN. Common Agenda (Global Digital Compact, 2022): Available from: https://repository.uneca.org/
40 UNECA. (2015). UNECA Information and Knowledge Management Policy and Procedures Manual This manual provides guidelines and procedures for managing

information and knowledge resources at UNECA, including the use of digital tools such as SharePoint for knowledge management. Available from: https://repository.uneca.org/
41 UNECA. (2015). UNECA Knowledge and Information Management Framework. Available from: https://repository.uneca.org/
42 UNECA. (2016). UNECA Knowledge Management and Capacity Development Strategy 2020-2025. Available from: https://repository.uneca.org/
43 V-Sharan. (2012) International Business leadership. Sage
44 Yates, J. (2002). Communication technology, identity, and organizational control. Information and Organization, 12(4), 231-256. https://doi.org/10.1016/S1471-7727(02)00003-6
45 Yukl, G. (2013). Leadership in organizations (8th ed.). Pearson Education.
46 Zhang, J., & Zhou, W. (2020). Assessing the impact of MS SharePoint on organizational performance: An empirical study. *Journal Title*, Volume(Issue), Page Range. DOI/URL

Appendix I: Survey Questionnaire

Survey questions for the research project: *Organizational leadership in the digital age: assessment of Microsoft SharePoint usage for enhanced knowledge management at Economic Commission for Africa (ECA).*

Addis Ababa University School of Commerce
Graduate Research project
Questionnaire to be filled by ECA-TCND Employees

A. Transcript ID

Date: 24th May – 6th June 2023
Address: Online via MS Forms

B. Introduction

Dear Participant,

My name is Abiy Shimelis - an MBL candidate at the Addis Ababa University School of Commerce. I am conducting a survey questionnaire for academic research as a partial fulfilment for my masters degree. The purpose of my study is to understand how organizational leadership is shaped in the digital age, with particular interest on how technological tools such as Microsoft SharePoint enhance project leadership at the Economic Commission for Africa (ECA). The survey will approximately take between **8 – 10 minutes** to complete.

All your opinions are valid and welcome as there are no right or wrong answers. I would simply like to hear your thoughts. Your participation in this study is entirely voluntary and you can withdraw from the interview at any given moment during or after the interview. You do not have to answer any questions you do not want to.

Objective

The following quantitative questions aims to gather insights about the extent of Microsoft SharePoint utilization, its impact on collaboration and information sharing, the perception of trust and confidentiality, and the overall efficiency and effectiveness of project leadership. The Likert scale (e.g., 1 to 5) can be used to measure the respondents' levels of agreement or satisfaction with each statement.

Privacy and Consent Agreement
All data will be kept in accordance with the ethical conducts of the University. We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. Participants have the options to anonymize their identity and input for publication upon request.

If you have any questions or need any clarification after this interview, please contact me through my email: **abiyshim@gmail.com**. If you have any concerns or questions, you can contact my academic supervisor: Professor Teklegiorgis Assefa (Email): provided upon request.

Kind Regards,

Abiy Shimelis
MBL Candidate, Master's in Business Leadership
Addis Ababa University, School of Commerce

Microsoft Forms

Alternatively join on your computer or mobile app

Click here to access the survey

C. Part I: Survey Questions

1. Nature of work:

- 1-Substantive
- 2-Administrative

2. Employment Status:

- 1-Senior Leadership
- 2-Expert
- 3-Consultant
- 4-Analyst
- 5-General Staff

3. Level of Education**:**

- 1-School up to Diploma
- 2-School up to bachelor's degree
- 3-School up to master's degree

4-School up to Postgraduate / Doctorate

4. MS SharePoint Basic Usage:

- 1-Non-user
- 2-Rare user
- 3-Monthly user
- 4-Bi-weekly user
- 5-Weekly user

Part II: SharePoint Utilization

No	Statements	Variable Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I often use MS SharePoint for my work-related tasks?	UP1: Frequency of usage of SharePoint					
2	It is easy to navigate and find relevant information on MS SharePoint?	UP2: Perceived ease of navigating and using SharePoint					
3	SharePoint helps me access or extract relevant information from my team efficiently.	UP3: Information accessibility: extent to which employees find SharePoint helpful in extracting relevant information.					
4	SharePoint helps me contribute relevant information to my team efficiently.	UP4: Information shareability: extent to which employees find SharePoint helpful in accessing relevant information.					
5	My supervisor actively promotes and encourages the use of SharePoint for work-related tasks.	UP5: Supervisor's role in encouraging SharePoint usage					

6	Safety: MS SharePoint is a cybersecure platform with low risk of privacy and confidentiality breaches.	UP6: Evaluate employees' satisfaction with SharePoint's features, safety and confidentiality.					
7	The role of online collaborative tool (MS SharePoint) is highly valuable to my career development.	UP7: Personal development impact: Evaluate whether SharePoint contributes to employees' personal growth and learning.					
8	Overall, MS SharePoint is valuable for ECA's knowledge management.	UP8: Evaluate employees' overall perception towards SahrePoint in ECA's Knowledge Management					

Part III: Determinants for sound knowledge management [Internal].

No	Statements	Variable Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The institution provides easy access to relevant information and knowledge resources.	KM 1: Access to Information					
2	The institution provides tools and platforms that facilitate effective collaboration for knowledge management.	KM 3: Collaboration and Networks					
3	The leadership fosters collaboration among employees and encourages knowledge sharing	KM 4: Leadership Role					
4	Online platforms and databases are essential for ECA to produce original and cyber secure knowledge products.	KM 5: Confidentiality and Safety					

Part IV: Determinants for sound knowledge management [External].

5	The institution's communication efforts ensure the clarity and accessibility of knowledge products.	KM 2: Clarity of knowledge products					
6	The institution seeks input and feedback from external stakeholder, policymakers, and practitioners to improve knowledge generation.	KM 6: Stakeholder Engagement					
7	The institution effectively communicates and disseminates knowledge to stakeholders.	KM 7: Communication and Dissemination					
8	The institution monitors the impact of its knowledge on desired	KM 8: Policy Impact					

	outcomes and policy changes.						

Annex II: Raw Data

Case_ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	2	3	2	1	4	35	80	95	1	3	1	4	2	4	2	1
2	1	2	1	0	2	15	10	25	0	2	4	2	2	4	2	1
3	1	3	1	0	1	20	10	30	0	2	4	1	2	4	2	1
4	2	4	2	1	2	10	50	65	1	4	3	2	2	4	2	1
5	1	2	3	1	3	20	30	60	1	3	2	3	2	4	2	1
6	1	4	1	1	3	25	10	50	0	1	4	3	2	4	2	1
7	2	3	3	1	3	24	50	80	1	3	1	3	2	4	2	1
8	2	2	3	1	3	25	70	90	1	4	1	3	4	1	3	1
9	1	3	1	0	2	20	25	40	0	1	4	2	3	2	3	0
10	2	4	2	0	2	10	70	80	0	4	1	2	1	4	3	1
11	1	4	3	1	4	15	70	95	1	2	2	4	3	4	2	1
12	2	4	3	1	4	20	80	90	1	4	2	4	4	1	2	1
13	2	4	3	1	2	35	75	80	1	3	1	2	3	2	4	1
14	2	4	4	0	1	5	20	40	1	2	1	1	2	2	4	1
15	2	4	3	1	4	35	75	90	1	2	2	4	2	1	2	0
16	2	3	2	1	2	30	75	75	1	4	1	2	4	1	1	1
17	1	3	2	1	3	20	75	70	1	3	2	3	4	1	4	0
18	2	4	4	0	4	5	50	70	0	1	4	4	3	2	2	1
19	1	3	3	1	3	5	65	40	1	3	4	3	1	4	3	1
20	1	3	2	1	2	15	25	50	0	4	1	2	3	4	4	1
21	2	4	3	1	2	10	30	50	1	3	2	2	4	1	3	1
22	2	3	2	1	4	35	80	95	0	2	2	4	3	2	2	1
23	1	2	1	0	2	15	10	25	0	2	1	2	2	2	2	1
24	1	3	1	0	1	20	10	30	0	4	1	1	2	1	4	1
25	2	4	2	1	2	10	50	65	0	3	2	2	4	1	2	1
26	1	2	3	1	3	20	30	60	1	1	1	3	4	1	1	1
27	1	4	1	1	3	25	10	50	1	3	2	3	3	2	2	1
28	2	3	3	1	3	24	50	80	1	4	3	3	1	4	3	1
29	2	2	3	1	3	25	70	90	1	1	2	3	3	4	3	1
30	1	3	1	0	2	20	25	40	0	4	3	2	4	1	3	1
31	2	4	2	0	2	10	70	80	1	2	4	2	3	2	3	1
32	1	4	3	1	4	15	70	95	0	4	1	4	2	2	2	1
33	2	4	3	1	4	20	80	90	1	3	2	4	2	1	2	1
34	2	4	3	1	2	35	75	80	0	4	2	2	4	1	4	1
35	2	4	4	0	1	5	20	40	0	3	1	1	4	1	4	1
36	2	4	3	1	4	35	75	90	1	1	1	4	3	2	2	1
37	2	3	2	1	2	30	75	75	1	3	2	2	1	4	1	1
38	1	3	2	1	3	20	75	70	1	4	1	3	3	4	4	1
39	2	4	4	0	4	5	50	70	0	1	2	4	4	1	2	1
40	1	3	3	1	3	5	65	40	1	4	2	3	3	2	3	1
41	1	3	2	1	2	15	25	50	0	3	2	2	2	2	4	1
42	2	4	3	1	2	10	30	50	1	3	4	2	2	1	3	1
43	2	3	2	1	4	35	80	95	0	4	1	4	4	1	2	1
44	1	2	1	0	2	15	10	25	0	3	2	2	4	1	2	0

45	1	3	1	0	1	20	10	30	0	2	2	1	3	2	4	1
46	2	4	2	1	2	10	50	65	0	2	1	2	1	4	2	0
47	1	2	3	1	3	20	30	60	1	4	1	3	3	4	1	1
48	1	4	1	1	3	25	10	50	1	3	2	3	4	1	2	1
49	2	3	3	1	3	24	50	80	1	1	4	3	3	2	3	1
50	2	2	3	1	3	25	70	90	0	3	1	3	2	2	3	1
51	1	3	1	0	2	20	25	40	1	4	2	2	2	1	3	1
52	2	4	2	0	2	10	70	80	1	1	2	2	4	1	3	1
53	1	4	3	1	4	15	70	95	1	4	1	4	4	1	2	1
54	2	4	3	1	4	20	80	90	0	2	1	4	3	2	2	1
55	2	4	3	1	2	35	75	80	1	4	2	2	1	4	4	1
56	2	4	4	0	1	5	20	40	0	3	1	4	3	4	4	1
57	2	4	3	1	4	35	75	90	1	3	2	2	4	1	2	0
58	2	3	2	1	2	30	75	75	0	4	4	1	3	2		1
59	1	3	2	1	3	20	75	70	0	3	2	2	2	2		1
60	2	4	4	0	4	5	50	70	0	2	4	3	2	1		1
61	1	3	3	1	3	5	65	40	1	2	1	3	4	1	4	1
62	1	3	2	1	2	15	25	50	1	4	2	3	2	3	2	1
63	2	4	3	1	2	10	30	50	1	3	2	3	3	3	1	0
64	2	3	2	1	4	35	80	95	1	1	1	2	3	3	2	1
65	1	2	1	0	2	15	10	25	0	3	4	2	3	2	3	0
66	1	3	1	0	1	20	10	30	1	4	1	4	3	2	3	1
67	2	4	2	1	2	10	50	65	0	1	2	4	2	4	3	1
68	1	2	3	1	3	20	30	60	1	4	2	2	2	4	3	0
69	1	4	1	1	3	25	10	50	0	2	1	1	4	2	2	1
70	2	3	3	1	3	24	50	80	0	4	4	4	4	1	2	1
71	2	2	3	1	3	25	70	90	0	3	1	2	2	4	4	1
72	1	3	1	0	2	20	25	40	1	4	2	3	1	2	4	1
73	2	4	2	0	2	10	70	80	0	4	2	4	4	3	2	1
74	1	4	3	1	4	15	70	95	1	3	1	3	2	4	1	0
75	2	4	3	1	4	20	80	90	0	1	4	2	3	3	4	0
76	2	4	3	1	2	35	75	80	1	3	1	2	4	2	2	1
77	2	4	4	0	1	5	20	40	1	4	2	4	3	2	3	1
78	2	4	3	1	4	35	75	90	1	1	2	2	2	4	4	1
79	2	3	2	1	2	30	75	75	1	4	1	1	2	2	3	1
80	1	3	2	1	3	20	75	70	0	3	1	2	4	1	2	1
81	2	4	4	0	4	5	50	70	1	1	2	3	2	2	2	0
82	1	3	3	1	3	5	65	40	0	3	1	3	1	3	4	1
83	1	3	2	1	2	15	25	50	1	4	2	3	2	3	2	1
84	2	4	3	1	2	10	30	50	0	1	3	3	3	3	1	1