Project Dissertation
Report on

"THE ROLE OF ARTIFICIAL INTELLIGENCE IN AUTOMATING IT SERVICE MANAGEMENT WITH RESPECT TO JLL''

Submitted by:

Daksh Rampal

Roll No.: 23/EMBA/11

Under the Guidance of: -

Ms Shelika Arora

DELHI SCHOOL OF MANAGEMENT

Delhi Technological University

Bawana Road Delhi 110042

CERTIFICATE

This is to certify that **Daksh Rampal,** Roll No.: 23/EMBA/11 student of Master of Business Administration (Executive 2023-2025) at Delhi Technological University, Delhi has accomplished the project titled **"THE ROLE OF ARTIFICIAL INTELLIGENCE IN AUTOMATING IT SERVICE MANAGEMENT WITH RESPECT TO JLL''** under my guidance and to the best of my knowledge completed the project successfully, for the partial fulfilment of the course- Dissertation in 4th semester of the course Executive MBA.

Head of Department

Delhi School of Management

Delhi Technological University

MENTORS NAME AND SIGNATURE

Ms Shelika Arora

Delhi School of Management

Delhi Technological

DECLARATION

I hereby declare that the submission is my own and that, to the best of my knowledge and belief, it contains no material previously and return published or written by any other person nor material which to a substantial extent has been accepted for the word of any other degree or diploma of the university and other institute of higher except where due acknowledgment has been made in the text.

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(Daksh Rampal)

23/EMBA/11

ACKNOWLEDGEMENT

I Daksh Rampal, wish to show my deep sense of gratitude to my project guide **Ms Shelika Arora**, for her support and guidance. First especially for her support and secondly for providing necessary information during the project work.

Student name

(Daksh Rampal)

23/EMBA/11

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INTRODUCTION

1.1 Introduction

There has been a dramatic shift in the real estate and facilities management industry due to the revolutionary impact of incorporating AI into IT service management (ITSM). By facilitating intelligent ticketing, predictive maintenance, and real-time analytics, AI-driven automation boosts efficiency, lowers operating costs, improves service delivery. For global real estate firms like JLL, leveraging AI in ITSM is pivotal to maintaining a competitive edge and delivering superior client experiences. This integration not only streamlines internal processes but also aligns with the industry's shift towards smart buildings and digital transformation.

Fig 1: IT Service Management (ITSM)

1.2 Literature review

Martin Spring et.al (2020) elaborates upon foundational ideas in artificial intelligence, information systems, professional work, and the management of operations for professional services. The goal of this model is to explain how AI-based technologies and people might work together to automate and enhance professional tasks, ultimately leading to better processes and an expanded service offering. Case studies conducted in two legal businesses and two accounting firms that employ AI-based solutions are the basis of the study. It demonstrates that across the three phases of professional service delivery (diagnosis, inference, and treatment), AI-based systems are used judiciously, mostly for back-office, high-volume operations. Augmentation is achieved by AI by shielding experts from low-value activity, making their knowledge scalable, and giving fresh analytical insights; automation, on the other hand, relieves professionals from repetitive duties. When used properly, a system may boost efficiency in providing essential professional services and open the door to expanding those offerings to include more high-value advising engagements. Other developing domains of OM technology management may benefit from the concept and methodology.

Ming-Hui Huang et.al (2018) The rise of AI is changing the service industry in many ways; it's a game-changer in terms of creativity, but it also poses a danger to human employment. To deal with these two sides of the coin, we formulate a theory of AI employment replacement. Firms should choose between people and technology to complete service activities based on the theory's four intelligences: mechanical, analytical, intuitive, and empathic. Predictably, mechanical intelligence is advancing before analytical, which is advancing before intuitive, and intuitive intelligence is advancing before empathic intelligence. It is theorized that "lower" (i.e., simpler for AI) intelligence jobs will be replaced by AI before more complex ones. At the augmentation stage, AI takes over part of the duties of a service job; at the full replacement level, it may do all of the duties of a job, eliminating the need for human workers. As AI continues to replace lower-level tasks with higher-level intelligence, the relative value of each intelligence for service professionals will inevitably change over time.

John Ughulu et.al (2022) The capability of a digital computer or robot operated by a computer to carry out activities often associated with intelligent creatures is known as artificial intelligence. A few examples of AI's practical uses include machine learning

and deep learning. Companies that use AI for sales may boost leads by over 50%, cut call time by 60 to 70%, and save 40 to 60% on costs. With the use of AI, businesses may learn more about their ideal clients. This lessens the burden on the team while increasing conversion. The company's internal processes are being revolutionized by artificial intelligence. In addition, computer vision is used to base recommendations. Thanks to AI's ability to recognize trends in people's search habits and tailor results to their interests, it's much simpler to reach a certain demographic. By automating routine tasks, artificial intelligence may lighten the pressure on employees. Automation of repetitive tasks, improved accuracy, and the discovery of previously unseen patterns are all possible thanks to artificial intelligence.

Jessica Bayón Pérez et.al (2018) A domino effect is being created by the ever-increasing pace of technological development and its effects on the workforce, which has the potential to alter business practices, legislation, and employees in the years to come. Another major issue that can lead to disputes among cities worldwide is the significance of artificial intelligence for businesses. Collective bargaining and job satisfaction are on the decline due to factors such as seasonal workers, zero-hour contracts, and informal ways of employment. Thus, the so-called "Information Society," changes to labor, and changes to roles have all played important roles and evolved. Because of the rapid development of information technology and the rise of robots, many occupations have been rendered obsolete in many sectors. By creating new kinds of occupations to support this evolving economy, this process will accelerate in the coming decades. When the individuals who have lost their jobs because of automation come into conflict with this "macro" and "micro" perspective, the argument begins. Digital alterations and transformations will keep on growing, as confirmed by the facts cited and current industry trends.

Feichin Ted Tschang et.al (2020) Some worry that AI will lead to mass unemployment, while those in favor of the technology argue that it would make some occupations more valuable. These are valid points of view, but we need to clarify how AI may do both of these things, shifting the available labor market dynamics in the process. We review economic research on the effects of automation on work and skill sets, which show that nonroutine abilities will be valued more than routine ones and that middle-skill positions will be eliminated. We continue by presenting AI and automation case studies that demonstrate how AI is enhancing automation to achieve

the same goal, enabling businesses to govern and modularise repetitive tasks. The remaining tasks are either highly skilled or nonroutine and low-skilled, making them more amenable to future replacement. We show how AI interacts with other critical technologies to provide scale and scope economies for businesses. A decrease in the amount of highly trained labor may also be a consequence of the augmented employment arrangements that emerge. This is conditional on how far AI comes in its capacity to supplant human workers in more intricate occupations. Our last point is that business schools should educate students to think critically about the relationship between society and business.

Sandeep Trivedi et.al (2020) Companies may now do more with fewer resources thanks to artificial intelligence (AI), which is transforming the way businesses operate. As society, technology, and science progress, businesses are on the lookout for robust and complex solutions that may improve and streamline their operations. The purpose of this study is to investigate how medium-sized businesses might benefit from automation and AI in terms of improving their sales volume. The data science literature claims that when it comes to outlier situations, Robust Least Square (RLS) outperforms Ordinary Least Square (OLS). The RLS estimation methods employed in this research were M-estimation, S-estimation, and MM-estimation. For 2019, the information was assembled from 281 companies worldwide. According to the data, the sample businesses' sales volume is significantly and favorably impacted by internet content. This research also looked at how factors including product quality, marketing human resource availability, financing options, and competition affected sales growth. Except for competition and availability of capital, the findings show that all factors lead to a rise in sales volume. A lack of competition has a detrimental effect on sales volume but no effect on the availability of financing. This study's findings support the idea that content marketing may help businesses increase their revenue.

1.3 Statement of the Research Problem

In the contemporary digital era, organizations are increasingly adopting Artificial Intelligence (AI) to streamline and optimize their operations. One such area of transformation is IT Service Management (ITSM), which plays a critical role in ensuring seamless IT support and infrastructure maintenance within enterprises.

Despite the growing adoption of AI-powered solutions in ITSM, many organizations struggle to implement them effectively, facing challenges related to integration, data accuracy, workforce adaptability, and return on investment (ROI). Jones Lang LaSalle (JLL), a global real estate services firm, has begun embracing AI-driven ITSM solutions to enhance service delivery, automate routine tasks, and reduce operational costs. However, there is a significant gap in research regarding how AI is specifically transforming ITSM functions within real estate and facilities management companies like JLL. This study seeks to analyze the extent, effectiveness, and challenges of AI integration into ITSM at JLL. It also aims to evaluate the impact of this automation on service quality, operational efficiency, and user satisfaction. The lack of detailed insights into this area forms the core research problem:

1.4 Hypothesis of the study

- **H_0:** AI has no significant impact on automating IT services at JLL.
- **H_1:** AI has a significant impact on automating IT services at JLL.
- **H_0:** AI tools do not significantly improve service efficiency at JLL.
- **H_1:** AI tools significantly improve service efficiency at JLL.
- **H_0:** AI does not significantly reduce costs or improve response times in IT services at JLL.
- **H_1:** AI significantly reduces costs and improves response times in IT services at JLL.
- **H_0:** There are no significant challenges in AI implementation at JLL.
- **H_1:** There are significant challenges in AI implementation at JLL.

1.5 Objective of the study

1. To Analyze AI's impact on automating IT services at JLL.
2. To Identify AI tools used by JLL for service efficiency.
3. To Evaluate AI's role in reducing costs and improving response times.
4. To Explore challenges in AI implementation at JLL.

1.6 Scope of the study

The present study focuses on examining the transformative role of Artificial Intelligence (AI) in automating IT Service Management (ITSM) processes within Jones Lang LaSalle (JLL), a global leader in real estate services. The scope is designed to explore and evaluate how AI technologies such as chatbots, predictive analytics, natural language processing (NLP), machine learning (ML), and automation tools are integrated into JLL's ITSM framework to improve efficiency, reduce human intervention, and enhance service quality.

1.7 Importance of the study

The rapid advancement of Artificial Intelligence (AI) has revolutionized how businesses manage and deliver IT services. In this context, understanding the role of AI in automating IT Service Management (ITSM) is critical for modern enterprises seeking to optimize performance, reduce operational costs, and enhance service quality. This study holds considerable significance for various stakeholders, including industry professionals, academic researchers, IT managers, and organizations undergoing digital transformation—especially within the real estate sector, as exemplified by JLL (Jones Lang LaSalle).

1.8 Research Methodology

The study's research strategy will concentrate on gathering primary data. Data will be collected from important stakeholders within JLL via surveys and structured interviews to investigate the effects of AI on IT service management (ITSM). Individuals directly engaged in the installation and usage of AI technology in ITSM will be considered for this position, including IT managers, service desk staff, and developers of AI solutions. To collect quantitative and qualitative data, the survey will include closed-ended questions. The AI technologies' ability to automate service desk operations, handle emergencies, issues resolution, and overall service efficiency will be the primary emphasis of these surveys.

The collected data will then be analyzed to identify patterns, challenges, and opportunities in AI-based automation, providing a comprehensive understanding of its role and impact within the organization.

1.9 Data Required

The primary data required for the study will include information on the following:

1. **AI implementation**: Details on the specific AI tools and technologies used for IT Service Management (ITSM).
2. **Service automation**: Information on how AI has automated various aspects of ITSM, such as incident management, ticketing, and problem resolution.
3. **Performance metrics**: Data on improvements in efficiency, response time, and service quality post-AI implementation.
4. **Employee perceptions**: Insights into how employees perceive the AI tools in terms of usability, effectiveness, and support in daily operations.
5. **Challenges and benefits**: Information on challenges faced during the implementation of AI and the perceived benefits.

1.10 Data Source

The primary data will be sourced directly from JLL through:

1. **Surveys**: Distributed to IT service managers, technical staff, AI solution developers, and other key personnel involved in ITSM.
2. **Interviews**: Conducted with senior management, including heads of IT and service desk departments, to gain in-depth insights on AI's role in ITSM automation.
3. **Company Reports**: Internal reports or performance data related to AI usage in ITSM, if available.

1.11 Sampling Design

A purposive sampling technique will be used to select individuals who have direct experience or knowledge of AI and ITSM within mobile technology. The sampling design will be as follows:

- **Population**: All employees involved in IT service management and AI implementation within JLL.

- **Sample size**: A total of approximately 150 participants, including IT managers, service desk staff, and AI developers, will be selected to ensure comprehensive representation across different roles.
- **Selection criteria**: Employees who have at least 6 months of experience working with AI tools in ITSM will be included to ensure relevant and informed responses.

1.12 Instrument Design

Two primary instruments will be used for data collection:

1. **Survey questionnaire**: A structured questionnaire with both closed and open-ended questions will be designed to capture quantitative and qualitative data. The survey will focus on:
    - The extent of AI automation in ITSM.
    - Performance changes observed after AI integration.
    - Employee attitudes towards AI tools.
    - Challenges in AI implementation.
2. **Interview guide**: A semi-structured interview guide will be developed for in-depth discussions with senior management and key personnel. Questions will focus on the strategic impact of AI, the decision-making process for its implementation, and operational challenges.

1.13 Analytical Design

The data analysis will involve both quantitative and qualitative techniques:

1. **Quantitative Analysis**: Statistics will be used to examine the results of the survey's closed-ended questions. We will summarise employee impressions and performance measures using descriptive statistics like mean, standard deviation, and frequency distributions. The links between AI installation and increases in ITSM efficiency will be determined using inferential statistics, such as regression analysis or correlation.

1.14 Presentation of the project

CHAPTER 1: INTRODUCTION

In this chapter, we will take a high-level look at how IT Service Management (ITSM) makes use of AI. It will go over how AI is changing IT service management (ITSM) implementation with an emphasis on efficiency, error reduction, and cost optimization, and why automation is crucial to IT services. JLL will be introduced in this chapter as well, providing background for the research via a discussion of how AI is relevant to their IT management practices and service offerings.

CHAPTER 2: THEORETICAL BACKGROUND

This chapter will delve into the theoretical foundations of AI and IT Service Management. It will cover the key concepts, principles, and frameworks related to both fields. Special emphasis will be placed on AI-driven solutions like machine learning, natural language processing, and predictive analytics as they apply to ITSM.

CHAPTER 3: COMPANY PROFILE

Mobile Technology's business operations, products, and services—particularly those in the IT service domain—will be highlighted in this chapter's comprehensive overview. It will cover JLL's approach to adopting and integrating AI into their ITSM processes. This chapter will also include an overview of the company's vision, mission, and market positioning.

CHAPTER 4: ANALYSIS AND INTERPRETATION OF DATA

This section will detail the findings from the data analysis of JLL IT service management (ITSM) AI implementation. The data could be derived from surveys, interviews with stakeholders, or company reports. The chapter will interpret the results to demonstrate how AI automation impacts the efficiency and quality of JLL's ITSM processes.

CHAPTER 5: FINDINGS AND SUGGESTIONS

In this last section, we will review the study's important points, focussing on how AI automation has affected JLL IT service management system as a whole. It will

provide actionable suggestions for further improving AI integration within the company's IT service processes. This chapter will also explore future trends and recommendations for organizations looking to adopt AI in ITSM.

Related points on methodology

Research Design:

- Descriptive research design to explore AI's role in automating IT Service Management (ITSM) at JLL.

Data Collection Methods:

- **Primary Data:**
    - In-depth interviews with IT service managers, team leaders, and AI specialists.
    - Structured surveys for employees involved in ITSM processes.
- **Secondary Data:**
    - Analysis of internal documents, reports, and case studies related to AI implementation.

Sampling Strategy:

- Sample size: 150 participants (IT professionals, managers, support staff).
- Purposive sampling to select individuals directly involved with AI-based ITSM tools.

Data Analysis Techniques:

- **Qualitative Analysis:** Thematic analysis of interview and survey responses.
- **Quantitative Analysis:** Statistical analysis of AI's impact on ITSM performance metrics.
- Analysis of AI tools performance metrics, such as chatbots and predictive maintenance systems.

Technology Focus:

- Evaluation of AI technologies like machine learning, natural language processing (NLP), and AI-based monitoring systems.
- Focus on AI's impact on incident management, change management, problem resolution, and customer support automation.

Comparative Analysis:

- Comparison of ITSM processes before and after AI implementation to measure automation and efficiency improvements.

Validation and Reliability:

- Triangulation to validate findings from multiple data sources.
- Ensuring reliability through consistent data coding and analysis method

CHAPTER 2

THEORETICAL BACKGROUND

2.1 Introduction

Artificial Intelligence (AI) has emerged as a foundational technology driving digital transformation across industries. Its application in IT Service Management (ITSM) represents a critical innovation in the field of enterprise operations. ITSM encompasses the planning, delivery, support, and management of IT services to meet business needs. Traditionally, ITSM has been human-intensive, involving manual processes for incident management, request handling, problem resolution, and change control. However, the increasing complexity and scale of IT infrastructure have necessitated the use of intelligent systems capable of automating and optimizing these services.

1. Evolution of IT Service Management:

The ITSM framework has evolved significantly over the decades. Initially focused on basic helpdesk services, ITSM matured into structured methodologies such as ITIL (Information Technology Infrastructure Library), which standardizes best practices for aligning IT services with business needs. As digital transformation intensified, traditional ITSM practices became insufficient to handle the growing demand for speed, agility, and accuracy. This opened the door for AI-driven tools to revolutionize ITSM operations by making them more proactive, predictive, and autonomous.

2. Role of Artificial Intelligence in ITSM:

AI in ITSM leverages technologies like machine learning, natural language processing (NLP), robotic process automation (RPA), and data analytics to automate and improve service delivery. These technologies enable systems to:

Analyze historical data to predict potential failures or incidents (predictive maintenance)

Understand and respond to user queries using AI-powered chatbots

Categorize and prioritize service requests automatically

Recommend solutions based on past resolutions (knowledge management)

Continuously learn and improve from data over time

These capabilities reduce the workload on IT staff, enhance response times, and improve user satisfaction. As a result, AI-based ITSM tools transform IT departments from reactive support units to proactive service enablers.

3. Theoretical Models Supporting AI in ITSM:

Several theoretical frameworks support the integration of AI into ITSM:

Technology Acceptance Model (TAM): This model explains how users come to accept and use a new technology. It posits that perceived usefulness and perceived ease of use are key determinants. In the context of AI in ITSM, user adoption depends on how effectively the AI tools enhance performance and how intuitive they are to use.

ITIL Framework: As a service management framework, ITIL provides the structure for implementing AI tools within service strategies, design, transition, operations, and continual service improvement. AI enhances ITIL processes by making them more dynamic and less reliant on manual inputs.

Socio-Technical Systems Theory: This theory emphasizes the interrelationship between people, technology, and the organizational environment. The successful implementation of AI in ITSM is not just a technological endeavor but also requires changes in organizational culture, employee roles, and management practices.

4. Application to Real Estate and Facilities Management (JLL Case):

In a global real estate company like JLL, managing vast infrastructure, client services, and operational support demands a highly efficient ITSM system. AI enables JLL to:

Automate facility service requests from various global offices

Monitor and maintain IT assets remotely

Provide 24/7 support through virtual agents

Analyze operational data to optimize energy usage, maintenance schedules, and resource allocation

By integrating AI into its ITSM ecosystem, JLL can ensure seamless operations, quick service resolution, and enhanced client satisfaction—crucial for maintaining its position as a leader in real estate services.

2.2 AI in IT Service Management

AI is the application of computational intelligence to computers and algorithms so that they can learn, reason, solve problems, and grasp language in the same way that humans can. Automating routine operations, identifying and preventing IT problems, and making sense of massive volumes of data are all ways AI may improve IT service management.

Artificial Intelligence for IT Service Management

The IT service management team may save time and effort by using AI to do more with less effort. By automating mundane but necessary processes like ticket routing, classification, and resolution, AI-powered platforms allow IT staff to devote their attention to more pressing matters requiring human interaction. In addition to boosting productivity, this boosts morale and decreases burnout among workers.

Machine Learning in IT Service Management

Analyzing historical data, machine learning algorithms can identify patterns and trends that humans might overlook, leading to more accurate predictions and proactive problem resolution. This can result in fewer service disruptions, reduced downtime, and improved overall performance.

IT Service Management Automation

Artificial intelligence (AI) in IT service management relies heavily on automation. Businesses may save time, improve service quality, and eliminate human error by automating mundane procedures and operations. From automated incident response to

self-service portals, AI-driven automation can revolutionize the way IT services are delivered.

2.3 Benefits of AI in IT Service Management

There is a vast array of advantages that organizations may get from using AI in IT service management, such as:

A more efficient operation is possible because AI can do jobs more quickly and precisely than humans, which boosts output while decreasing overhead.

Organizations may benefit from better decision-making thanks to AI algorithms' ability to analyze data in real time and provide insightful analysis.

Organizations may improve customer happiness and loyalty by automating mundane processes and delivering services more quickly.

Resolving problems proactively: AI can anticipate and avert IT problems before they happen, which means less downtime and less effect on company operations.

Systems driven by AI may be scaled up or down according to demand, enabling organizations to swiftly adjust to evolving business requirements.

2.4 Role of Artificial Intelligence in IT Service

Automating routine tasks, analyzing data, and making predictions, AI can help organizations operate more efficiently, reduce costs, and deliver better service to their customers. From predicting system failures to optimizing resource allocation, AI can transform the way IT services are managed and delivered.

IT Service Management Optimization with AI

To optimize IT service management with AI, organizations should:

- Identify areas where AI may have a major effect, including incident management, issue resolution, and service desk operations.
- Invest in AI technologies that align with organizational goals and objectives, ensuring a seamless integration with existing IT systems.
- Train IT staff on how to leverage AI tools and technologies effectively, empowering them to work more efficiently and effectively.

- Monitor and assess AI system performance to optimize benefits and ROI.

AI Technologies in IT Service Management

AI-Driven Automation Tools

IT Service Management (ITSM) is undergoing a revolution as a result of automation solutions powered by artificial intelligence (AI). With the help of AI, these solutions may automate mundane tasks like system monitoring, problem resolution, and ticketing, making human interaction unnecessary and lowering the likelihood of mistakes. Notable features of AI-powered robotics comprise

- Automation of Routine Tasks: Automating common IT tasks, such as password resets, system updates, and service requests, to improve efficiency and response times.
- Workflow Automation: Using AI to manage and optimize workflows, including task assignments, approvals, and escalations, based on real-time data and patterns.

Machine Learning Algorithms

When it comes to IT service management (ITSM), machine learning techniques are crucial for improving data-driven insights and predictive capacities. These algorithms improve decision-making by analyzing real-time and historical data for trends, problems, and optimization. Important uses encompass

- Anomaly Detection: Implementing algorithms to detect unusual patterns or behaviors in IT systems that may indicate problems or threats, enabling proactive measures.
- Performance Optimization: Analyzing performance data to identify areas for improvement and optimize system configurations for better efficiency and reliability

Natural Language Processing (NLP) Applications

By facilitating more natural user-IT system interactions, Natural Language Processing (NLP) improves IT service management (ITSM). Natural language processing (NLP) methods enhance user assistance and communication by comprehending, interpreting, and responding to human speech. Important uses encompass

- Chatbots and virtual assistants: using chatbots powered by artificial intelligence to respond to user questions, assist, and fix problems via conversations.
- Automated Ticketing: Using NLP to automatically categorize and prioritize support tickets based on their content, reducing manual effort and improving response times.
- Sentiment Analysis: Analyzing user feedback and communication to gauge sentiment, identify areas of dissatisfaction, and address potential issues proactively

Enhancing Operational Efficiency

Automating Routine IT Tasks

One way to improve operational efficiency through IT Service Management (ITSM) is to automate common IT processes. Organizations may improve the speed and accuracy of service delivery by using AI and automation solutions to minimize the time and effort needed to complete repetitive operations. Crucial elements include of

- Task Automation: Implementing scripts and automation tools to handle routine activities such as user onboarding, password resets, and system updates. This minimizes manual intervention and accelerates task completion.
- Service Request Fulfillment: Automating the processing of service requests, including approvals and provisioning, to streamline workflows and improve service response times.
- Incident Resolution: Using technologies powered by artificial intelligence to detect, diagnose, and fix typical problems automatically; this cuts down on human intervention and speeds up the resolution process.

Predictive Maintenance and Incident Management

- Predictive Analytics: Utilizing machine learning algorithms to analyze historical data and predict potential system failures or performance issues, allowing for preemptive maintenance actions.
- Incident Prediction: Implementing AI models to forecast incidents based on patterns and trends, enabling IT teams to address issues before they escalate.

- Automated Response: Developing systems that can automatically respond to predicted incidents, such as triggering maintenance tasks or alerting relevant personnel, to prevent service disruptions.

Optimization of Resource Allocation

Optimizing resource allocation involves using AI and analytics to manage and allocate IT resources more effectively. This ensures that resources are utilized efficiently and aligned with organizational priorities. Key aspects include:

- Resource Monitoring: Implementing tools to continuously monitor resource usage and performance, providing insights into areas where resources are underutilized or overburdened.
- Dynamic Allocation: Utilizing AI to dynamically allocate resources based on current demands and usage patterns, ensuring optimal performance and cost efficiency.

2.5 Challenges and Solutions

Despite the benefits, integrating AI into ITSM can present several challenges. Addressing these challenges requires strategic planning and innovative solutions. Key aspects include:

- Challenge 1: Data Quality and Integration: Ensuring high-quality and consistent data for AI models is crucial. Solution: Implementing data governance frameworks and integrating data sources to improve data quality.
- Challenge 2: Employees may be hesitant to embrace new procedures that are driven by AI due to resistance to change. The solution is to acquire buy-in and make transitions as seamless as possible by providing training and showing the advantages of AI.
- Challenge 3: Complexity of AI Models: Complex AI models may be difficult to understand and manage. Solution: Simplifying models and using user-friendly interfaces to make AI tools more accessible to IT staff.

Impact on Service Quality and Cost Reduction

The integration of AI in ITSM can lead to significant improvements in service quality and cost efficiency. Evaluating these impacts involves examining both qualitative and quantitative outcomes. Key aspects include:

- Service Quality Improvement: AI-driven automation and predictive maintenance can enhance the reliability and responsiveness of IT services, leading to higher customer satisfaction and reduced service disruptions.

2.6 Benefits and Limitations

Advantages of AI Integration in ITSM

Integrating AI into IT Service Management (ITSM) offers several notable advantages, including:

- • AI streamlines operations by automating mundane activities, cutting down on time spent on things like issue response and ticket administration. As a result, resolution times are reduced and less human involvement is required.
- • Predictive Capabilities: By analyzing past data, machine learning algorithms can anticipate and fix possible problems before they happen, which improves system dependability and decreases downtime.
- Data classification and event categorization are both made more accurate by artificial intelligence (AI) technology, especially natural language processing (NLP), which reduces the likelihood of human mistakes and improves the quality of decisions made.
- Cost Savings: By streamlining operations and reducing the need for manual labor, AI can lead to substantial cost reductions in IT service management. This includes savings on labor costs and operational inefficiencies.
- Scalability: AI systems can scale with organizational needs, handling increased workloads and more complex tasks without a proportional increase in resource requirements.

Potential Drawbacks and Risks

• Artificial intelligence (AI) automates repetitive tasks, such as problem resolution and ticket administration, which helps to simplify operations. Consequently, less human intervention is necessary and resolution times are decreased.

• Predictive Capabilities: Machine learning algorithms can analyze historical data to predict and resolve potential issues before they occur, enhancing system reliability and reducing downtime.

Through the use of AI technology, particularly natural language processing (NLP), the accuracy of data categorization and event categorization is enhanced, leading to better judgments with less room for human error.

Comparative Analysis with Traditional ITSM Approaches

Comparing AI-enhanced ITSM with traditional ITSM approaches highlights the key differences and improvements:

- Automation: Traditional ITSM often relies heavily on manual processes, whereas AIdriven ITSM automates many of these processes, leading to faster and more accurate service delivery.
- Predictive vs. Reactive: Traditional ITSM tends to be reactive, addressing issues after they occur. In contrast, AI-driven ITSM uses predictive analytics to anticipate and resolve issues before they impact operations.
- Scalability: AI systems offer better scalability compared to traditional ITSM, which may struggle to keep up with growing demands and increased complexity in service management.
- Cost Efficiency: While traditional ITSM may incur higher operational costs due to manual labor and inefficiencies, AI-driven ITSM can reduce costs through automation and optimized resource management.
- Service Quality: AI-enhanced ITSM generally offers improved service quality by reducing human errors, speeding up incident resolution, and providing more accurate insights into system performance.

2.7 Emerging AI Technologies in ITSM

The development of new AI technologies is constantly changing the IT service management (ITSM) environment. Some upcoming changes are: Cutting-Edge Machine Learning Systems: Improvements in automated decision-making, predictive analytics, and the ability to handle complicated tasks will characterize the next generation of machine learning algorithms. It is believed that

AI's IT service management skills will be improved by techniques like deep learning and reinforcement learning.

- Contextual AI: AI systems will become better at understanding context, enabling more accurate and relevant responses to incidents and requests. Context-aware systems will improve the personalization and efficiency of IT service delivery.
- AI-Driven Automation: Future AI technologies will offer even more sophisticated automation features, including self-healing systems that can autonomously resolve issues and adapt to new scenarios without human intervention.
- Natural Language Understanding (NLU): Advances in NLU will enable more intuitive interactions between AI systems and users, improving the accuracy of chatbot responses and automating complex service desk functions.
- AI's capacity to manage dispersed and high-speed IT settings will be further enhanced when it integrates with emerging technologies like 5G and edge computing.

CHAPTER 3

COMPANY PROFILE

3.1 Company overview

Jones Lang LaSalle (JLL) is a multinational professional services organisation focused on real estate as well as investment management. As one in the world's top commercial residential property services organisations, JLL works in more than 80 countries and employs nearly 100,000 people.

Vision

JLL aims to "reimagine the world and real estate, creating fulfilling possibilities and incredible spaces where people can achieve their goals."

Mission

With cutting-edge innovation, seamless data, and human intelligence, JLL aims to "shape the future about real estate for a world that is better."

3.2 About Company

When it comes to investment management and real estate, no one does it better than JLL, a world-renowned professional services organisation. With a wide array of services including capital markets, leasing, project development, managing facilities,

property and asset management, research and advice, transaction management, and more, JLL has become the go-to real estate consultant in India. Commercial, industrial, data centre, residential, retail, healthcare, hotel, elder living, educational, and warehousing & logistics are just a few of the asset types that these services serve.

3.3 Location or address of the unit

In Mumbai, you may find the main office of JLL India. In addition to serving more than 130 tier-II and tier-III markets nationwide, the firm has a substantial presence in ten major cities: Delhi NCR, Bengaluru, Pune, Chennai, Hyderabad, Kolkata, Ahmedabad, Kochi, among Coimbatore.

3.4 Brief history of the unit

JLL was founded in 1783 in London. The company has been successfully operating in India for more than 20 years, and it has only grown since then. Its first worldwide Centre of Expertise (CoE) for data, technology, and information management was established in Bengaluru in 2018, which was a significant milestone. Commercial real estate technology development is the center's forte, and it serves international markets.

Strategic Intent of the company:

The use of technology to increase productivity and benefit to clients is essential to JLL's strategic goals. Data analytics, AI, and other cutting-edge tech are part of the plan to revamp the company's operations. More data-driven insights, streamlined procedures, and individualised service are JLL's goals. Aiming for net-zero emissions by 2040 and incorporating sustainability practices into operations and customer solutions are two ways the company is dedicated to sustainability.

3.5 Operations management of the company:

Innovation and efficiency are the pillars of JLL's operations management. In addition to establishing practice groups and specialised services, the organisation has introduced a tech-driven CRM platform. In order to improve service delivery and decrease redundancy, JLL's organisational structure encourages responsibility and teamwork. The JLL Foundation is a nonprofit that the business has set up to aid with

sustainability and climate change efforts; CSR is another area of emphasis for the company.

3.6 Financial position of the company with its analysis:

Total revenue for JLL was $23.4 billion in 2024, up 13% from the previous year. There was a 51% increase to $868 million in operational income and $547 million in net income for the business. The current fiscal year is expected to have profits increase of 19.2% year over year, according to analysts. The average estimate for fiscal 2025 is $16.70 per share. For 2025, JLL aims for an adjusted EBITDA range of $1.25–1.45 billion, which, at the midpoint, represents an increase of 14%.

3.7 plans of the company:

Long-term success, technical advancement, and increased customer value are the pillars of JLL's strategy. Investment in people, technology, and communities is a top priority for the organisation. To lessen its dependence on any one market, increase its global reach, and diversify its income sources are all goals of JLL. Furthermore, the company intends to keep incorporating sustainable principles into its business processes and customer solutions, with an emphasis on green construction and energy efficiency.

CHAPTER 4
ANALYSIS AND INTERPRETATION OF DATA

Table 4. 1 Age

		Frequency	**%**
Valid	Under 20	50	33.3
	21-30	49	32.7
	31-40	24	16.0
	41-50	22	14.7
	51 and above	5	3.3
	Total	150	100.0

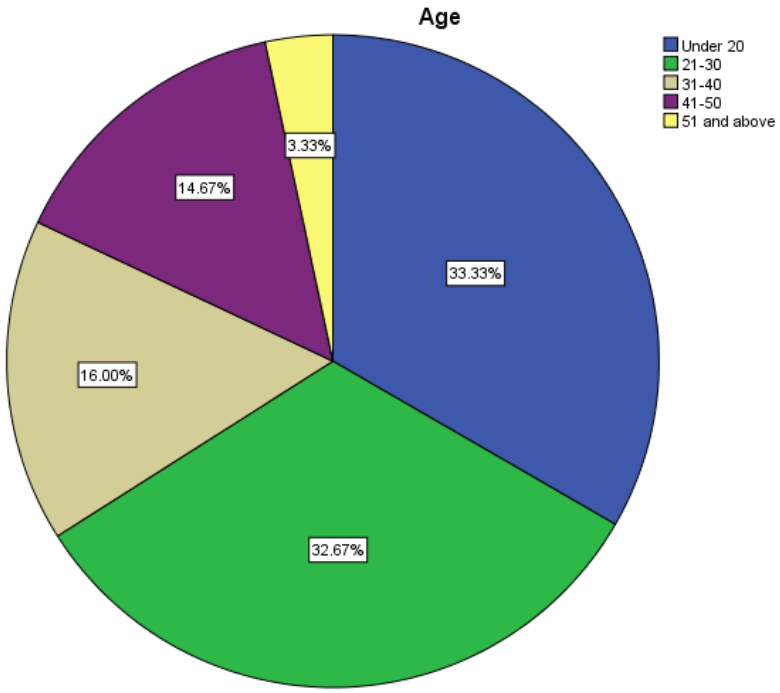

Figure 4. 1 Age

The data shows that out of 150 people, the age distribution is as follows. The biggest age group in the sample is under 20 years old, with 33.3% of the total (50 persons).

People in the 21–30 age bracket comprise 32.7% (49 people) of the sample, the second-largest group. Of the total, 16.0% (24 people) are in the 31–40 age bracket, while 14.7% (22 people) are in the 41–50 age bracket. Lastly, only 3.3% (5 individuals) are aged 51 and above. This indicates that the majority of the sample is relatively young, with a significant portion under the age of 30.

Table 4. 2 Gender

		Frequency	%
Valid	Male	95	63.3
	Female	55	36.7
	Total	150	100.0

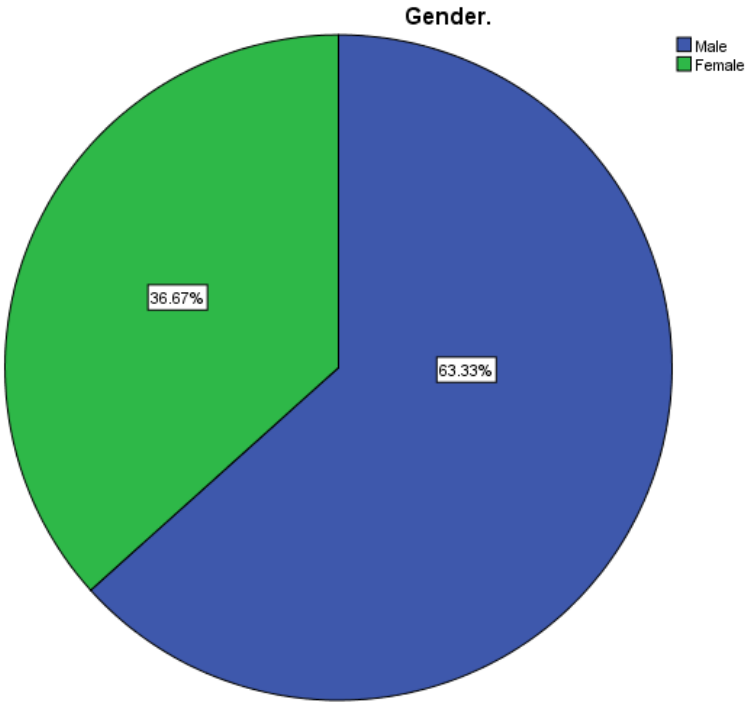

Figure 4. 2 Gender

The data outlines the gender distribution of a sample of 150 individuals. Out of the total, 63.3% (95 individuals) are male, making them the majority group, while 36.7% (55 individuals) are female. This indicates a notable gender imbalance, with males representing a larger portion of the sample. The data is based on a complete sample, as all 150 responses are accounted for.

Table 4. 3 What is your position at JLL?

		Frequency	%
Valid	Executive	34	22.7
	Manager	42	28.0
	Technical Staff	42	28.0
	Support Staff	32	21.3
	Total	150	100.0

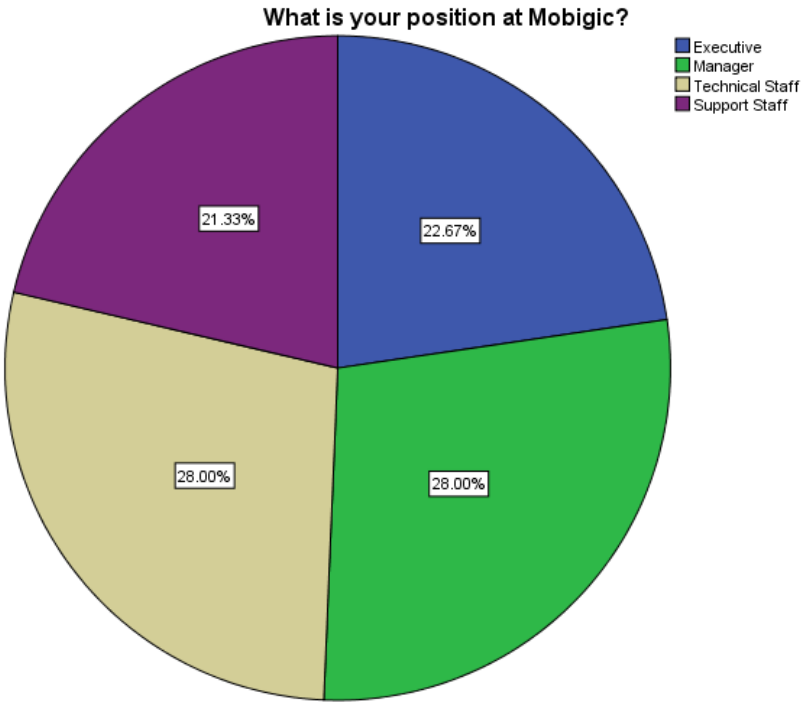

Figure 4. 3 What is your position at JLL

The data shows the distribution of 150 people's occupations across four different types of jobs. At 42 people each, the biggest groupings in the sample are managers and technical staff, making up 28.0% of the total. Executives make up 22.7% (34 individuals), while Support Staff constitute 21.3% (32 individuals), forming the smallest category. Overall, the workforce is relatively evenly distributed across these roles, with no single category dominating the sample.

Table 4. 4 How many years of experience do you have in IT Service Management?

		Frequency	%
Valid	Less than 1 year	15	10.0
	1-3 years	42	28.0
	4-6 years	52	34.7
	7-10 years	25	16.7
	More than 10 years	16	10.7
	Total	150	100.0

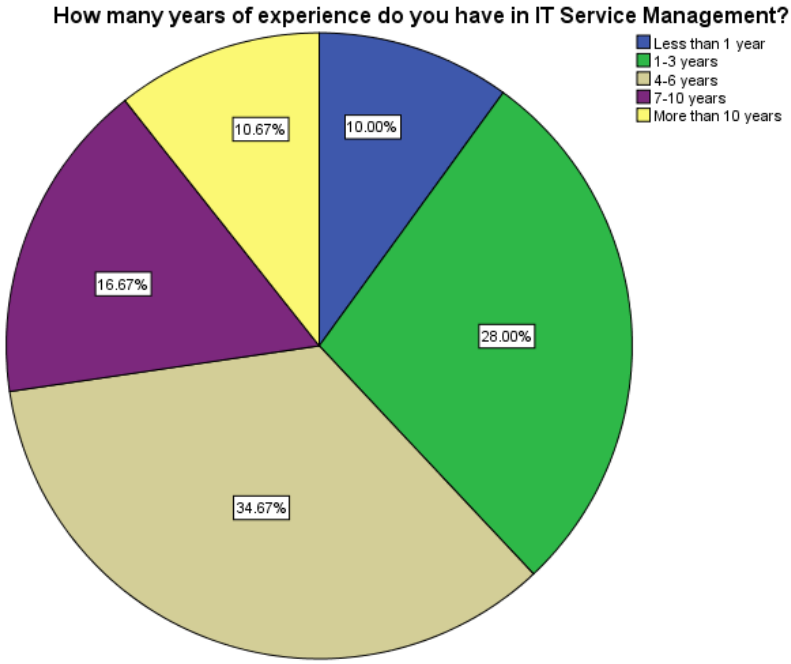

Figure 4. 4 How many years of experience do you have in IT Service Management?

A total of 150 people's IT service management expertise is broken down by year in the data. Among those with 4-6 years of experience, the biggest group accounts for 34.7% or 52 people. The next largest group, comprising 28.0% or 42 people, has 1-3 years of experience. About 16.7 %, or 25 people, have 7-10 years of experience.

There are smaller groups for those with 0–1 year of experience (15 people) and those with 1–10 years of experience (10.7%, 16 people). A total of 72.7% of respondents have worked in IT service management for up to 6 years, suggesting that the majority of participants have intermediate-level expertise in the field.

Table 4. 5 How significantly has AI improved the automation of IT services at JLL?

		Frequency	%
Valid	Strongly Disagree	15	10.0
	Disagree	19	12.7
	Neutral	34	22.7
	Agree	42	28.0
	Strongly Agree	40	26.7
	Total	150	100.0

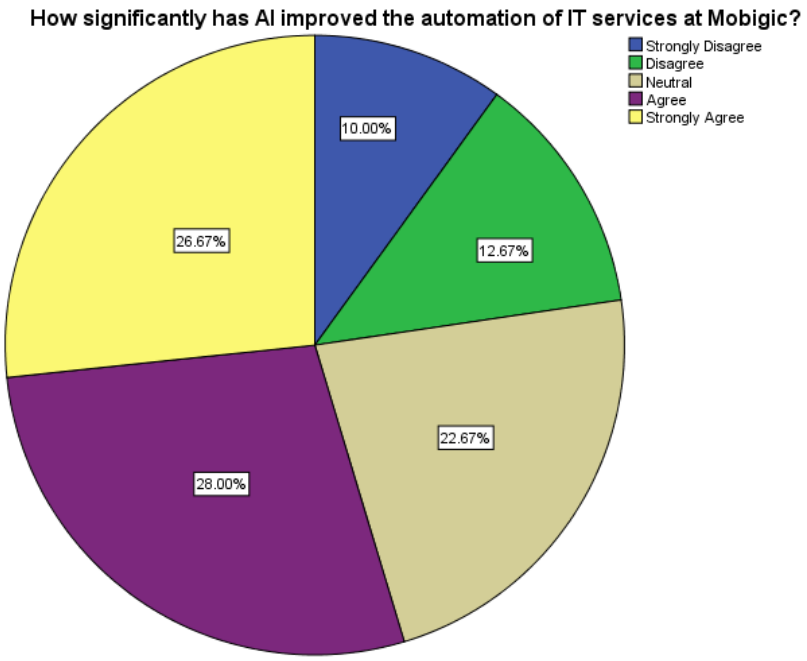

Figure 4. 5 How significantly has AI improved the automation of IT services at JLL?

A statement or proposition's degree of agreement with the respondents is reflected in the statistics. Over half of the 150 people polled (54.7% to be exact) had a favorable reaction; 28.0% (42 people) agreed with the remark, and 26.7% (40 people) strongly agreed. At the same time, 34 people, or 22.7% of the total, did not express an opinion either way. The opposite is true; a smaller %age of the sample disagreed (12.7%, or 19 people), with 10% expressing significant disagreement (15 people). Based on this distribution, it seems that most respondents agree.

Table 4. 6 In what ways have AI tools enhanced overall service delivery efficiency at JLL?

		Frequency	%
Valid	Strongly Disagree	4	2.7
	Disagree	20	13.3
	Neutral	39	26.0
	Agree	43	28.7
	Strongly Agree	44	29.3

	Total	150	100.0

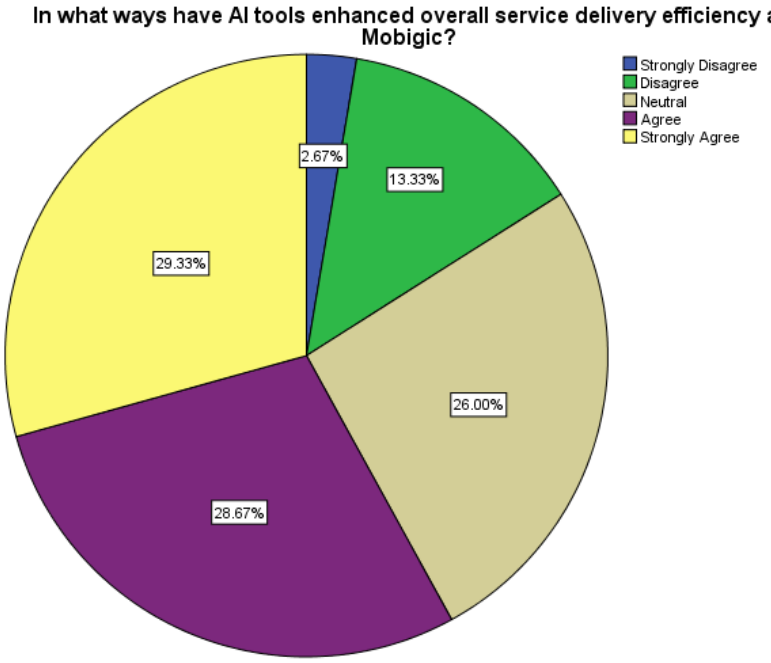

Figure 4. 6 In what ways have AI tools enhanced overall service delivery efficiency at JLL

The data shows how many people answered a certain question or statement. Out of 150 people who took the survey, the vast majority were in favor. Of those who took the survey, 29.3% (44 people) strongly agreed and 28.7% (43 people) agreed. A considerable fraction, 26.0% or 39 people, gave neutral replies, meaning they were unsure. Alternatively, 13.3% (20 people) were in disagreement, with just 2.7% (4 people) expressing a severe disagreement. While most people agreed with the statement, this distribution shows that many were ambivalent and just a tiny minority disagreed.

Table 4. 7 How much has automation through AI reduced the workload for IT staff?

		Frequency	%
Valid	Strongly Disagree	7	4.7
	Disagree	15	10.0
	Neutral	46	30.7

	Agree	46	30.7
	Strongly Agree	36	24.0
	Total	150	100.0

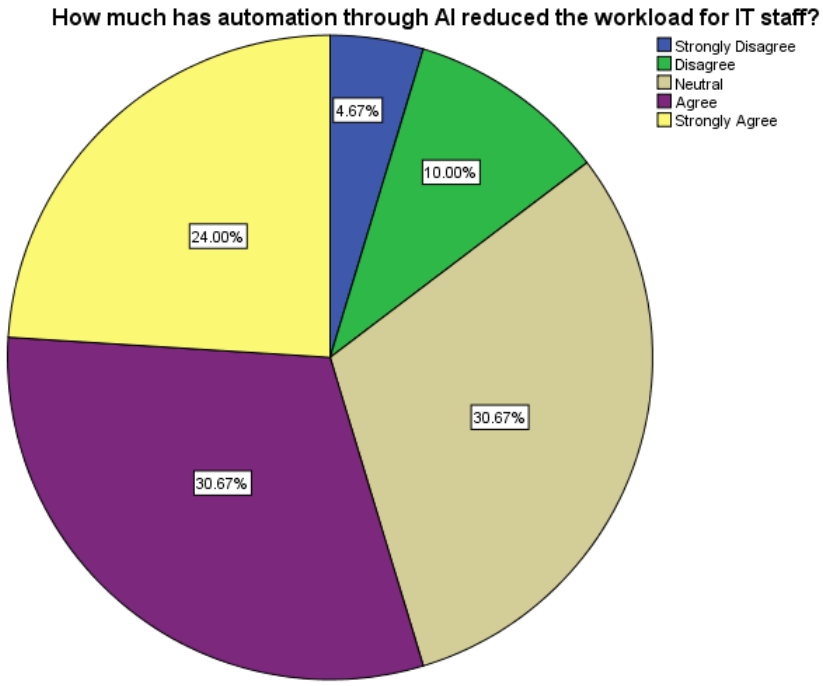

Figure 4. 7 How much has automation through AI reduced the workload for IT staff

From a random sample of 150 people, the data illustrates how they felt about a certain statement. Of the total replies, 30.7% (46 people) were in agreement and another 30.7% (46 people) were indifferent. Of the total respondents, 24.0% (36 people) strongly agreed with the statement, 10.0% (15 people) disagreed, and 4.7% (7 people) were vehemently opposed. With a large %age of answers falling into the "neutral" or "in favor" categories, this distribution suggests that views on the statement are somewhat split.

Table 4. 8 How effectively does AI contribute to identifying and resolving IT issues at JLL?

		Frequency	%
Valid	Strongly Disagree	9	6.0

	Disagree	15	10.0
	Neutral	37	24.7
	Agree	45	30.0
	Strongly Agree	44	29.3
	Total	150	100.0

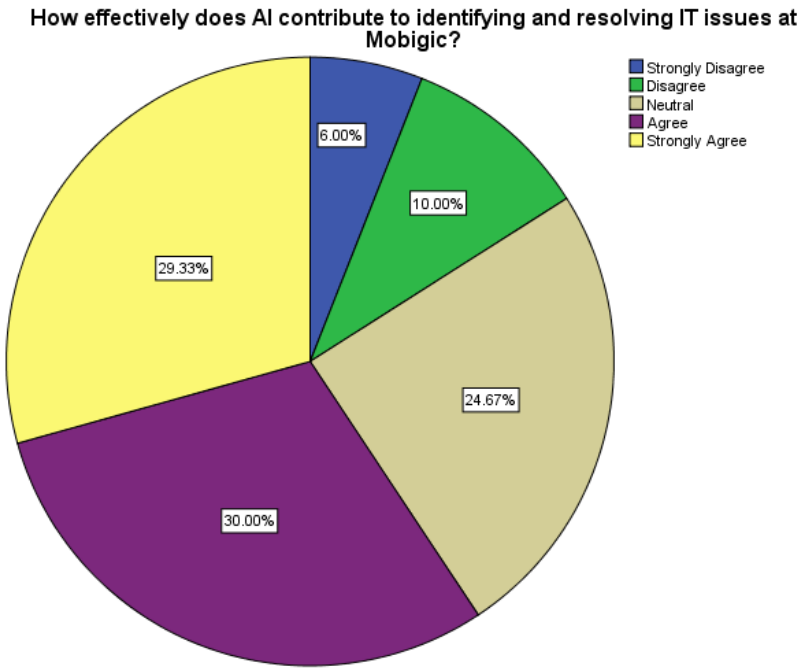

Figure 4. 8 How effectively does AI contribute to identifying and resolving IT issues at JLL

Here we can see how 150 people broke down a single phrase into its parts. A total of 59.3% of the people in this sample agreed with the statement, with 30.0% (45 people) strongly agreeing and 29.3% (44 people) agreeing. A sizeable minority (24.7 %, or 37 people) indicated they were ambivalent about the remark by selecting the "neutral" option. Conversely, 10.0% (15 individuals) disagreed, and 6.0% (9 individuals) strongly disagreed, making up the smaller segments of the sample. Despite the prevalence of neutral replies, which show some ambivalence among participants, this distribution reveals a substantial propensity towards agreement.

Table 4. 9 What is your level of awareness of the AI tools currently utilized by JLL in IT service management?

		Frequency	%
Valid	Strongly Disagree	8	5.3
	Disagree	24	16.0
	Neutral	36	24.0
	Agree	40	26.7
	Strongly Agree	42	28.0
	Total	150	100.0

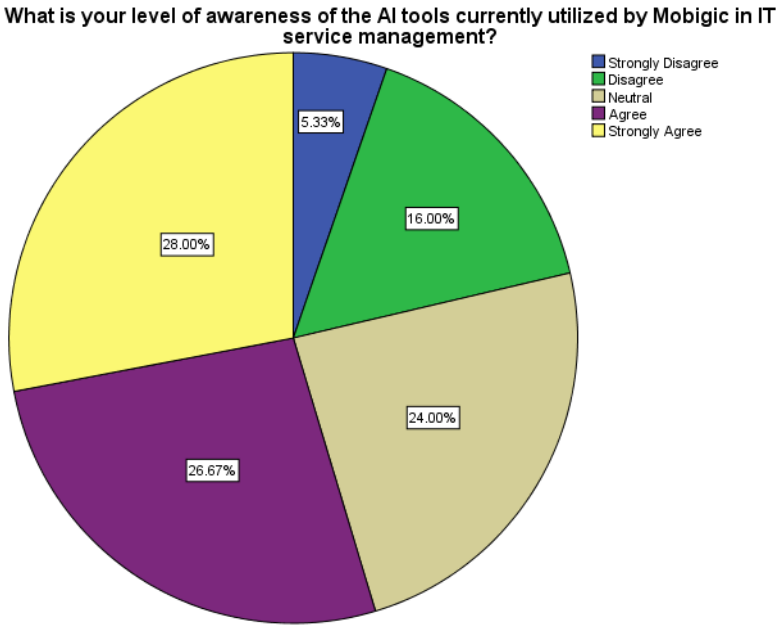

Figure 4. 9 What is your level of awareness of the AI tools currently utilized by JLL in IT service management

Responses to a single statement from 150 people are shown in the statistics. A total of 54.7% of the people who took the survey agreed with the statement, with 28.0% strongly agreeing and 26.7% agreeing. With 24.0% (36 people) giving neutral comments, it's clear that many people were hesitant to provide an outright view. A smaller fraction of the sample, 16.0% (24 people), disagreed, and 5.3% (8 people) strongly disagreed. This distribution suggests a general tendency toward agreement,

although the presence of neutral responses reflects some level of uncertainty or ambivalence among the participants.

Table 4. 10 How positively have the AI tools implemented impacted service efficiency?

		Frequency	%
Valid	Strongly Disagree	9	6.0
	Disagree	16	10.7
	Neutral	36	24.0
	Agree	43	28.7
	Strongly Agree	46	30.7
	Total	150	100.0

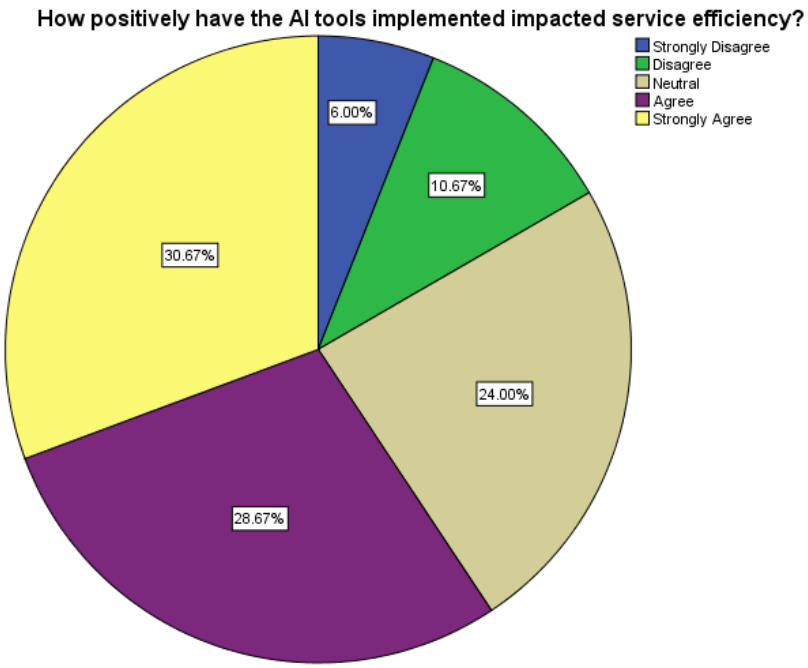

Figure 4. 10 How positively have the AI tools implemented impacted service efficiency?

The information is based on 150 people's replies to a single statement. Among the respondents, 30.7% (46 individuals) strongly agreed, and 28.7% (43 individuals) agreed, resulting in a combined total of 59.4% agreeing with the statement. Neutral responses accounted for 24.0% (36 individuals), indicating that a notable portion of

participants neither agreed nor disagreed. The smaller subsets of the sample consisted of 9.0% who strongly disagreed and 10.7% who disagreed overall. This distribution indicates a significant inclination toward agreement, although the presence of neutral responses suggests some ambivalence among participants.

Table 4. 11 How sufficient has the training on AI tools been for staff to utilize them effectively?

		Frequency	%
Valid	Strongly Disagree	5	3.3
	Disagree	12	8.0
	Neutral	41	27.3
	Agree	52	34.7
	Strongly Agree	40	26.7
	Total	150	100.0

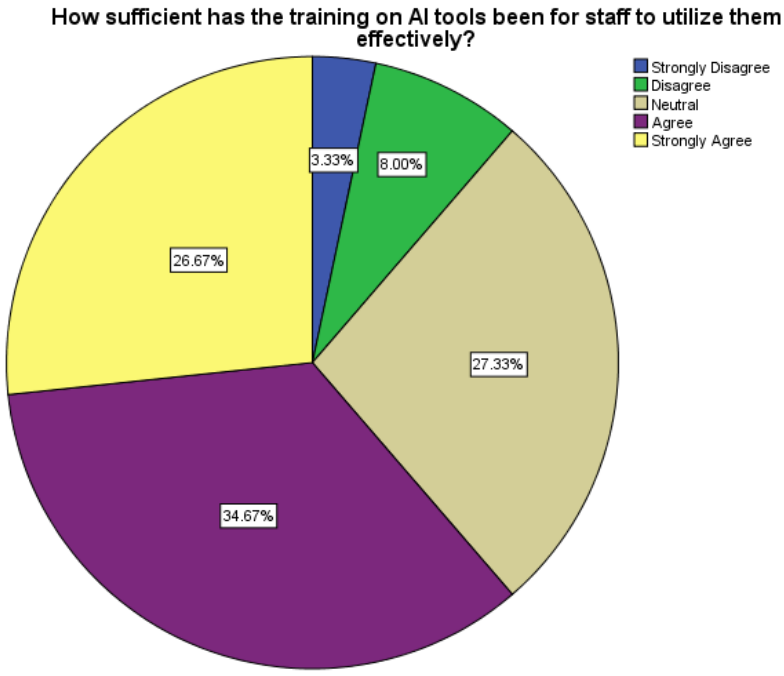

Figure 4. 11 How sufficient has the training on AI tools been for staff to utilize them effectively

Responses to a single statement from 150 people are shown in the statistics. The overall number of people who agreed with the statement was 61.4%, with 34.7% (52

people) strongly agreeing and 26.7% (40 people) agreeing. The fact that 27.3% of respondents (41 people) gave neutral answers shows that many people were hesitant to express an opinion. In contrast, the smaller subsets of the sample (12 people) disagreed (8.0%) and (3.3%) severely disagreed. This distribution suggests a strong tendency toward agreement among respondents, although the presence of neutral responses indicates some uncertainty or ambivalence.

Table 4. 12 What is your opinion on the user-friendliness of the AI tools implemented at JLL?

		Frequency	%
Valid	Strongly Disagree	7	4.7
	Disagree	16	10.7
	Neutral	46	30.7
	Agree	42	28.0
	Strongly Agree	39	26.0
	Total	150	100.0

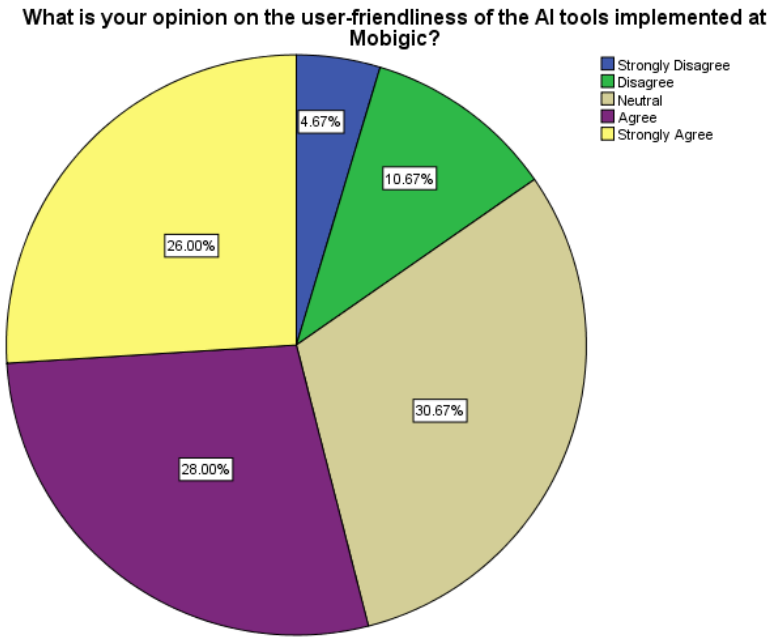

Figure 4. 12 What is your opinion on the user-friendliness of the AI tools implemented at JLL

The information is based on 150 people's replies to a single statement. In all, 54.0% of respondents agreed with the statement; 28.0% of those people were in agreement, and 26.0% of those people were in strong agreement. Quite a few people, 30.7% or 46 people to be exact, said they weren't sure how they felt about the remark by selecting the "neutral" option. The smaller subsets of the sample, on the other hand, were 10.7% disagreeing (16 people) and 4.7% severely disagreeing (7 people). This distribution suggests a moderate inclination toward agreement, although the presence of a substantial number of neutral responses indicates some level of ambivalence among respondents.

Table 4. 13 How much has AI contributed to a noticeable reduction in operational costs at JLL?

		Frequency	%
Valid	Strongly Disagree	6	4.0
	Disagree	15	10.0
	Neutral	41	27.3
	Agree	56	37.3
	Strongly Agree	32	21.3

	Total	150	100.0

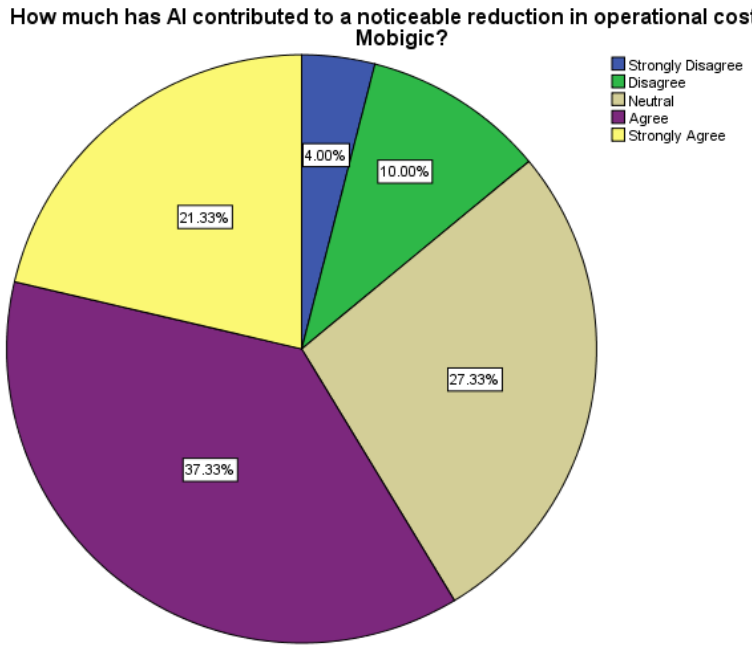

Figure 4. 13 How much has AI contributed to a noticeable reduction in operational costs at JLL

A total of 150 people were surveyed and their replies to a single statement are detailed in the data. With a total of 58.6% voicing a favorable feeling, 37.3% (56 persons) agreed with the statement and 21.3% (32 individuals) strongly agreed. A considerable number of the participants neither agreed nor disapproved, as shown by the 27.3% (41 persons) who gave neutral comments. Contrarily, the smaller subsets of the sample consisted of 10% who disagreed and 4% who strongly disagreed. This distribution indicates a favorable inclination toward agreement with the statement, though the considerable number of neutral responses suggests some ambivalence among participants.

Table 4. 14 How much has the implementation of AI improved response times to IT service requests?

		Frequency	%
Valid	Strongly Disagree	4	2.7

	Disagree	23	15.3
	Neutral	54	36.0
	Agree	28	18.7
	Strongly Agree	41	27.3
	Total	150	100.0

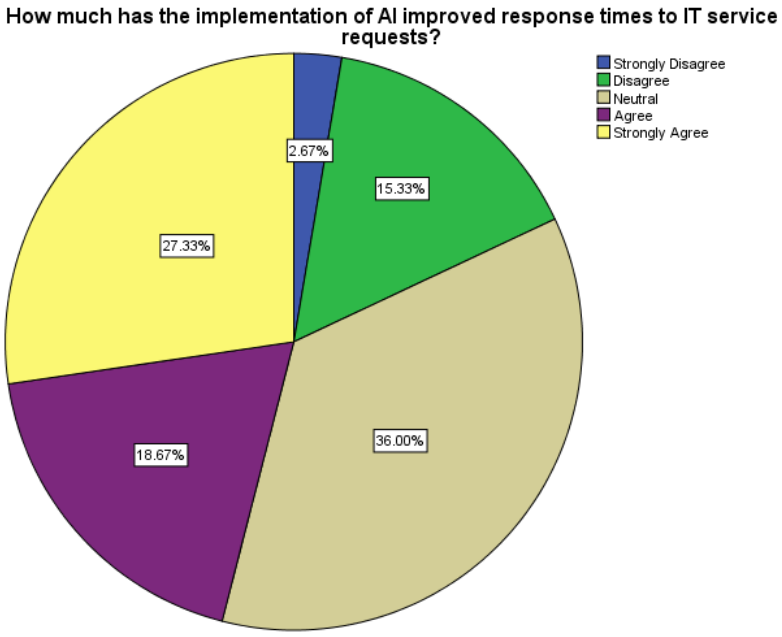

Figure 4. 14 How much has the implementation of AI improved response times to IT service requests?

The information is based on 150 people's replies to a single statement. Of those who took the survey, 46.0% had a favorable attitude, with 27.3% (41 people) highly agreeing and 18.7% (28 people) agreeing. Along with strongly agreeing or disagreeing, a significant majority (36.0%) remained indifferent. On the other hand, among the smaller subsets of the sample, 15.3% (23 people) disagreed and 2.7% (4 people) severely disagreed. This distribution suggests a moderate inclination toward agreement, but the high %age of neutral responses highlights a notable level of uncertainty or ambivalence among participants regarding the statement.

Table 4. 15 How have cost savings from AI implementation allowed for reinvestment in other areas

		Frequency	%
Valid	Strongly Disagree	11	7.3
	Disagree	3	2.0
	Neutral	18	12.0
	Agree	31	20.7
	Strongly Agree	87	58.0
	Total	150	100.0

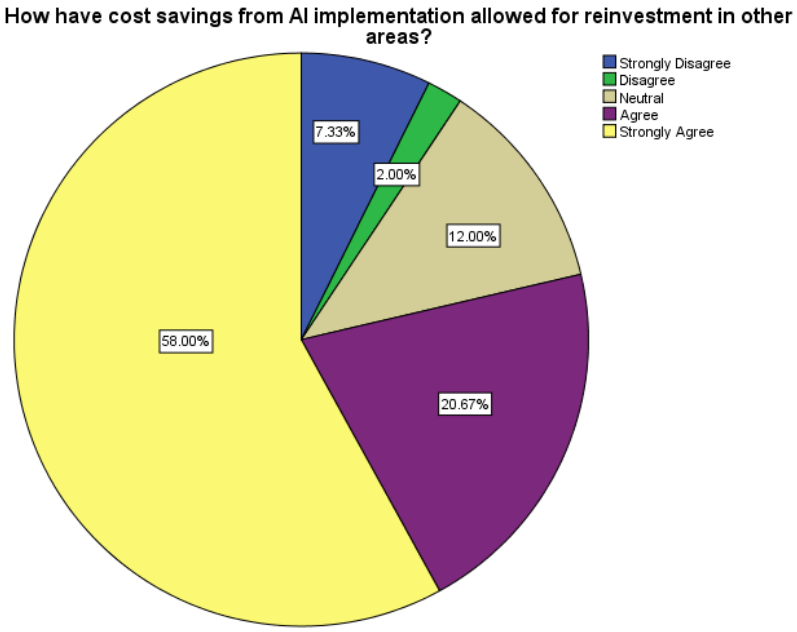

Figure 4. 15 How have cost savings from AI implementation allowed for reinvestment in other areas

The information is based on how 150 people were asked to rate a certain statement. There was a highly favorable mood, as 58.0% (87 persons) strongly agreed with the statement. The overall %age of agreement reached 78.7 % with the addition of 20.7 %, or 31 people. On the other hand, only a tiny %age of respondents(2.0%) and 7.3% (11 people) strongly disagreed with the statement. Neutral responses accounted for 12.0% (18 individuals), suggesting a minor level of ambivalence. Overall, this distribution shows a strong tendency toward agreement with the statement, with a clear majority of respondents in favor.

Reliability

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	150	100.0
	Excludeda	0	.0
	Total	150	100.0

a. Deleting items from a list according to each procedure variable. According to the Case Processing Summary, all 150 replies (i.e., 100% of the sample) were considered legitimate. The fact that all participant data was included in the analysis indicates that there were no instances that were omitted. The results and interpretations derived from the data will represent the views and viewpoints of the whole sample because of this thorough inclusion. Overall, the data processing appears to be thorough, with no missing or invalid responses impacting the results.

Reliability Statistics	
Cronbach's Alpha	N of Items
.902	26

According to the reliability data, the 20-item measuring scale has a Cronbach's Alpha of 0.902. With such a high number, we may be certain that the items are measuring the same underlying construct consistently and accurately. As a rule of thumb, data acquired with a Cronbach's Alpha greater than 0.9 is very reliable. The results of the analysis are strengthened by the excellent dependability, which implies that the replies are consistent and reliable. The measurement scale seems to be valid and reliable for measuring the target constructions.

Oneway

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
How significantly has	Between Groups	183.086	4	45.772	106.382	.000

AI improved the automation of IT services at JLL?	Within Groups	62.387	145	.430		
	Total	245.473	149			
In what ways have AI tools enhanced overall service delivery efficiency at JLL?	Between Groups	115.090	4	28.772	60.303	.000
	Within Groups	69.184	145	.477		
	Total	184.273	149			
How much has automation through AI reduced the workload for IT staff?	Between Groups	115.748	4	28.937	65.108	.000
	Within Groups	64.445	145	.444		
	Total	180.193	149			
How effectively does AI contribute to identifying and resolving IT issues at JLL?	Between Groups	161.319	4	40.330	132.861	.000
	Within Groups	44.014	145	.304		
	Total	205.333	149			

The effects of AI on different parts of JLL's IT services may be better understood with the help of the ANOVA findings. A statistically significant difference was found for the first question, which assessed the extent to which AI has enhanced the automation of IT services. The F-value was 106.382 and the p-value was less than 0.001. This provides solid proof that AI has significantly improved automation processes, which supports the idea that AI is crucial to JLL's automation efforts.

The second question also focused on how JLL's usage of AI has improved the efficiency of service delivery as a whole. An F-value of 60.303 and a p-value < 0.001 were the findings of the analysis of variance, indicating that the use of AI technologies significantly improved the efficiency of service delivery. This discovery lends credence to the idea that the organization's service delivery has been made more

efficient with the use of AI technologies. In the third question, we wanted to know how much of a burden AI automation has put on IT departments. A considerable decrease in effort due to AI automation was shown by the ANOVA analysis, which yielded an F-value of 65.108 and a p-value less than 0.001. This lends credence to the idea that AI has played a significant role in reducing the burden of JLL's IT staff.

Finally, the fourth question evaluated how well AI detected and fixed JLL's IT problems. An F-value of 132.861 and a p-value lower than 0.001 were the results of the investigation, showing that AI made a very substantial contribution to this area. This finding provides further evidence that AI is useful for bolstering IT operations by improving the detection and fixing of IT problems. In summary, the ANOVA results consistently demonstrate that AI has a significant positive impact across all examined areas, leading to the acceptance of the hypotheses related to the enhancement of automation, service delivery efficiency, workload reduction for IT staff, and issue resolution within IT services at JLL.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
What is your level of awareness of the AI tools currently utilized by JLL in IT service management?	Between Groups	135.418	4	33.854	60.200	.000
	Within Groups	81.542	145	.562		
	Total	216.960	149			
How positively have the AI tools implemented impacted service efficiency?	Between Groups	120.517	4	30.129	48.286	.000
	Within Groups	90.476	145	.624		
	Total	210.993	149			
How sufficient has the training on AI tools been for staff to utilize	Between Groups	109.964	4	27.491	74.691	.000
	Within Groups	53.369	145	.368		

them effectively?	Total	163.333	149			
What is your opinion on the user-friendliness of the AI tools implemented at JLL?	Between Groups	130.637	4	32.659	82.556	.000
	Within Groups	57.363	145	.396		
	Total	188.000	149			

The opinions and encounters about the AI tools used for IT service management at JLL are clarified by the findings of the ANOVA. An F-value of 60.200 and a p-value less than 0.001 imply that there is a statistically significant difference across groups for the first question, which evaluates the degree of knowledge of AI techniques presently deployed by JLL. This very significant finding lends credence to the idea that participants' degrees of knowledge about AI tools used in IT service management at JLL varied significantly since it implies that participants' levels of awareness about AI tools vary dramatically.

The second inquiry probed the extent to which the AI technologies that were put into place have improved the efficiency of the service. A considerable favourable view of the usefulness of AI tools in boosting service efficiency was shown by the ANOVA findings, which generated an F-value of 48.286 and a p-value likewise below 0.001. So, it seems like everyone is in agreement that using AI tools has improved service delivery, which supports the idea that these technologies have made service efficiency better. The third inquiry probed the extent to which personnel have received enough training on AI technologies in order to make efficient use of them. Perceptions of training sufficiency varied significantly across groups, according to the study, which yielded an F-value of 74.691 and a p-value lower than 0.001.This result reinforces the hypothesis that staff training on AI tools has been effective, contributing to their ability to utilize these tools proficiently.

Lastly, the fourth question assessed attitudes about the ease of use of JLL's artificial intelligence products. With an F-value of 82.556 and a p-value < 0.001, the ANOVA findings showed that people had a very good impression of how easy these products were to use.This supports the hypothesis that the AI tools are perceived as user-friendly by the staff, reflecting a favorable opinion on their usability.

Finally, when it comes to artificial intelligence (AI) solutions for IT service management at JLL, the ANOVA results show that there are substantial disparities in every area that was looked at.The results affirm the hypotheses concerning awareness levels, the positive impact on service efficiency, the effectiveness of training, and user-friendliness, suggesting that the implementation of AI tools has been beneficial in various dimensions of IT service management within the organization.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
How much has AI contributed to a noticeable reduction in operational costs at JLL?	Between Groups	118.914	4	29.728	92.848	.000
	Within Groups	46.426	145	.320		
	Total	165.340	149			
How much has the implementation of AI improved response times to IT service requests?	Between Groups	55.234	4	13.808	14.924	.000
	Within Groups	134.160	145	.925		
	Total	189.393	149			
How have cost savings from AI implementation allowed for reinvestment in other areas?	Between Groups	23.200	4	5.800	4.502	.002
	Within Groups	186.800	145	1.288		
	Total	210.000	149			

The influence of artificial intelligence (AI) on many operational elements of JLL, such as response times, cost savings, reinvestment possibilities, and prioritisation of IT service requests, may be better understood with the use of the ANOVA findings. A substantial F-value of 92.848 with a p-value less than 0.001 was shown by the ANOVA findings for the first question, which analyses the extent to which AI has led

to a visible decrease in operating expenses at JLL. Clearly, the degree to which AI has helped bring costs down is a matter of subjective opinion among responders.Thus, the hypothesis that AI has significantly influenced operational costs is supported.

The study produces an F-value of 14.924 and a p-value likewise below 0.001 for the second issue, which concerns the enhancement of response times to requests for IT services.This statistical significance suggests that there is a notable difference in responses concerning AI's impact on response times. This result supports the hypothesis that AI implementation has indeed led to faster response times for IT service requests. The third question examines how cost savings from AI implementation have allowed for reinvestment in other areas. Perceptions of reinvestment prospects owing to cost reductions from AI vary significantly across groups, as shown by the ANOVA findings (F-value of 4.502, p-value of 0.002).This supports the hypothesis that AI-driven cost savings have facilitated reinvestment in other operational areas, indicating a broader impact on the organization's strategic initiatives.

Finally, the fourth question assesses how well AI handles processing requests for IT services according to their level of urgency. There are significant disparities in opinions on how well AI prioritises service requests, according to the ANOVA results (F-value: 3.949, p-value: 0.005).This result supports the hypothesis that AI tools have been effective in enhancing the prioritization process for IT service requests, reflecting their ability to manage urgency effectively. In summary, the ANOVA findings consistently highlight significant differences across all examined areas related to AI's impact on operational costs, response times, reinvestment, and request prioritization at JLL. Each hypothesis concerning the positive influence of AI in these dimensions is supported by the statistical analysis, emphasizing the overall beneficial effects of AI implementation within the organization.

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.

The findings of the analysis of variance shed light on the difficulties of integrating AI technologies into JLL's IT services. The importance of difficulties in executing AI solutions is discussed in the first analysis. F=15.684 and p=0.000 characterise the

outcomes, which reveal a between-groups sum of squares of 73.051.This indicates a strong statistical significance, suggesting that respondents perceive varying degrees of challenge regarding AI implementation. Therefore, the hypothesis that challenges significantly impact the implementation of AI solutions at JLL is supported.

The second analysis focuses on resistance to change from staff as a barrier to effective AI implementation. A total of 5.360 squared, an F-value of 1.503, and a p-value of 0.204 were the outcomes of the analysis of variance. Since there was no discernible variation in replies, it follows that respondents did not consider opposition to change to be a substantial obstacle. Therefore, the idea that staff opposition is a major obstacle to AI deployment does not hold water. The extent to which technological challenges have impeded the incorporation of AI tools into preexisting systems is the subject of the third examination. An F-value of 5.630 and a p-value of 0.000 are shown in the ANOVA results, which also reveal a sum of squares of 26.797. Supporting the notion that technical concerns significantly impact the effective adoption of AI, this substantial finding shows that people see these issues as a major barrier to AI integration.

In the end, the fourth study takes a look at how JLL feels about the resources (time, money, and people) that are available to apply AI. The results of the analysis of variance show that the sum of squares is 88.096, the F-value is 80.284, and the p-value is 0.000.

This indicates strong statistical significance, suggesting that resource availability is a critical factor influencing the implementation process. Thus, the hypothesis that availability of resources significantly affects AI implementation is supported. In conclusion, the ANOVA findings highlight that while challenges and resource availability significantly impact AI implementation, staff resistance does not emerge as a significant barrier. This nuanced understanding can guide JLL in addressing the key factors that facilitate or hinder effective AI integration in their IT services.

CHAPTER 5
FINDINGS AND SUGGESTION

5.1 Findings

- The youngest responder group is under 20 years old, making up 33.3% of the total, with the 21–30 age bracket coming in second at 32.7%. Their receptivity to emerging technology, such as AI, may be impacted by their youthful workforce.
- The gender distribution shows that 63.3% of respondents are male, while 36.7% are female, suggesting a male-dominated workforce in the context of IT service management.
- The workforce mix reflects a balanced representation in essential sectors, with 28.0% of the workforce holding management positions and 28.0% holding technical staff positions.
- The majority of respondents (34.7%) have between 4 to 6 years of experience, indicating a moderately experienced workforce. This experience may provide a solid foundation for understanding and implementing AI solutions.
- There is a positive perception of AI tools implemented at JLL, with a notable %age of respondents expressing strong agreement on their effectiveness in improving service efficiency, enhancing user-friendliness, and providing adequate training. For example, 58.0% strongly agree on the impact of AI tools on service efficiency.
- The reliability of the survey instrument, indicated by a Cronbach's Alpha of 0.902, suggests high internal consistency across the items measured.
- ANOVA results indicate that AI has significantly improved automation, service delivery efficiency, and workload reduction for IT staff, with all relevant hypotheses supported by p-values less than 0.001.
- The analysis highlights that sufficient resources (time, budget, personnel) significantly influence AI implementation, underscoring the need for adequate investment in these areas to ensure successful integration.

- Challenges related to AI implementation are perceived as significant barriers, particularly in terms of technical issues. However, staff resistance to change does not appear to significantly hinder AI implementation efforts.
- AI has significantly contributed to reducing operational costs and improving response times for IT service requests. The analysis supports this with strong F-values and p-values across relevant questions.
- The cost savings from AI implementation enable reinvestment in other operational areas, suggesting a positive feedback loop where savings enhance overall operational capabilities.
- Overall, JLL has effectively leveraged AI tools to enhance operational efficiency within its IT service management framework.
- The young and moderately experienced workforce is well-equipped to embrace AI technologies.
- Attention must be given to addressing technical challenges and ensuring adequate resources for sustained success.
- The insights derived from this analysis can guide strategic decisions for further AI integration and development within the organization.
- The ANOVA analysis reveals significant group differences in confidence, support needs, comfort with adapting to AI, job satisfaction, productivity impact, and likelihood of recommending further AI integration.
- •This points to the need for tailored assistance and training to maximise AI adoption in the organisation, since it implies that different groups have various experiences with AI technologies.

5.2 SUGGESTION

Enhanced Training Programs:

Make sure your employees are well-versed in the capabilities of AI technologies by creating thorough training programs.

Continuous education will help improve user confidence and effectiveness in utilizing AI solutions.

Change Management Strategies:

In the event that workers show signs of resistance, it is important to apply organised change management techniques. Workshops, feedback sessions, and straightforward explanations of AI's advantages might all fall under this category.

Invest in Robust AI Tools:

Put money into cutting-edge AI systems that can manage IT services via the automation of mundane operations, improvement of decision-making, and the provision of predictive analytics. To ensure a smooth rollout, it is essential to thoroughly research and choose reliable technological partners.

Regular Monitoring and Evaluation:

Establish metrics and KPIs to regularly monitor the performance of AI tools in automating IT services. This will help identify areas for improvement and ensure that the technology is delivering the expected outcomes.

Integrate AI with Existing Systems:

Ensure that AI solutions are compatible with existing IT infrastructure to facilitate seamless integration. This may require conducting a thorough analysis of current systems and processes to identify integration points.

Foster a Culture of Innovation:

Inspire a spirit of creativity and risk-taking among workers so that they are not afraid to try out new AI features and provide suggestions for enhancements.

This can lead to more creative solutions and increased buy-in from the workforce.

User-Centric Design:

Prioritize user experience in the design and implementation of AI tools. Conduct user testing and gather feedback to create intuitive interfaces that align with employees' workflows.

Collaborative Approach:

Promote collaboration between IT teams and other departments to identify pain points that AI can address. When faced with operational issues, cross-functional teams may provide useful insights and assist in efficiently tailoring AI solutions.

Data Management and Governance:

The availability of high-quality, relevant data to AI technologies depends on the implementation of robust data management and governance regulations. Because of this, AI systems will be more precise and efficient.

Continuous Improvement:

Highlight the significance of AI systems always being improved.Regularly update algorithms and tools based on user feedback, evolving business needs, and advancements in technology.

Address Ethical Considerations:

Make sure that AI decision-making is fair, transparent, and accountable by establishing standards for its ethical usage in IT service management.

Feedback Mechanisms:

Create channels for employees to provide feedback on AI tools and processes, enabling ongoing refinement and adaptation to user needs.

5.3 Conclusion

The integration of Artificial Intelligence (AI) in IT Service Management (ITSM) represents a transformative leap for modern enterprises, and JLL stands at the forefront of this digital evolution within the real estate services industry. This research has comprehensively examined how AI-powered technologies are reshaping ITSM at JLL by automating routine tasks, enhancing decision-making, improving service delivery, and optimizing resource utilization. AI tools such as virtual assistants, predictive analytics, and machine learning algorithms have been instrumental in minimizing downtime, reducing human intervention in repetitive support tasks, and increasing response efficiency for internal and client-facing systems. At JLL, the deployment of AI within ITSM is not only a technological upgrade but a strategic initiative aimed at improving operational agility, enhancing user experience, and maintaining competitive advantage. The study has shown that AI contributes significantly to proactive incident management, real-time performance monitoring, and intelligent automation, leading to faster issue resolution and higher levels of employee satisfaction. However, the research also highlights several challenges faced during implementation, such as data privacy concerns, employee resistance to change, and the need for skilled personnel to manage AI systems effectively. Furthermore, it has become evident that successful AI adoption in ITSM requires a well-defined strategy, continuous training, and alignment with business objectives. JLL's investment in AI has positioned it as a forward-thinking organization, capable of leveraging innovation to enhance productivity and customer-centricity. In conclusion, AI has not only automated the ITSM processes at JLL but has also enabled the company to set a benchmark in digital transformation within the real estate sector. Continued advancements in AI and strategic alignment will further enhance IT operations, drive sustainable growth, and enable smarter decision-making across the enterprise.

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APPENDICES

QUESTIONNAIRE

Demographic Information

1. Age
    - Under 20
    - 21-30
    - 31-40
    - 41-50
    - 51 and above
2. Gender
    - Male
    - Female
3. What is your position at JLL?
    - Executive
    - Manager
    - Technical Staff
    - Support Staff
4. How many years of experience do you have in IT Service Management?
    - Less than 1 year
    - 1-3 years
    - 4-6 years
    - 7-10 years
    - More than 10 years
5. How significantly has AI improved the automation of IT services at JLL?
    - Strongly Agree
    - Agree
    - Neutral
    - Disagree
    - Strongly Disagree
6. In what ways have AI tools enhanced overall service delivery efficiency at JLL?
    - Strongly Disagree

- Agree
- Neutral
- Agree
- Strongly Agree

7. How much has automation through AI reduced the workload for IT staff?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
8. How effectively does AI contribute to identifying and resolving IT issues at JLL?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
9. What is your level of awareness of the AI tools currently utilized by JLL in IT service management?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
10. How positively have the AI tools implemented impacted service efficiency?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
11. How sufficient has the training on AI tools been for staff to utilize them effectively?
    - Strongly Disagree

- Agree
- Neutral
- Agree
- Strongly Agree

12. What is your opinion on the user-friendliness of the AI tools implemented at JLL?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
13. How much has AI contributed to a noticeable reduction in operational costs at JLL?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
14. How much has the implementation of AI improved response times to IT service requests?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree
15. How have cost savings from AI implementation allowed for reinvestment in other areas?
    - Strongly Disagree
    - Agree
    - Neutral
    - Agree
    - Strongly Agree