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Title: Disruptive Data Migration Process for a Multinational Pharmaceutical Company

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Executive Summary

This research centres on proposing a process innovation solution for JNJ, a multinational pharmaceutical business. JNJ made the choice to transfer all of the company's data from various countries and divisions to a network based on cloud technology. The current procedure presents substantial obstacles. In total, a sum of £6 million has been allocated towards the acquisition of resources, tools, infrastructure, and communication, while the process of data migration remains unfinished. As part of the revised approach, the organisation has chosen to discard the intention of implementing a self-service application that would have granted departments the autonomy to determine which data to transfer and which data owners to engage with in each region. A business-centric methodology was designed, which integrated the data migration process with business objectives, hence enhancing the level of PMO maturity. The proposed plan aims to address the typical obstacles of the process by establishing a business-oriented approach. As part of an improved project resilience strategy, the PMO will spread migration and establish increased local-central integration. The organisation also utilises artificial intelligence to enhance the automation of migration. The PDCA approach is used to implement a pilot programme in the UK. The document provides a comprehensive overview of the change leadership team, risk management concepts, and the process of implementing innovation.

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1.0 Introduction

Organisations are expected to make decisions quickly in a volatile and competitive environment. Innovation acts as a driver of either necessity or opportunity within organisations (Furstenthal et al., 2021). Leading innovators seize these conditions to identify fresh solutions and make bold decisions that can reignite growth (Chesbrough, 2020). Innovation within an organisation is intended to realise new changes (either product-centric or process-centric) with the goal of improving organisational efficiency and creating overall value through a detailed action plan (Tidd and Bessant, 2014). This report focuses on a process innovation solution for a global pharmaceutical company, JNJ. Process innovation is characterised as the process of developing and implementing new and improved processes, methods and systems to improve efficiency and effectiveness. Process innovation requires making changes to organisational tasks, the sequence of activities or the structure of specific processes. The goal of such process innovation is to reduce underlying costs and improve productivity and efficiency (Westland, 2017).

In this report, we discuss the idea of an innovation involving data migration. Data migration involves the successful transfer of data in a secure manner to prevent corruption and loss of information. At JNJ, a decision was made to migrate all of the firm's data across different countries and departments to a cloud-based network. The cloud migration process was intended to reduce dependence on outdated servers and investment in ongoing server maintenance and development. This cloud migration process began in January 2019 across the ASPAC, EMEA, North America and LATAM regions to migrate data from file servers to the Microsoft SharePoint cloud platform. This report evaluates the challenges that exist within the current process of data migration to the cloud and proposes an innovative solution to overcome these problems. The objective of the plan was to transform current data migration and management processes to reduce inefficiencies and scalability and security challenges. The report identifies the steps that I took as a project manager in charge of the data migration process.

2.0. Evaluation of the Current Process at JNJ

The process of data migration relies on an internal software tool developed by the IT department of JNJ. This tool is made available to all IT teams across different countries. The technical team in each location is in charge of analysing the data requiring migration/or decommissioning in conjunction with members of different departments (e.g. HR, legal, etc). The local IT teams are responsible for using the tool to identify and marking data on the file

server. Once the data are marked, the global Project Management Office (PMO) team engages in a review to resolve any issues that may arise before the shift to the cloud is undertaken. Once the migration plan is set, then data migration is conducted in sprints. Data migration sprints are time-boxed periods where a set of migration tasks is completed from the overall data to be transferred. As an example, in Ireland, the local team in conjunction with the PMO finalised 120TB of data, split into 12 monthly sprints. Each country's local team is asked to develop similar sprints to enable the data migration process. The following figure identifies the steps within the current migration process.

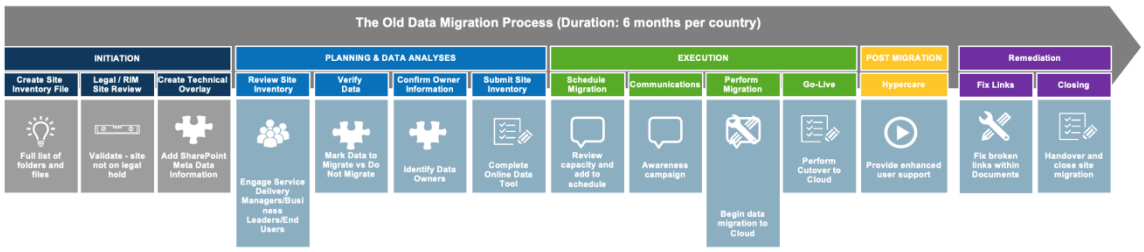


Figure 1: Current Data Migration Process

Source: Confidential company documents

Though a structured approach is adopted, there are significant challenges. Firstly, the process requires significant input from the PMO, as each local IT team has to liaise with the PMO office before initiating a migration plan. This can lead to a significant overload of tasks on the PMO, with many members leaving the team due to the complexity of tasks. Overall, £3.5 million has been spent on resources, tools, infrastructure, and communication of this proposed process. Despite this expenditure, there has been incomplete migration of data. Not a single country has successfully completed the data migration process. As a result, there has been a loss of trust in the existing process. The project sponsors (executive team) and the local IT teams are discouraged by the delays in establishing data migration plans and have lost confidence in the process.

A detailed analysis of the plan identifies different problem areas, as highlighted in the following fishbone analysis.

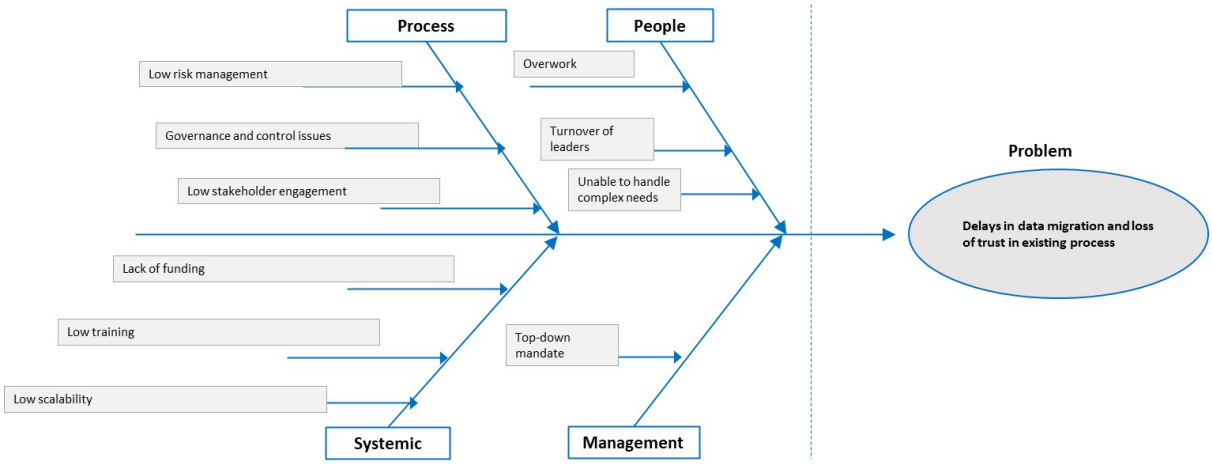


Figure 2: Fishbone Analysis of Issues with Existing Data Migration Process

Source: Self-created

At the people level, overload on the PMO team and dependence on the IT department are an important reason for this challenge. Country-level team members have been overwhelmed with the delays within the PMO. They have lost their appetite to work with the PMO due to the time and intensity of tasks. They have also been concerned about the lack of ownership and the perceived top-down mandates given by the central PMO team. This, accompanied by constant project leader changes (three PMO leaders across two years), has reduced overall trust in the PMO team. According to Bender et al. (2000), successful process innovation cannot be achieved unless there is trust in the need for change. It is possible that the top-down mandate issued by the central PMO negatively impacted outcome achievement.

At the process level, there are concerns of ineffective risk management and stakeholder engagement. Though the expected benefit was to access data from anywhere to any device without data loss, the steps undertaken to identify risks within this process have been limited. Additionally, the longer the migration period, the greater the risks linked to loss of data, corruption, duplication of data, and redundancy of data due to loss of relevance (Amin et al., 2021). Though the goal was to simplify the user experience, the lack of stakeholder feedback when developing the process has led to a loss of stakeholder engagement. Successful change implementation requires bottom-up stakeholder engagement, as this can influence the willingness of team members to engage in the change process (Vala et al., 2017).

A third process challenge is the lack of governance and controls. No roles have been mapped at the local team level or at the PMO level in terms of coordination. This has led to confusion

and missed deadlines. Governance is essential to project monitoring as it provides direction and defines how decision-making procedures and metrics are identified at the project level (Too and Weaver, 2014).

There are also systemic challenges. There is evidence of cost overrun and lack of training amongst local IT staff and the PMO to address the migration effectively. Additionally, though the implementation tool was developed internally, there are challenges of low scalability. Agrawal et al. (2011) conclude that scalability is essential for systems to handle an increase in volume efficiently. For example, the potential design of a 12-month sprint for each country is a result of low scalability. There is a need for the system to handle increasing traffic and processing needs. Low scalability could mean that the system may not be able to handle additional capacity in the future.

From the above assessment, a need for a drastic process change is recognised. The proposed migration process is technology-centric and is dependent on a self-service tool. All actions have to be monitored and coordinated between the local team and the PMO and delays in coordination lead to communication and trust issues. Furthermore, the use of a tool-based analysis means that technical reviews have to be carried out independently, leading to high costs without a single country being able to manage end-to-end migration.

The PMO department at JNJ developed a five-level maturity model to assess the success of its IT applications. At level 1, there is often ad hoc initiation without clear results. At level 2, there are some rudimentary results with inconsistencies. Levels 3 and 4 support defined processes which are either responsive or proactive. Level 5 is optimised: there is full integration of all processes and tools which are managed by a central PMO team. This maturity model can be compared to the one developed by Sandhu et al. (2019). These authors contend that successful PMO integration within a projectified organisation requires moving from project oversight to strategic alignment. An analysis of the existing process shows that there is some degree of achievement of project deliverables, with evidence of a repeatable methodology. Therefore, at the moment, the degree of business maturity for this project is at level 1. The PMO and JNJ project leadership team have recognised the need to improve this maturity level, which forms the basis of the proposed process innovation. Through process innovation, this report intends to develop an alternative idea to promote structured change within the innovation process.

3.0. Current Industry Landscape

Any innovative solution is possible only when the impact of external environmental factors is addressed. The external environment influences process innovation solutions as it can identify market demands, consumer expectations and technology advancements (Adam and Alarifi, 2021). An environmental scan is required to provide insights into opportunities and pressures that may drive the future of process innovation (Wang and Ellinger, 2011). This section evaluates some external environmental trends related to data migration.

There are some important trends in the external environment that may influence the proposed process innovation. Firstly, there is a need to consider rising data security challenges. Statistical evidence has shown that 45 per cent of all data security breaches are cloud-based (Jones, 2024). Additionally, 80 per cent of companies report that they have experienced at least one cloud security-related challenge in the last year (IBM, 2023). All of these indicate that any new solution that is implemented should improve overall security of the data migration and storage process. Additionally, the rise of regulatory requirements like the GDPR in the Europe Data Protection Act in the UK requires that any solution that is implemented is in line with regulatory requirements (Ali and Osmanaj, 2020). Another aspect of regulation is the increasing importance given to AI oversight. In particular, the regulation intends to address challenges of privacy, bias and misrepresentation (UK Parliament, 2024).

The size of the data migration market should also be recognised. It is perceived that there will remain sustained growth in the global market for cloud migration. In particular, Markets and Markets (2023) recognised that the cloud migration service market will be worth 10.2 billion by 2023. This will be projected to reach 29.2 billion by 2028. The increase in data volume generated across global businesses requires a consistent increase in storage capacity which may influence how individuals (users) perceive data migration policies. Any data migration solution that is developed should be able to address this expanding need. IT departments need to assure their consumers (i.e. other employees) of careful steps within the migration process that will meet these expanding needs (Amin et al., 2021). Additionally, they need to educate their consumers on encryption, backup and recovery plans. It is essential for the project team in charge of migration to balance technology against financial needs (Mohammad, 2021). They should balance costs against resource usage and identify solutions that are long-lasting and driven.

Another important trend that has to be acknowledged is the use of data lakehouses within cloud-based migration. Data lakehouses are open data management architectures that can improve overall scalability during data migration. They have large capacity and can therefore handle large volumes of data in real time. Data lakehouses can centralise data storage, thereby providing better unification of data across the entire organisation (Gopalan, 2022). A third trend that has to be addressed is the focus on AI and automation. Data migration helps ensure the regular flow of information and storage of data for recovery. There are diverse automation solutions to simplify this process. These automation solutions, driven by AI, are intended to automate some or many of the processes involved to reduce the risk of failure and improve accuracy and efficiency (Packham, 2024). This also helps firms to conduct the migration process with greater accuracy and efficiency while reducing the possibility of failures caused by human mistake. Organisations may enhance data insights with the use of clever algorithms, which can also detect and remove data duplicates, thereby lowering storage expenses and enhancing efficiency.

The final external trend that has to be recognised is the importance of sustainability. Sustainability within the context of data storage and cloud farms has been extensively raised in academic and business literature (Achar, 2022). There is a need for organisations to identify and measure their environmental impact, especially that of their data centres (Vale et al., 2020). Steps should be taken to monitor the environmental impact of data migration solutions and identify sustainable solutions to reduce their impact.

The following PESTLE analysis (Figure 3) summarises these trends and challenges that need to be considered as part of the data migration process.

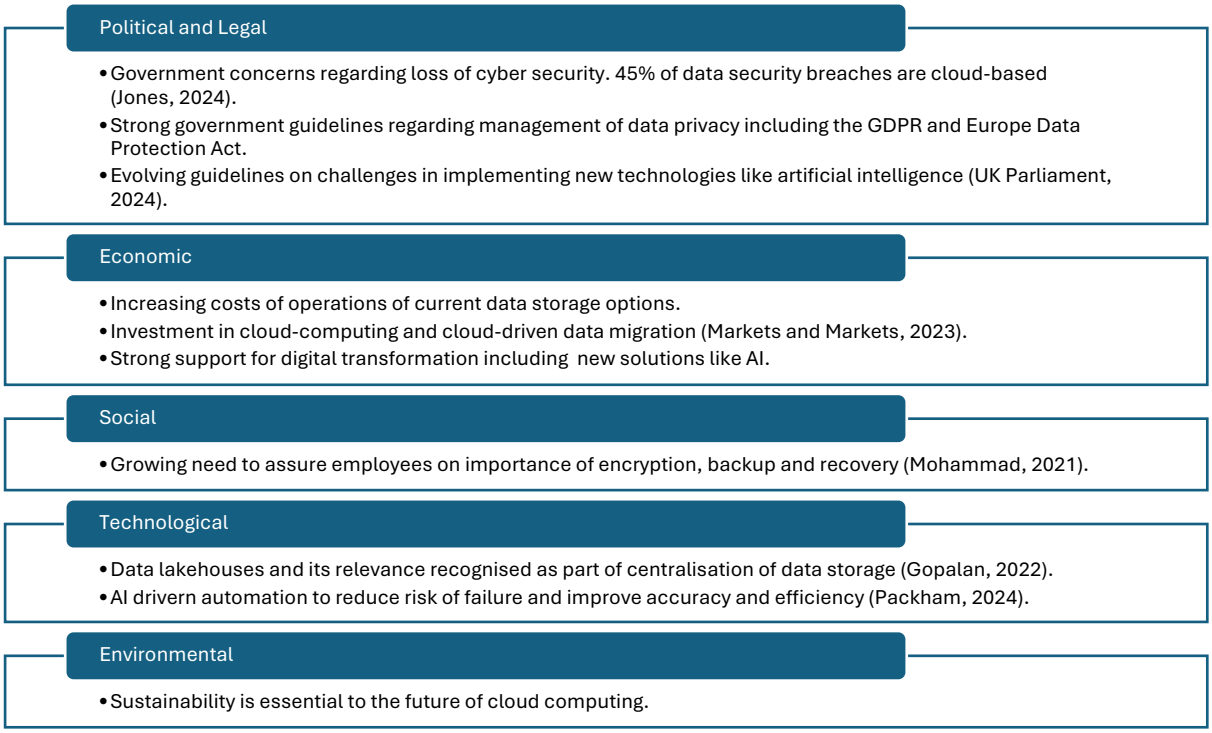


Figure 3: PESTLE Analysis

Author (current study)

4.0 Proposed Disruptive Data Migration Process

The vision of the process innovation is to transform the existing data migration process into a strategic asset that can improve operational efficiency, compliance and innovation. As part of the new proposal, the organisation decided to abandon the plan to use a self-service application that would have given department the freedom to decide for themselves which data to move and which data owners to contact in each region. A methodology that was more focused on business methods, where the data migration process was linked to business objectives was developed, supporting high level of PMO maturity (Sokhanvar et al., 2014). The increased responsibility for ownership, coordination, monitoring, tracking, and reporting on progress by the PMO are a key component of the new process. The PMO plays a pivotal role in this revised model, directing each nation down a clearly set migration path. According to Arbabi et al. (2020), the role of the PMO is to consult with the business and technical teams, and then performing a proof of concept to ensure the new procedure was optimal.

The proposed plan intends to overcome the standard process challenges by creating a business-driven focus. The proposed parallel business interaction process will create a reduced project timeline, minimise operational downtime, and create real-time decision-making. As part of an enhanced project resilience strategy, the PMO will distribute migration and create better local-central integration. The need for resources will be constantly assessed and specialised teams will be implemented at the region level to meet overall needs. Additionally, targeted AI-driven migration is implemented. The following core changes are proposed.

4.1. Creating a Parallel Approach to Migration

Initiating business interactions in parallel across all regions and nations concurrently is another major shift in strategy; this offers numerous benefits over the previous sequential waterfall method. Parallel migrations, which include working on numerous components simultaneously, drastically cut down on project timelines compared with the legacy waterfall migration's step-by-step procedure. By lowering the impact on day-to-day operations and increasing the capacity to operate concurrently, parallel migrations minimise operational downtime. Adjustments to the migration plan as the project advances are possible because of the novel parallel business engagement and data migration approach, which allows near real-time decision-making based on feedback and outcomes from one stream.

4.2 Improving Real-Time Tracking

By developing and delivering numerous components at once, stakeholders can see progress in real time, which increases their involvement and support for the project. Teams can gain knowledge from simultaneous migration procedures, transferring what they have learnt to improve overall efficiency and effectiveness. It is only logical that parallel migrations are more scalable (Alkhonaini and El-Sayed, 2018). This allows some systems to go live faster than others, delivering early benefits and perhaps early returns on investment.

4.3. Achieving Better Project Maturity

To make sure it aligns with business goals, the new strategy tackles structural issues to simplify the migration process, and it plans and manages processes thoroughly to make sure they go off without a hitch during installation and rollout. The goal is to move towards a migration process which is in line with the broader business goals of the organisation.

4.4 Improve Automation of Migration through AI Integration

According to Bandari (2022), the automation of data migration using AI involves creating a model which can reduce human involvement. This can not only minimise the errors of migration but also improve speed of migration. In the past, data migration was a tedious and difficult process with little oversight, sluggish results, and a high potential for mistakes. AI optimises migration pathways and timetables in real time to ensure optimal speed and minimal downtime (Amin et al., 2021). The use of AI is essential for guaranteeing the integrity of sent data. AI painstakingly searches data and big data for abnormalities and inconsistencies before they become problems. AI also proactively cleans and standardises data to improve accuracy. When it comes to data security, AI uses strong encryption methods to shield information during transfer and storage, acting as a security force field (Petersen, 2023). Additionally, AI reduces security risks to guarantee the privacy and integrity of data. AI also helps with data migration automation by analysing historical migration data to properly predict obstacles, much like a director analysing past performances to anticipate potential concerns. Khan and Walia (2024) also conclude that the integration of AI within the data migration process can help in reducing problems including duplicates and inconsistencies. Finally, AI can help predict potential issues and problems that exist within the migration process. Therefore, there is proactive measurement. A comparison of the old process against the new process is highlighted below.

Table 1: Comparison of Old Process Against New Process

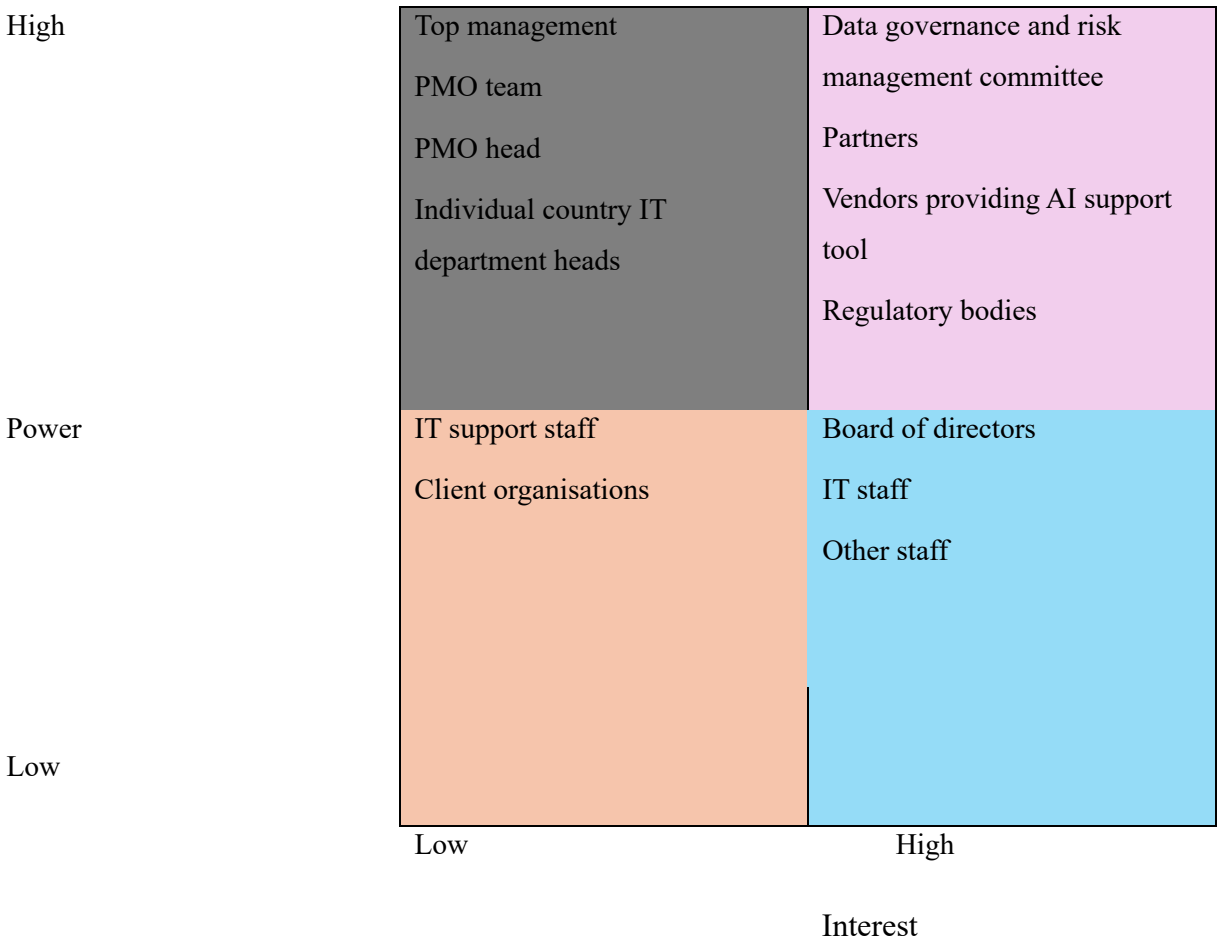
Old Process	New Process
No monitoring of successful migration.	Real-time monitoring
Low risk management, low governance, top-down	High level of project maturity – PMO controls the process. High degree of governance and clear risk assessment processes.
Resource-heavy as independent IT teams of each country had to do all the work	Reduced dependence on manual labour due to AI implementation
High errors	Improved efficiency
Low scalability	High scalability
Low stakeholder engagement	High stakeholder engagement

5.0 Implementing the Change

5.1 Stakeholder Identification

It is important to recognise the key stakeholders who have an impact on the change implementation process. To achieve this goal, a stakeholder power-interest matrix is used. This matrix identifies the power (authority) and degree of interest (i.e. interest in successful implementation) (Riahi, 2017). Those with high power and interest need to engage better in the proposed change process, while those who have only high power or high interest may need to be given information on the change as it may impact overall outcomes (Nguyen and Mohamed, 2018). The key stakeholders who are involved in the implementation of this project are highlighted in the following matrix.

Figure 4: Stakeholder Mapping



High Power and High Interest

The key stakeholders who have high power and high interest include the PMO team, the top management, and the country IT heads. The top management is essential in the implementation of the proposed change, as IT innovation requires top-down support. The management can provide strategic direction, ensure alignment with business goals, and provide the required resources. The central PMO team also has significant power and interest, as the team is the primary champions of the proposed change process, not only overseeing the project but also coordinating across different IT offices and providing the required support, including training and troubleshooting. According to Philbin (2016), a key role of the PMO is to coordinate and collaborate across diverse teams to improve project outcomes. The independent IT heads also hold significant power and interest as they have to work with the PMO to implement the migration process and ensure compliance.

High Power and Low Interest

There are others who have high power but low interest. For example, the data governance and risk management committee has high power, as it oversees the implementation of the proposed migration process. This team makes sure that there is compliance with local, regional and global regulations on data privacy and other compliances. However, their active interest in project implementation is low. Another key stakeholder who has high power is the external vendor providing the AI support for data migration automation. The eternal vendor provides expertise and support and ensures that there is assistance with AI tools. However, apart from providing external support, they do not have a significant role in implementing the change process.

High Interest and Low Power

The IT staff in each country are found to have low power and high interest. They play an essential role in aiding in the migration process. They execute all new changes and can provide feedback on the process. However, they do not have the power to influence the nature of the process. Similarly, end-users or department employees whose data are migrated have low power and high interest. They work with the local IT team to validate migrated data and can provide insights into potential usability issues. Additionally, the board of directors are also have interest in the governance of the proposed solution.

Low Power and Low Interest

The support staff who are involved in providing support after the process is implemented have low power and low interest. They may be part of the wider IT support team available for each region. Additionally, regulatory bodies may be involved in providing compliance metrics and audit processes, but actual involvement in the implementation process is low. According to Tidd and Bessant (2020), successful implementation of change is possible only if stakeholder interest and needs are recognised. Through the identification of these stakeholders, it is possible to develop a migration plan that can address growing challenges and needs.

5.2 Establishing the Change Team

Finding and nurturing a change team or agents of change is the initial stage in implementing change (Legris and Collerette, 2006). According to Legris and Collerette (2006) change agents are individuals who help organisations intentionally shift by offering technical, expert, or advisory assistance. The PMO team is the driving force behind this process transformation. The need for systematic AI adoption is acknowledged after discussing the key advantages of such a deployment against the old process (Kurup and Gupta, 2022). The head of the PMO can appoint members of the change team to verify the data that need migrating; this team should also include representatives from IT department and risk and quality assurance. Some of the core members of this team are highlighted below.

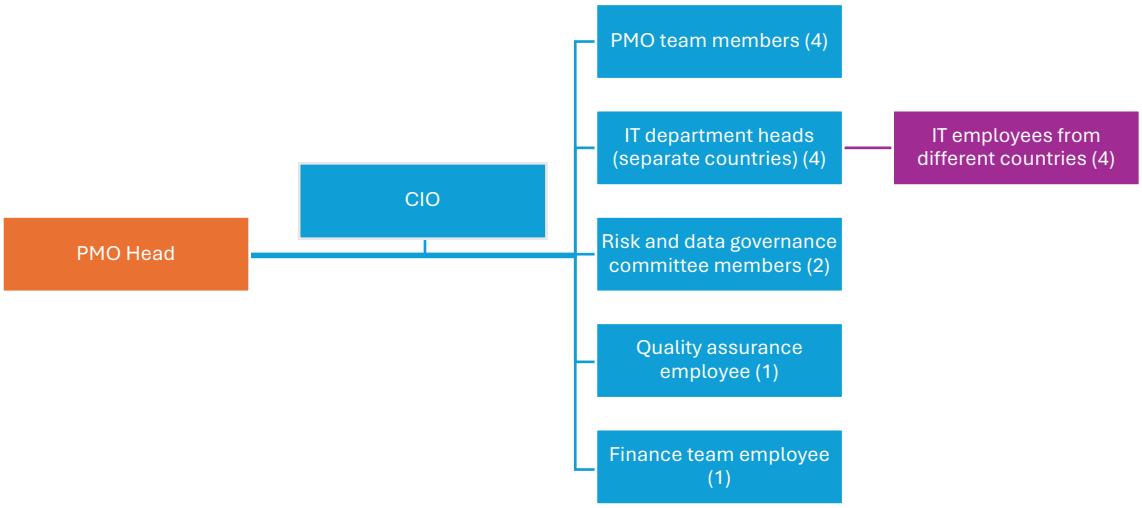


Figure 5: Proposed Project Team

Author: Self-created

6.0 Addressing Risks of Change Resistance

The proposed change process of migration involves moving away from manual data migration to a fully automated process. There can be different challenges or change resistance issues which may arise during this process.

The first change resistance aspect that should be highlighted is the perceived lack of job. The automation of the proposed data migration process can lead to significant worry regarding job loss. The impact of workers' perspectives on AI implementation and concerns about job loss have been the subject of multiple investigations (Das Swain et al., 2024). For instance, Manuti and Monachino (2020) discovered that workers can be more resistant to AI technology mainly because they were worried about their jobs. Addressing concerns about job displacement is crucial for increasing AI adoption. In the context of AI driven automation of IT testing and services, Lenka and Limbore (2022) there can be significant reluctance to adopt AI models which can reduce human involvement and improve efficiency.

Another challenge that can cause potential change resistance includes problems of integration complexity. Androcec et al. (2015) contends that integrating AI within existing software infrastructure can be a challenging process. In this context, there can be resistance amongst employees to adapt to the new tool as it require additional expertise and careful planning. Similarly, as Leese (2024) posit, there could be problems with data interoperability. For example, different AI tools may have to be integrated and this could mean that there could be difficulties with standardisation of data formats. Apart from this challenge, it is also important to evaluate if there are issues of algorithmic bias. According to Bateni et al. (2022), there could be bias in data handling and modelling. Therefore, it could be difficult to explain the transparency of the decision-making process (ie., deciding which approach is most ideal). Packin and Lev-Aretz (2018) brought attention to the ethical issues faced by employees over potential biases, discrimination, and privacy infringements linked to AI algorithms. Workers may be hesitant to interact with AI systems that they view as potentially problematic in explaining adoption, which might lead to a decrease in adoption rates.

There can be steps taken to overcome this challenge. Firstly, this report recommends that a pilot programme will address the perceived technical challenges that occur. Secondly, by implementing training and educating employees on how AI can augment their role in the data migration process, it is possible to address inherent challenges linked to workforce resistance. Finally, risks of bias and data transparency can be overcome by implementing clear steps to

data migration automation. Extant literature has acknowledged that the three most important factors in determining how people feel about AI adoption are communication of the need for AI, training on how AI can be implemented and integrated with existing operations, and a company culture that accepts innovation and digital transformation (Manuel Cyrus, 2023; Mahmud et al., 2023). According to Cann (2021), the significance of open and honest communication regarding the goals, advantages, and consequences of AI projects in fostering confidence and reducing anxieties. Therefore, a comprehensive communication programme initiated by the PMO will attempt to educate all employees on the core benefits associated with the proposed AI data migration process.

The following forcefield analysis helps identify the key forces which can act as for and against the implementation of the change process.

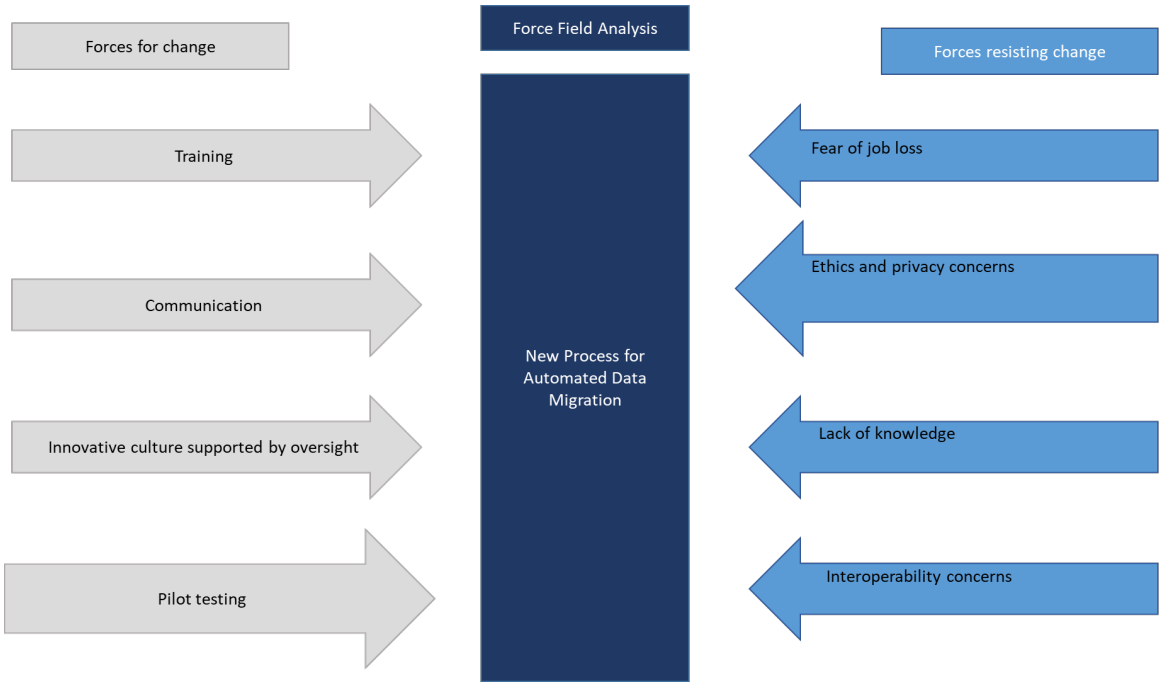


Figure 6: Force Field Analysis

Author (current study)

7.0 Pilot Implementation and Expansion

The pilot programme will adopt a PDCA strategy. Business strategies often benefit from PDCA, an iterative four-step approach for improving quality and productivity (Chojnacka-Komorowska et al., 2019). The PDCA cycle is iterative; it begins with a simple adjustment to see how this might affect processes; then it moves on to bigger and more specific changes (Johnson, 2016).

7.1 Plan

At the planning stage, it is important to define the scope and goals of implementation (Johnson, 2016). The essence of this process is assessing the current state of affairs and establishing appropriate corporate objectives and targets. As Khan and Walia (2024) recognised, effective data management in AI requires defining the data set that has to be migrated and defining both structured and unstructured data. Within the pilot project, objective setting involves defining time to complete migration and measures taken to ensure data integrity while minimising overall downtime. The following table recognises some of the key data integrity assessment options.

Table 2: Data Integrity Assessment

Data Integration Assessment	Explanation
Check sum verification	Evaluating migrated data through hash value assessment.
Data validation	Conducting consistency checks on data relationships
Record Counts	Comparing counts of records before and after migration
Testing of automation	Evaluating the effectiveness of automation through integration tests
Parallel migration assessment	Comparing parallel migration speed and efficiency against old single processes.
Monitoring and audit	Creating reports to maintain logs of migration and comparing them against old process.
User acceptance	Evaluating user acceptance of the new process.

Additionally, as Agrawal et al. (2024) acknowledged, successful integration of AI into an organisation's existing processes requires evaluating the ability of the current software and hardware set-up to support integration. Therefore, within the pilot project, the PMO will evaluate the infrastructure to assess current data storage and network capacities. Additionally, interoperability of existing software solutions with the proposed AI tool is assessed. Finally, a detailed risk assessment will be carried out to determine impact of data loss, downtime and perceived compatibility issues.

There is also a need to conduct training needs analysis. The PMO should evaluate the capability of the IT department and employees in other departments to adapt to the automated migration process. According to Cubric (2020), successful integration of innovative solutions, especially those involving data transformation, requires user skills and competencies in the proposed change. The purpose of the training needs analysis process is to address this need. The following table presents a sample of this training needs analysis process.

Table 3: Sample Questions for Training Needs Assessment

Question	Options
How confident are you in integrating AI within the data migration process?	Very confident, confident, not confident, definitely not confident
What are some steps that you think should take place before we implement an AI driven parallelly processed data migration process?	Open ended question for participants to answer

The final element of the plan process is the selection of AI and migration tools. There should be a detailed evaluation of available AI solutions that the PMO can adopt in order to improve the quality of automated data flow and integration. This report considered two alternatives including Informatica Intelligent Cloud Services (IICS) and IBM Infosphere (IBM, 2024). The advantage of the IBM is that it has high performance data processing, reliability and scalability and AI integration capabilities. There is the limit of high cost and licensing. On the other hand, the IICS though smaller in size, has focused AI applications for cloud support (IICS, 2024). They can ensure better data quality and assurance as there are trained models. It requires additional support and can be more complex. The change team should evaluate these changes before a decision on the most ideal tool is taken. As part of AI tool selection, the AI model that will be used for data mapping and transformation is also discussed and validated (Bandari,

2022). The PMO should work with the IT team in the UK to prepare training data models for data mapping, transformation and detecting anomalies.

7.2 Do

In the 'do' phase, the change management team gets a chance to put its proposed change into action. At this point, a little experiment or trial run should be conducted (Johnson, 2016).

As part of implementation, employees should be given training. The purpose of the training programme is to provide information on the AI's role in data migration and to educate the IT employees on the steps they need to take to set up the automated IT migration process. The next step is to set up the environment. This includes procuring the infrastructure and installing and configuring the AI and migration tools. Additionally, it is important to execute a pilot migration process—for example, data migration from a single department of the UK subsidiary can be chosen to test the process. The AI model can be applied to automate the data mapping process. Following this, the pilot migration should be executed across the entire value chain. This includes applying the AI model to the data mapping, transformation and validation process. All activities should be logged by the IT department. A detailed Gantt chart helps monitor this implementation process. The final step of this stage is gathering relevant feedback. Feedback should be gathered from the PMO, IT department and other employees who were involved in the pilot migration process.

Table 4: Gantt chart

	Month 1				Month 2				Month 3			
Week	1	2	3	4	1	2	3	4	1	2	3	4
Identifying core elements of new process												
Objectives and scope												
Stakeholder identification												
Change management team												
Change resistance assessment and identifying enablers												
Selecting AI tool												
Team training on AI												

Data assessment and preparation												
Pilot migration execution												
Validating and integrity assessment												
Getting feedback from PMO, IT departments and employees												
Post migration assessment												

7.3 Check And Act

The company compiles and analyses the data from its pilot projects during the 'check' stage of the PDCA cycle (Johnson, 2002). If it works, the business will roll out the modification nationwide. In that case, the business might start over with the plan phase and develop an alternative strategy. Finally, in the 'act' phase of the PDCA cycle, a company acts on the insights obtained from the experiment. The corporation may expand implementation of the change if the pilot programme was successful (Johnson, 2016).

At the check stage, steps should be taken to monitor outcomes. Performance indicators should be compared between the old and new processes, including time to migration, data loss and data quality. Additionally, as Amin et al. (2021) contend when adopting AI for cloud migration, it is important to evaluate the consistency and quality of the automated process. Therefore, the IT department, guided by the centralised PMO team, should use AI to identify the underlying discrepancies and anomalies within the migrated data.

As part of the 'act' stage, issues identified during the check phase are addressed. The model will be refined based on the feedback received. Additionally, detailed documentation will be developed by the PMO to communicate the need for the change and the success and challenges of the pilot project to other subsidiaries. There will also be a plan for iterative implementation across different subsidiaries.

8.0 Sustainability and Environmental Impact

An important aspect highlighted as part of the external assessment is the implementation of sustainable solutions. Therefore, any solution to data migration that is considered will include sustainable solutions. There are different types of sustainability solutions that are recognised in this report.

Consider Green Data Centers

Green data centres allow organisations to reduce their carbon footprint, increase energy and resource efficiency, extend the lifecycle of their infrastructure, lower data centre costs, and more (Ahmadisakha and Andrikopoulos, 2024). Solar and wind power are two examples of renewable energy sources commonly used by green data centres. The ultimate goal is to use smart energy strategies that prioritise data centre efficiency and environmental sustainability.

The Concept of Virtualisation

In order to make the most of renewable energy resources in decentralised cloud data centres, virtual machine (VM) movement is necessary during task execution for load balancing. VM approaches transfer workloads to other computers located in different locations because there is no on-site renewable energy (Buyya and Gill, 2018). VMs also allow the transfer of workloads from cloud data centres powered by renewable energy sources to cloud data centres that use waste heat from a different location. Moving data storage from one active server to another does not interrupt the VM's workload execution, which improves virtualisation's performance (Kumar and Vidhyalakshmi, 2012). It is suggested that such virtualisation solutions are recognised as part of new idea implementation.

Planning for Capacity

In order to achieve a solid return on investment, or ROI, cloud service providers need to have a well-structured and efficient capacity plan. Power infrastructure, information technology resources, and workloads can all be part of the capacity planning process. To guarantee backup and recovery, storage, and availability—which boosts user happiness and draws in more customers down the road—SLAs should specify service quality criteria (Rahman and Islam, 2015). Therefore, it is important that as part of planning steps are taken to improve overall planning and capacity.

9.0 Conclusion

The objective of this report was to ascertain a novel and inventive concept, and explore methods to revitalise a portion or the entirety of the business. The existing data transfer procedure exhibits signs of poor maturity. The Project Management Office (PMO) and the project sponsorship team have acknowledged the necessity to enhance the standard of data migration. The objective of the process innovation is to convert the current data migration process into a valuable resource that may enhance operational efficiency, compliance, and innovation. As part of the new concept, the organisation opted to discard the plan of implementing a self-service application that would have allowed departments to independently determine which data to transfer and who data owners to contact in each location. A business-centric approach was designed, which integrated the data migration process with business objectives, hence facilitating a high degree of PMO maturity. The proposed plan aims to address the typical procedural obstacles by establishing a business-oriented emphasis. The suggested parallel business interaction procedure will result in a shortened project duration, minimise operational downtime, and enable real-time decision-making. As part of an improved project resilience strategy, the PMO will spread migration and establish stronger local-central integration. The organisation also utilises artificial intelligence to enhance the automation of migration. The PDCA approach is used to implement a pilot programme in the UK. The document provides a comprehensive overview of the change leadership team, risk management concepts, and the process of implementing innovation.

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