

ENHANCING JOB ROTATION ONBOARDING IN THE MALAYSIAN PUBLIC SECTOR: A NotebookLM Large Language Model Case Study

MUHAMMAD SUKRI BIN RAMLI
Asia School of Business
Kuala Lumpur, Malaysia
Email: m.binramli@sloan.mit.edu

Abstract

Mandatory job rotations are a cornerstone of the Malaysian civil service, designed to enhance governance, reduce integrity risks, and foster organizational agility. However, these rotations present significant onboarding challenges, requiring employees to rapidly adapt to diverse roles and complex responsibilities, particularly in 'hot seat' and high-risk-to-corruption positions. This study focuses on the Jabatan Kastam Diraja Malaysia (JKDM), where the need for efficient onboarding is heightened by the structured tenure of job rotations. The necessity to quickly acclimate to new roles within a defined period, especially in sensitive positions, underscores the urgency of effective onboarding strategies. To address the inherent onboarding complexities, particularly in navigating intricate customs regulations, this research proposes leveraging Large Language Models (LLMs), with a specific focus on NotebookLM. NotebookLM's ability to ingest and summarize extensive regulatory documents, coupled with features like interactive training modules and AI-powered Q&A, offers a dynamic, personalized learning experience. This approach aims to surpass traditional training limitations, streamlining onboarding, enhancing knowledge transfer, and boosting productivity within JKDM. The study outlines an implementation plan, including a pilot program and department-wide rollout, with expected outcomes of improved onboarding efficiency, enhanced knowledge sharing, and increased operational effectiveness, ultimately contributing to a more agile and integrity-driven public service.

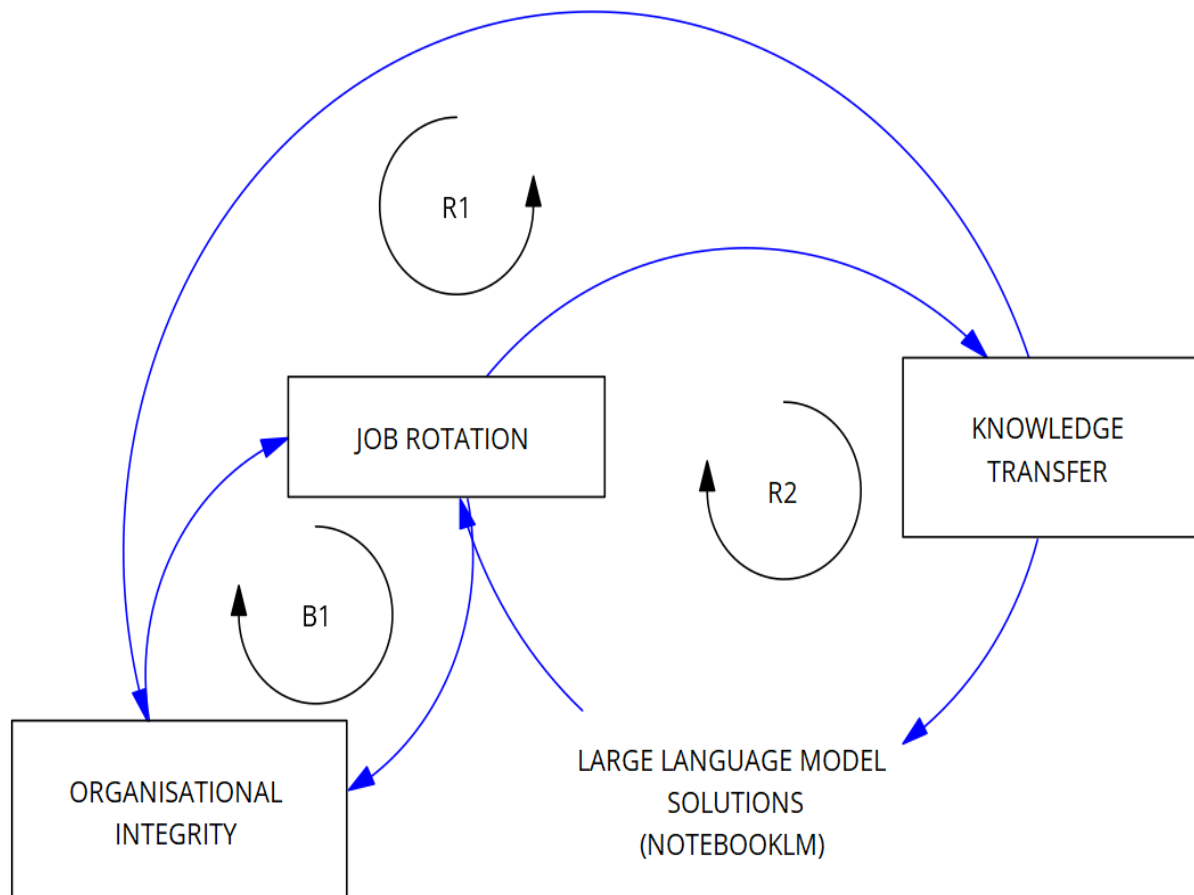


Figure 1: Causal-Loop Relationship Between Job Rotation, Knowledge Transfer and Organizational Integrity

1. Introduction

The Malaysian public sector plays a crucial role in the country's economy and governance, employing a significant portion of the workforce and providing essential services to citizens (Malaysian Administrative Modernization and Management Planning Unit, 2010). As of 2024, the public sector employed approximately 1.6 million civil servants, highlighting its size and importance in Malaysia's socio-economic development (Prime Minister's Office of Malaysia, 2024). The sector encompasses a wide range of services, including healthcare, education, infrastructure development, and social welfare programs, all of which are vital for the well-being of Malaysian citizens (Economic Planning Unit, 2010).

Within this large and complex sector, job rotation is a common practice aimed at enhancing employee development, facilitating knowledge sharing, and enabling cross-training across different government agencies and departments (Bauer & Erdogan, 2011; Campion, Cheraskin, & Stevens, 1994). The Public Service Department (JPA) provides a general framework for job rotation, emphasizing its role in talent management and career development (Jabatan Perkhidmatan Awam, 2015). The frequency, duration, and selection process for job rotations vary depending on the specific agency and position, allowing for flexibility and customization based on organization needs and circumstances (Jabatan Perkhidmatan Awam, 2015). This approach to talent management is designed to foster a versatile and well-rounded workforce capable of adapting to the evolving needs of the public sector (Jabatan Perkhidmatan Awam, 2018).

Despite the benefits of job rotation, civil servants often encounter challenges during the onboarding process, particularly when adapting to new roles, responsibilities, and organizational cultures (Bauer & Erdogan, 2011). These challenges can hinder their ability to quickly integrate and contribute effectively to their new positions (Noe et al., 2017). One major challenge is information overload, where the sheer volume of documents, regulations, and procedures to learn can be overwhelming, especially when transitioning to a new agency or department with its own unique set of rules and practices (Noe et al., 2017). This overload can lead to confusion and frustration, slowing down the onboarding process and impacting employee performance (Bauer & Erdogan, 2011).

Furthermore, varied procedures across different agencies and departments pose a significant hurdle for employees undergoing job rotation (Noe et al., 2017). Each agency may have its own specific workflows, documentation styles, and approval processes, requiring employees to constantly adjust and relearn how to perform tasks (Noe et al., 2017). This inconsistency can lead to delays, errors, and a sense of disorientation, particularly for those new to the agency or department (Bauer & Erdogan, 2011). In addition to procedural variations, knowledge gaps can also present challenges during onboarding (Noe et al., 2017). Identifying and addressing these gaps efficiently can be difficult, especially when transitioning to a role that requires specialized expertise or knowledge of specific regulations and policies (Campion et al., 1994).

The limited time available for onboarding further exacerbates these challenges. Time constraints due to the demands of public service delivery often mean that employees have to quickly get up to speed in their new roles (Noe et al., 2017). This pressure can limit the depth of training and support provided, potentially leaving employees feeling unprepared and hindering their ability to perform their duties effectively (Bauer & Erdogan, 2011). Finally, inconsistent onboarding experiences across agencies and departments can create disparities in employee preparedness and performance (Noe et al., 2017). Some agencies may have well-structured onboarding programs with comprehensive training and support, while others may have more ad hoc approaches, leading to variations in the quality and effectiveness of the onboarding process (Bauer & Erdogan, 2011). This inconsistency can affect employee morale, productivity, and overall job satisfaction (Noe et al., 2017).

This research focuses specifically on the JKDM, also known as the Royal Malaysian Customs Department, as a case study to demonstrate the potential of NotebookLM in addressing the challenges of job rotation onboarding. JKDM is a particularly relevant case for several reasons. First, JKDM officers operate in a high-risk environment where corruption is a significant concern. The mandatory rotation of officers, especially those in "hot seat" and sensitive positions, necessitates rapid and effective onboarding to ensure compliance and minimize vulnerabilities. Second, JKDM deals with a vast and complex body of customs regulations, requiring officers to possess a thorough understanding of various laws, tariffs, and procedures. This complexity can be overwhelming for officers transitioning to different roles within JKDM, especially under the time constraints of structured tenure. Third, JKDM has a wide range of roles and responsibilities, from enforcement and valuation to investigation and intelligence. Each role demands specialized knowledge and skills, and officers undergoing job rotation must quickly adapt to these new demands. Finally, the trade environment is dynamic and constantly evolving, with frequent updates and amendments to customs regulations and international trade agreements. This necessitates continuous learning and adaptation for JKDM officers to stay abreast of the latest developments. The challenges faced by JKDM officers during job rotation onboarding are representative of the broader challenges faced by civil servants across various agencies and departments in the Malaysian public sector. Therefore, the successful implementation of Large Language Model within JKDM can serve as a model for other agencies seeking to improve their onboarding processes, enhance knowledge transfer, and promote integrity within their workforce.

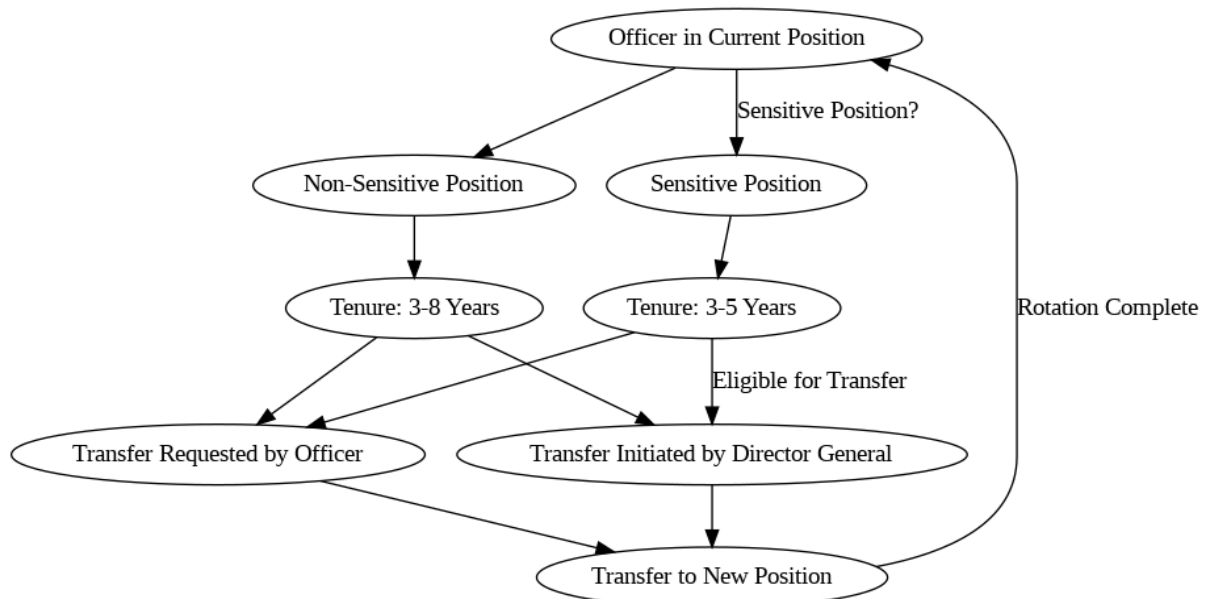


Figure 2: Flowchart of Job Rotation Program in Civil Service

2. Problem Statement

The challenges faced by Malaysian civil servants during job rotation onboarding are multifaceted and deeply ingrained in the structure and practices of the public sector. One prominent challenge is the varied agency procedures across different government bodies (Noe et al., 2017). For instance, document formats, approval processes, and communication protocols can differ significantly between agencies, creating confusion and hindering smooth transitions for employees (Noe et al., 2017). This lack of standardization necessitates that employees relearn processes with each rotation, leading to inefficiencies and potential delays in service delivery (Bauer & Erdogan, 2011).

Another significant issue is documentation accessibility. Currently, essential documents like regulations, circulars, and guidelines are often scattered across various platforms, including physical files, internal websites, and shared drives (Ismail & Ahmad, 2012; Yusoff & Hassan, 2010). This fragmented system makes it difficult for employees to locate the necessary information quickly and efficiently, especially during onboarding when they are unfamiliar with the agency's knowledge repositories (Awang & Ahmad, 2009). Moreover, outdated versions of documents may persist, leading to potential errors and inconsistencies in work processes (Davenport & Prusak, 1998).

Traditional onboarding methods often prove ineffective in ensuring knowledge retention. Passive learning approaches, such as lectures or reading materials, may not fully engage employees or provide opportunities for practical application of knowledge (Chen et al., 2021). This can result in superficial understanding and difficulty in applying learned information to real-world scenarios (Hwang et al., 2020). Furthermore, limited opportunities for interaction and knowledge sharing can hinder the development of a deeper understanding and the ability to retain information long-term (Nonaka & Takeuchi, 1995).

Time constraints pose a significant obstacle to effective onboarding. The demanding nature of public service delivery often leaves limited time for comprehensive training and knowledge transfer (Noe et al., 2017). Employees are expected to quickly integrate into their new roles and contribute to the agency's operations, leaving little room for in-depth learning and development (Bauer & Erdogan, 2011). This pressure to perform can lead to a superficial understanding of job responsibilities and a reliance on "learning on the job," which may not always be the most efficient or effective approach (Campion et al., 1994).

Standardizing best practices across different agencies is crucial for improving overall public sector performance, but it presents significant challenges (Andriopoulos & Lowe, 2017; Gil-Garcia & Pardo, 2017). Communication barriers, lack of a centralized platform for knowledge sharing, and varying levels of commitment to adopting best practices can hinder their dissemination and implementation (OECD, 2019). This can lead to inconsistencies in service delivery and hinder the public sector's ability to adapt and improve its operations (Dunleavy et al., 2006).

Finally, the need to identify level of digital literacy among some government servants poses a challenge for implementing technology-driven solutions like Large Language Model. While the Malaysian government is actively promoting digital transformation, the level of digital literacy varies across individuals and agencies (Ting, Osman, & Ting, 2016). This disparity can create a digital divide, where some employees may struggle to utilize the full potential of digital tools, hindering the effectiveness of technology-driven initiatives (Said, Alam, & Zainuddin, 2016).

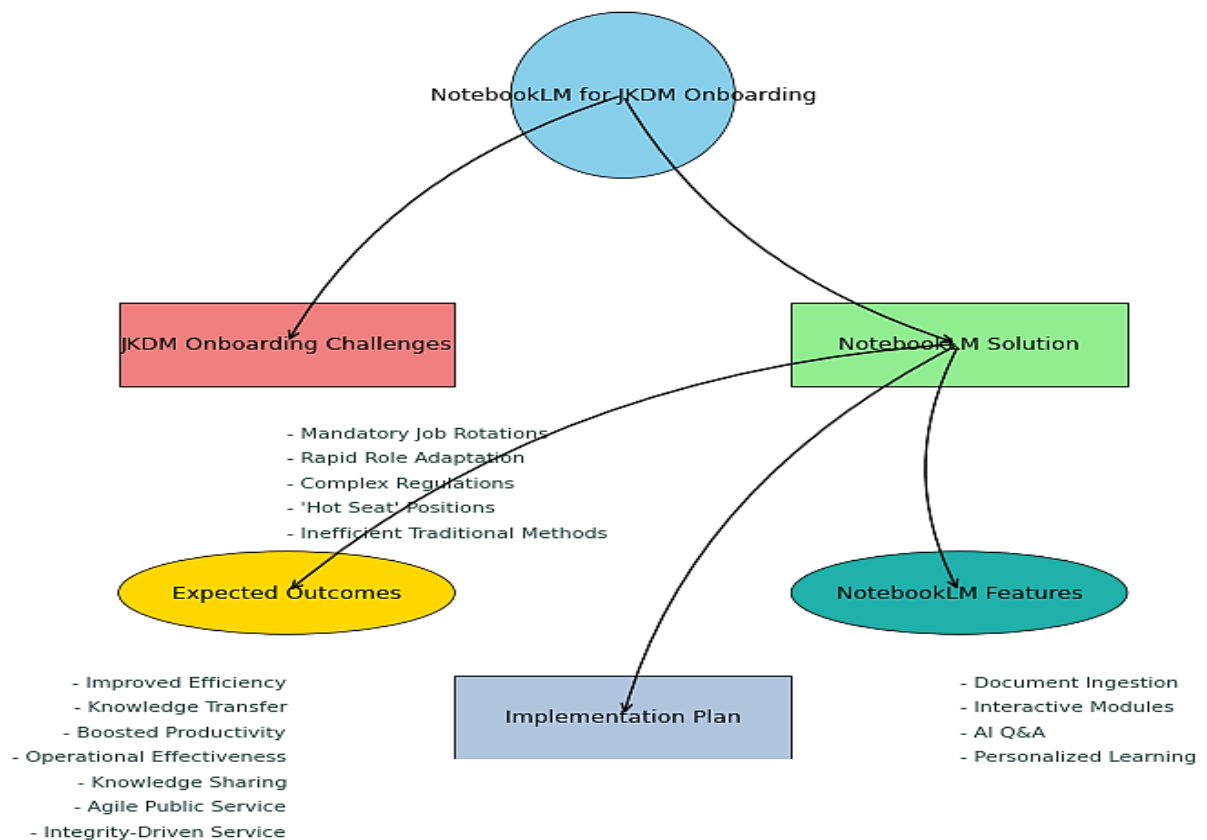


Figure 3: Visualization of Onboarding Process with Large Language Model

Within the broader context of the Malaysian public sector, the JKDM faces unique challenges related to job rotation onboarding. One of the most significant challenges is the sheer volume and complexity of customs regulations (Zakaria & Ahmad, 2021). JKDM officers must be well-versed in a vast array of laws, tariffs, and procedures, including the Customs Act 1967, the Excise Act 1976, Sales Tax Act 2018, Service Tax Act 2018, and various Free Trade Agreements (FTAs). These regulations are often complex and subject to frequent amendments, making it challenging for officers to quickly grasp and apply them in their daily work (Yusoff & Hassan, 2019). For example, the classification of goods for import and export duties can be highly intricate, requiring officers to have a deep understanding of tariff codes and their interpretations (Rahman & Ahmad, 2017).

Another challenge stems from the diverse roles within JKDM. The department comprises various units and divisions, each with specific responsibilities and expertise. For example, the Enforcement Division focuses on preventing smuggling and other customs offences, while the Valuation and Classification Division determines the value and tariff classification of goods. Each role requires a distinct set of knowledge and skills, making it challenging for officers to transition seamlessly between different areas of the department (Yusoff & Hassan, 2019). An officer moving from enforcement to valuation, for instance, would need to acquire new knowledge on valuation methods, customs procedures, and relevant legislation (Zakaria & Ahmad, 2021).

Furthermore, keeping up-to-date with changes in customs regulations and international trade poses a significant challenge for JKDM (Omar & Hassan, 2019). The dynamic nature of global trade means that customs procedures, tariffs, and agreements are constantly evolving (Al-Shboul, Abdallah, & Abdallah, 2021). JKDM officers need to be aware of these changes to ensure compliance and effective enforcement of regulations (Nawi & Salleh, 2021). This requires continuous learning and access to updated information, which can be challenging to achieve through traditional training methods and knowledge dissemination channels (Hussin & Said, 2020). For example, changes in FTA regulations or the introduction of new technologies or application for customs processes require officers to update their knowledge and skills promptly (Sidek & Abdallah, 2018).

This research explores the challenges faced by Malaysian civil servants during job rotation onboarding, particularly the information overload and procedural variations across agencies. The research uses the JKDM as a case study, highlighting the complexities of customs regulations and the diverse roles within the department. The proposed solution is NotebookLM, a large language model (LLM), to create a centralized knowledge repository, interactive training modules, and AI-powered

3. Proposed Solution

Addressing the complexities of job rotation onboarding within the Malaysian public sector, and particularly the specific demands of JKDM, a technology-driven solution can offer significant improvements. Leveraging advanced AI capabilities presents a promising approach to enhance how government servants acquire and utilize knowledge in new roles, aiming to foster a more efficient, engaging, and ultimately more effective onboarding process across the Malaysian public sector. One such platform that embodies this approach is NotebookLM.

A core onboarding hurdle remains the sheer volume of information new employees must absorb, often dispersed across disparate systems and formats. Establishing a centralized knowledge repository can directly tackle this challenge. This repository, as implemented in platforms like NotebookLM, digitizes and organizes crucial documents – circulars, regulations, guidelines, and more – potentially eliminating the need for time-consuming searches across multiple platforms. By ensuring streamlined access to current document versions, such systems can contribute to improved operational efficiency and accuracy. This centralized digital approach can deliver several advantages: employees may gain more rapid and effortless information access anytime, anywhere. Furthermore, robust search functionality, a feature of platforms like NotebookLM, enables efficient location of specific details within the knowledge base, while automated change tracking can help ensure users are working with updated information. Digitization may also reduce reliance on physical documents, potentially conserving valuable space and resources.

Technology can also foster a culture of collaborative learning and knowledge sharing by providing tools and features that enable employees to connect and learn from each other. Platforms like NotebookLM offer features such as shared notebooks for collaborative editing and feedback. Collaborative knowledge sharing can offer advantages. Employees may learn from peer experiences and expertise, potentially creating a supportive learning environment. Organizational knowledge and best practices can be more readily shared, contributing to continuous improvement. Collaborative learning initiatives can support the development of teamwork and communication skills.

Leveraging AI capabilities, technology solutions can establish Q&A systems, offering on-demand support and guidance throughout the onboarding journey. Such intelligent systems, as demonstrable in platforms like NotebookLM, may interpret natural language questions and deliver relevant answers to frequently asked queries. This type of AI-powered Q&A system can yield several potential benefits: employees may receive faster answers, potentially reducing delays in seeking assistance. By providing readily available support, the system could free up senior officers to focus on other responsibilities. Furthermore, streamlined information access may contribute to a more efficient onboarding process, enhancing overall efficiency.

Understanding that digital literacy levels may vary across the government workforce, technology can be utilized to deliver targeted digital literacy training. This training, potentially facilitated by platforms like NotebookLM, can include tutorials on basic computer skills, guides on utilizing relevant digital tools, and assessments to evaluate digital proficiency. By providing this focused training, technology can contribute to bridging the digital divide. This may help ensure that employees possess the necessary digital skills for effective platform and digital tool utilization. Focused training may support digital inclusion, fostering a more equitable workplace where every employee can actively participate and contribute, irrespective of their digital literacy level. Moreover, it could build digital confidence, encouraging employees to embrace and effectively leverage technology in their daily work.

To promote inclusivity and broad accessibility, technology solutions can incorporate multilingual support. Offering a Bahasa Melayu interface, as seen in platforms like NotebookLM, is one example. This vital multilingual feature can allow employees to engage with the platform in their preferred language, potentially enhancing comfort and comprehension. Crucially, multilingual approaches can support inclusivity, enabling personnel, regardless of linguistic preference, to more easily access and benefit from the platform. A Bahasa Melayu interface may increase accessibility for employees less proficient in English and reflect a commitment to respecting the diverse linguistic landscape of the Malaysian public sector.

To address JKDM's specific operational needs, technology solutions can be designed for integration with the department's existing digital infrastructure. Integration with iPatuh, JKDM's internal platform, serves as a prime example. By connecting iPatuh and a platform like NotebookLM via integration method for example API integration, data connectors, JKDM officers could gain unified access to critical information within a single interface. This streamlined access to vital resources may help ensure officers more consistently work with current regulations and procedures, potentially enhancing efficiency and mitigating risks associated with outdated information and potential errors. This centralized knowledge repository could contribute to greater consistency in decision-making, potentially equipping officers to more effectively navigate customs operations.

This comprehensive approach to technology implementation within JKDM suggests its potential to address department-specific challenges and enhance workforce capabilities. By offering tailored features and leveraging AI, platforms like NotebookLM can contribute to improving the onboarding experience, potentially empowering JKDM officers and supporting a more efficient and effective customs administration.

4. Proposed Implementation Process

The Malaysian government's existing subscription to Google Workspace provides a strong foundation for the seamless implementation of NotebookLM Plus. This integration offers several benefits. Government servants are already accustomed to navigating and utilizing various Google Workspace applications, such as Gmail, Google Drive, and Google Docs. This existing familiarity with the Google Workspace environment can facilitate a smoother transition and faster adoption of NotebookLM Plus, reducing potential resistance to change and encouraging active platform use. Google Workspace is known for its stringent security measures designed to protect sensitive data. By integrating NotebookLM Plus with this existing infrastructure, the government can leverage these robust security measures to safeguard confidential information and maintain data privacy, which is crucial for maintaining public trust and ensuring compliance with data protection regulations. Lastly, utilizing the existing Google Workspace infrastructure optimizes resource allocation and potentially reduces implementation costs. This cost-effectiveness stems from avoiding the need to invest in new infrastructure or software, allowing for a more efficient and economical implementation process, which is particularly important in the context of limited public sector budgets.

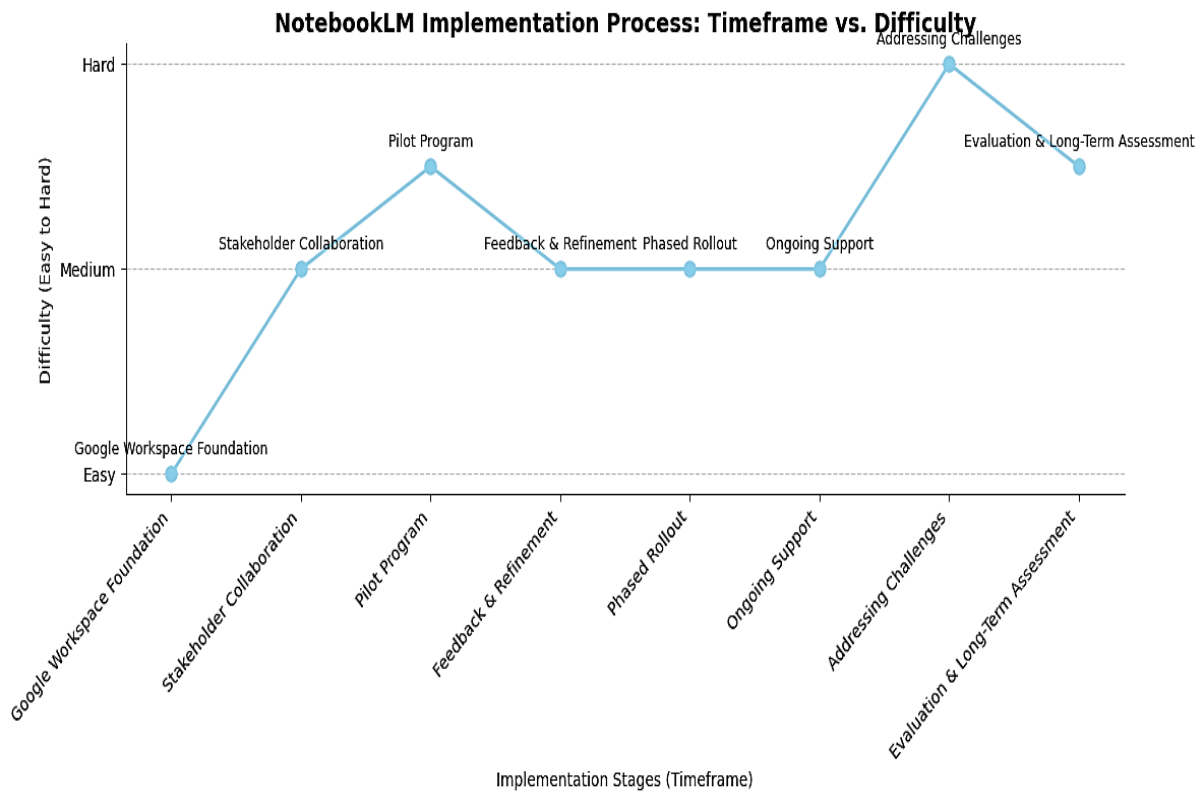


Figure 5: Implementation Process of Job Rotation Powered by Large Language Model

Successful implementation of NotebookLM Plus necessitates strategic collaboration with key stakeholders, including MAMPU, JKDM, Agency IT Departments, and Google Workspace Administrators. It is suggested that MAMPU, as the central agency for public sector modernization, provide overarching guidance to ensure alignment with national digital transformation policies and strategies. Their involvement is deemed crucial for ensuring the project contributes to broader goals of enhancing public sector efficiency and effectiveness. JKDM, possessing specialized knowledge and experience in customs regulations and procedures, should contribute customs-specific expertise and content to tailor NotebookLM Plus to their unique requirements. Their input is vital to ensure the platform effectively addresses the specific challenges faced by JKDM officers during job rotation onboarding. Agency IT departments are expected to play a critical role in the technical setup, integration with existing systems, and ongoing support for NotebookLM Plus. Their expertise is essential for ensuring the smooth operation and maintenance of the platform within each agency's IT infrastructure. Google Workspace administrators should manage user access and permissions within the Google Workspace environment, ensuring data security and privacy. Their role is crucial for controlling access to sensitive information and preventing unauthorized use of the platform.

It is recommended that a pilot program be conducted prior to a full-scale rollout to assess the feasibility and effectiveness of NotebookLM Plus in a real-world setting. Specific agencies and departments, including JKDM units, should be selected for the pilot program based on their diverse needs and challenges. The selection process should aim to include a representative sample of agencies and departments to ensure the pilot program captures a wide range of user experiences and

potential challenges. The pilot program should have clearly defined objectives, such as assessing the usability of NotebookLM Plus, gathering user feedback, and identifying potential challenges. These objectives should guide the data collection and analysis process during the pilot phase. The pilot phase should have a specified duration to allow sufficient time for data collection and analysis. The duration should be determined based on the scope of the pilot program and the complexity of the implementation process. Data should be collected through various methods, including surveys, interviews, and usage analytics, to evaluate the effectiveness and user experience of NotebookLM Plus. This data should provide valuable insights into the strengths and weaknesses of the platform and inform any necessary adjustments before the full-scale rollout. Feedback from the pilot program will be crucial for refining NotebookLM Plus and ensuring that it meets the needs of its users. Feedback will be used to enhance the platform's usability and functionality, ensuring it meets the needs of government servants. This may involve improving the user interface, adding new features, or modifying existing functionalities based on user suggestions and preferences. Learning modules and content will be refined based on user feedback to improve their relevance and effectiveness. This may involve updating content, adding new modules, or modifying existing ones to better address the specific learning needs of government servants. Any technical or logistical challenges identified during the pilot program will be addressed before the department-wide rollout. This may involve resolving technical issues, improving training materials, or addressing any logistical barriers to adoption.

One challenge is the potential resistance to change among government servants. For instance, some employees may be hesitant to adopt new technologies due to a perceived lack of technical skills or concerns about job security. To mitigate this, comprehensive training and transparent communication are crucial. Training should be hands-on and demonstrate the platform's benefits, such as how NotebookLM Plus can simplify tasks and improve efficiency. Transparent communication should address concerns openly, perhaps through town hall meetings or online forums where employees can ask questions and receive honest answers. A phased rollout can allow employees to adapt gradually, starting with a small group of early adopters who can then champion the platform to their colleagues.

Another challenge is the varying levels of digital literacy among government servants. A recent survey might reveal that a significant percentage of employees lack confidence in using digital tools or have limited experience with online learning platforms. To address this, digital literacy assessments and targeted training programs should be implemented. These programs could focus on building essential digital skills, such as navigating online interfaces, using search functions effectively, and collaborating on shared documents. Ongoing support through help desks, online resources, and community forums can aid employees who encounter difficulties or have further questions. Designing NotebookLM with a user-friendly interface, incorporating clear instructions and intuitive navigation, can also accommodate varying digital literacy levels.

Data privacy concerns are also important to address. A thorough review of existing data privacy policies might reveal potential vulnerabilities related to the storage and access of sensitive information within NotebookLM Plus. Safeguards like data encryption and access controls should be implemented to prevent unauthorized access and ensure compliance with regulations like the Personal Data Protection Act 2010. Data privacy policies should be clearly communicated to foster trust, perhaps through easily accessible online documentation or mandatory training modules. Compliance with relevant regulations is essential to maintain public confidence and avoid potential legal issues.

5. Result & Impact

The implementation of NotebookLM Plus is expected to yield significant positive outcomes for the Malaysian government. This includes improved onboarding efficiency, as NotebookLM Plus can streamline the onboarding process, reducing the time it takes for government servants to become proficient in their new roles. This will lead to faster integration and minimize disruptions to service delivery during job rotations (Noe et al., 2017). The platform will facilitate knowledge sharing and collaboration among government servants, breaking down information silos and promoting a culture of continuous learning. This will lead to a more knowledgeable and adaptable workforce, better equipped to handle the challenges of a dynamic public sector environment (Dunleavy et al., 2006).

Furthermore, NotebookLM Plus is expected to increase productivity by providing quick and easy access to information and resources, empowering government servants to work more efficiently and effectively. This will lead to increased productivity and improved service delivery to citizens (Davenport & Prusak, 1998). The use of NotebookLM Plus can potentially reduce the need for extensive in-person training sessions, leading to cost savings for the government. The platform's self-paced learning modules and AI-powered assistance can supplement traditional training methods, making them more efficient and cost-effective (Jabatan Perkhidmatan Awam, 2022). A more efficient and effective onboarding process can lead to increased employee satisfaction and engagement. By providing the necessary tools and resources for success, NotebookLM Plus can contribute to a more positive work environment and improve employee morale.

In addition to the general benefits for the Malaysian government, the implementation of NotebookLM Plus within JKDM is expected to yield specific benefits. NotebookLM Plus will provide JKDM officers with a comprehensive and interactive knowledge base of customs regulations, tariffs, and procedures. This will improve their understanding of complex regulations and ensure compliance with the latest updates and amendments. The platform's personalized learning paths will enable JKDM officers to quickly acquire the knowledge and skills required for different roles within the department. This will

facilitate smoother transitions between roles and improve their ability to contribute effectively to various areas of customs operations.

Moreover, NotebookLM Plus will enable JKDM officers to perform their duties more efficiently by providing quick access to information and resources. This will lead to faster clearance of goods, improved revenue collection, and enhanced enforcement of customs regulations. The platform will keep JKDM officers informed about the latest developments in international trade and customs regulations. This will enable them to adapt to changes quickly and ensure that JKDM's operations remain effective and compliant in a dynamic global trade environment.

6. Key Benefits

Implementing NotebookLM Plus for onboarding in the Malaysian public sector, particularly within JKDM, offers numerous benefits. One significant advantage is enhanced efficiency, leading to streamlined onboarding processes, faster learning, and reduced time to proficiency (Noe et al., 2017). This efficiency gain allows employees to integrate into their new roles more quickly and contribute effectively to their respective agencies. Another key benefit is improved knowledge transfer, facilitated by a centralized knowledge repository, interactive learning modules, and AI-powered assistance (Davenport & Prusak, 1998). This enhanced knowledge transfer ensures that employees have access to the information and resources they need to perform their duties effectively, leading to better decision-making and improved service delivery.

NotebookLM Plus can also lead to increased productivity by empowering employees with efficient access to information and resources (Janssen et al., 2010). This increased productivity translates to better service delivery and more efficient use of public resources. Additionally, the platform offers potential cost savings by reducing the need for extensive in-person training sessions (Chen et al., 2021). The platform's self-paced learning modules and AI-powered assistance can supplement traditional training methods, making them more efficient and cost-effective. Moreover, a more efficient and supportive onboarding experience can lead to increased job satisfaction and engagement among employees (Ainin & Ibrahim, 2013).

Furthermore, NotebookLM Plus equips employees with the knowledge and skills to navigate a dynamic work environment and adapt to evolving job roles (Argote & Ingram, 2000). This adaptability is crucial in today's rapidly changing world, where public sector employees need to be able to respond effectively to new challenges and opportunities. Within JKDM, the platform can enhance compliance by improving understanding and adherence to complex regulations (Zakaria & Ahmad, 2021). This improved compliance can lead to better enforcement of customs regulations and more efficient revenue collection. Access to comprehensive information and AI-powered insights also supports better decision-making, leading to more informed and effective policies and practices (Dunleavy et al., 2006). By embracing innovative solutions like NotebookLM Plus, the Malaysian public sector can enhance its workforce's capabilities, improve service delivery, and strengthen its position in a rapidly evolving world.

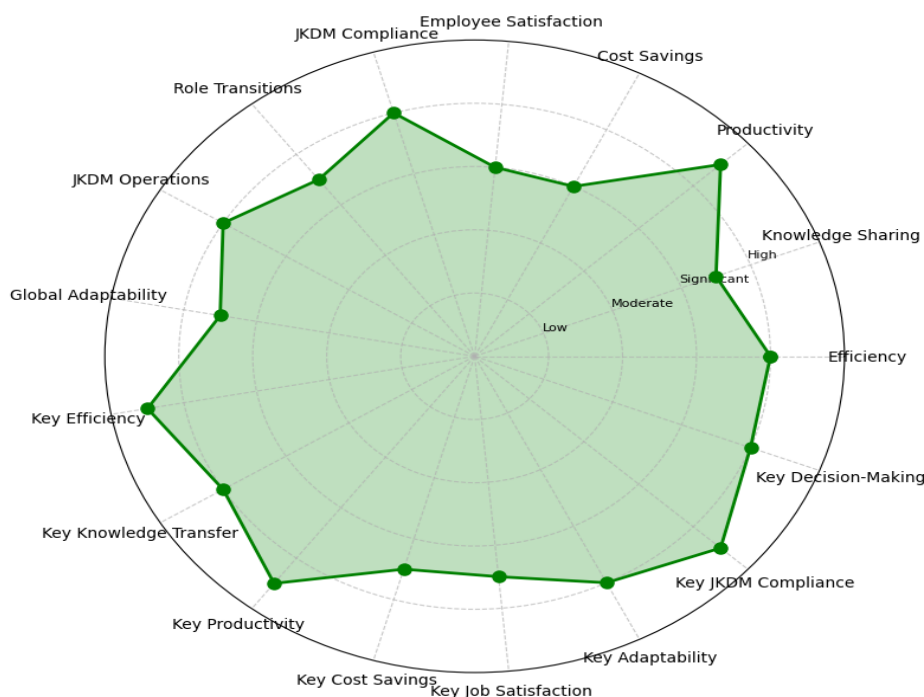


Figure 6: Expected Benefits from Large Language Model Deployment for Job Rotation.

7. Conclusion

This research has explored the intricate challenges surrounding job rotation onboarding in the Malaysian public sector, with a specific focus on the Jabatan Kastam Diraja Malaysia (JKDM). By meticulously examining the complexities of customs regulations, the diverse roles within the department, and the ever-evolving nature of the trade environment, this study has illuminated the critical need for innovative solutions to enhance onboarding processes and facilitate knowledge transfer. Traditional onboarding methods, often characterized by passive learning approaches and limited opportunities for interaction, have proven inadequate in ensuring knowledge retention and the effective application of acquired information. Furthermore, time constraints, inconsistencies in onboarding experiences, and the imperative to address varying levels of digital literacy among civil servants present formidable obstacles to achieving effective onboarding.

The proposed solution, harnessing the advanced capabilities of an LLM product, like NotebookLM, offers a compelling pathway to navigate these challenges. NotebookLM is a Google product within the LLM family that allows for document ingestion and summarization, interactive training modules, and AI-powered Q&A. An LLM product provides a comprehensive suite of features, encompassing interactive learning modules, AI-powered Q&A systems, and personalized learning paths, meticulously crafted to redefine the onboarding experience and empower government servants with the knowledge and skills indispensable for excelling in their roles. The platform's capacity to establish a centralized knowledge repository, digitize and organize critical documents, and furnish on-demand support has the potential to revolutionize the efficiency and effectiveness of onboarding processes.

The implementation of an LLM product is poised to yield substantial positive outcomes for the Malaysian public sector, extending beyond enhanced onboarding efficiency to encompass heightened knowledge sharing, augmented productivity, and cost optimization. By fostering a more informed, adaptable, and engaged workforce, an LLM product can contribute to the delivery of more impactful and efficient public services, ultimately bolstering the Malaysian government's ability to navigate the complexities of an increasingly interconnected and rapidly changing world.

While acknowledging the potential hurdles and limitations inherent in the adoption of any nascent technology, this research underscores the profound potential benefits of an LLM product, like NotebookLM, and champions its continued exploration and integration within the Malaysian public sector.

By embracing innovative solutions such as an LLM product, the Malaysian public sector not only elevates its workforce's capabilities and refines service delivery but also fortifies its position as a frontrunner in the digital age. This research serves as a clarion call, imploring policymakers and stakeholders to embrace the transformative potential of an LLM product and to proactively champion its implementation, thereby cultivating a more resilient, agile, and citizen-centric public service.

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