STRATEGIC ROLE OF AI: DIGITAL BUSINESS AND ORGANISATIONAL TRANSFORMATION

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Introduction

AI in workplace technology is an evolution of how organisations exist, compete, and create business value in the modern era (Martini et al., 2009). These are skills that AI has compared to traditional technologies; learning from data, predictive analytics, and automation change how organisations carry out their business. However, adopting AI is not just about technology since it brings first and second-order changes that influence efficiency and organisational and social systems. Such ripple effects explain the need to practice strategic management and consider the adoption processes. Furthermore, HR is more involved in coordinating the implementation of AI in the organisation and in solving concerns such as workforce preparedness, unethical use of AI, and the incorporation of AI within the company. This paper seeks to discuss key features of AI, both its short-term and long-term advantages, its potential for creating strategic value, and the processes and HR strategies required to integrate AI successfully.

Unique Features of AI in Workplace Technologies

Automation

AI is relatively unique in workplace technologies because it can augment human labour by performing complex tasks in real time. For example, robotic process automation (RPA), such as in Telefónica O2, showed considerable operational benefits for the business by automating tiresome tasks like warehouse transportation and management, data entries, or customer service enquiries. This reduced errors and processing time apart from boosting the annual savings by £4 million (Willcocks et al., 2016). AI differs from regular automation because such tools adjust to change and are helpful when handling complicated situations. Such systems are not predicated on a set of rules or laws but instead employ adaptive algorithms that make a company’s position distinctive and turn organisations into swift decision-makers based on available data.

Adaptability and Self-Learning

Another essential characteristic of AI is its capability to improve its predictive models as new data is processed over time. For example, the natural language processing algorithms in sentiment analysis applications allow organisations to measure customers' or employees' satisfaction in real-time from the texts (Wang et al., 2024). Their ability to learn from data sets them apart from standard systems, which require constant revisions as the environment evolves. AI has strength in its flexibility, chiefly in fields such as recommendation services applied to streaming services, including Netflix and Amazon (Razmerita et al., 2014). These revenues reflect the significant difference in engagement, loyalty, and revenue increase due to related personalisation.

Real-Time Insights and Decision Support

AI offers real-time decision-making as results are made available. AI can also analyse the patterns as they happen, unlike traditional systems that depend on the patterns' history, allowing organisations to change quickly. For instance, digital marketing platforms use AI to track the outcomes of marketing campaigns and adapt the strategies for those campaigns in real-time to the reaction of the customers (Bharadwaj et al., 2013). Similar capabilities were not possible with the traditional analytics tools, where the insights had to be manually interpreted, stressing the role of AI in strategic planning. Moreover, organisations have incorporated AI into their work processes and routines through various methods, such as predictive maintenance. Data analysis makes it possible to identify potential equipment failure and prevent it before it happens (Dery et al., 2017). It reduces the costs related to it by millions of dollars.

First and Second-Order Effects of AI Adoption

First-Order Effect

AI technologies at the workplace bring about first-order and second-order impacts on organisational performance and design. The first-order impact results are direct efficiency enhancements and reduced costs and operations. For instance, in the case of Telefónica O2, the implementation of robotic process automation (RPA) led to one-and-a-half times speed improvement and minimisation of errors in customer service processes (Willcocks et al., 2016). These short-term benefits stem from AI automating several time-consuming processes, freeing up human workers for high-value work. Likewise, the application of AI in data analytics gives timely and accurate results for better decisions instantly (Bharadwaj et al., 2013). These first effects can complement an organisation's strategic plan, like increasing customer satisfaction or decreasing expenses, making AI a desirable proposition.

Second-Order Effect

However, the second-order consequences of dispensing AI disrupt customary organisational and social relations. When traditional decision-making is left in the hands of AI solutions, top-down organisational structures may lose their significance and change. For instance, where AI facilitates many decision-makers by reducing centralisation, changes could lead to the deconstruction of middle managers' work and, thus, their opposition (Orlikowski, 1992). Moreover, it can shift working relations, as AI technology-based digital workplaces support cooperative work across regions instead of centralised office premises (Hertz, 2002; Dery et al., 2017). This process may also upset a traditional working method and require change management as stakeholders learn to adopt new approaches. The second-order impact is the ethical dimensions and workforce dislocation impacts. While AI increases worker efficiency, it disrupts organisational dynamics by displacing specific positions and causing short- and long-term employment instabilities (Mic et al., 2022). This displacement effect, alongside embedded biases within the AI algorithms, brings out issues with equal opportunities or continuing inequity within the workplace.

Driving Strategic Value with AI

AI enables organisations to achieve strategic objectives since it can improve operations, customer experience, and innovation. AI achieves this in the best way possible through predictive analytics, which revolutionises decision-making ventures. Amazon leverages AI-based inventory management systems to minimise the cost of holding inventory when demand is low and the cost of missed sales when demand is high while simultaneously satisfying consumer needs such as an hour's delivery using drones (Bharadwaj et al., 2013). Likewise, predictive maintenance boosted by Artificial Intelligence reduces equipment downtimes by estimating failure rates to allow timely action and maintain continuity (Dery et al., 2017). These applications lower the costs and show the organisations as credible and effective market actors.

AI also delivers value by creating hyper-personalised experiences for customers. With the help of loyalty and churn models, companies gain information about consumer behaviour to carry out marketing strategies. For instance, Netflix adapts content recommendations based on the information provided by its customers, which has acted as a retention and subscriber acquisition strategy (Razmerita et al., 2014). This personalisation enhances customer loyalty and lifetime value, thus making business goals congruent with the customers. Furthermore, by using AI to examine large sets of unstructured data like opinions on social media, organisations can identify brand sentiment and respond to it (Baptista et al., 2017; Wang et al., 2024). It would also enhance their competitive positions.

Socio-Technical Systems Framework

The primary rationale of the Socio-Technical Systems (STS) theoretical approach is to address the most critical factors for successful AI integration into organisations. This approach focuses on creating systems where technology relates to the organisation's social context to enhance performance. The technical subsystem involves the physical hard assets, such as gadgets and technology that support AI and the processes, while the social subsystem comprises people, culture, and practices (Baxter & Sommerville, 2011). When these subsystems are integrated with equal effectiveness, organisational efficiency increases, resistance to change decreases, and user acceptance is improved. It is common for

organisations to adopt the STS framework by identifying the points of contact between artificial intelligence systems and human activities. Employee involvement is key, specifically HR, IT, and management, to redesign those workflows and train employees. Stakeholder involvement is also a cornerstone, as they will own the change. The framework supports the learning and feedback process in which humans and technology participate, and their interaction results in a better and more satisfying performance.

AI Adoption Lifecycle

The AI adoption lifecycle, detailed in Figure 1, captures organisations' implementation roadmap and effective AI deployment. It consists of the awareness phase, where the organisation looks at opportunities, relative value, and the associated risks. The situation of AI is examined considering market trends, competitors, and internal issues to determine its feasibility (De Silva & Alahakoon, 2022; Rogers et al., 2014).

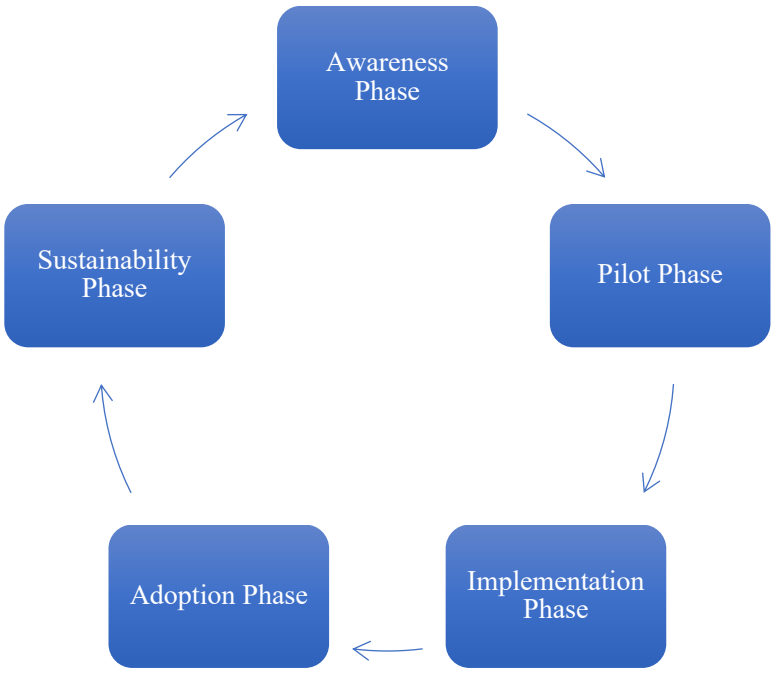

Figure 1

AI Adoption Lifecycle

Then comes the pilot phase, where specific and small-scale solutions based on AI are implemented. For instance, a housing association might test the use of AI chatbots in citizen communication to measure system performance and reception. It is then followed by the implementation phase, which integrates AI into company processes and departments. The

implementation includes reengineering work processes, systems implementation, and dealing with ethical dilemmas. The lifecycle has the AI adoption phase. This follows the implementation phase, where the technology is fully integrated within the organisation. The sustainability or evaluation phase is the post-adoption stage, where AI is monitored and fine-tuned (De Silva & Alahakoon, 2022). Here, the piloted modes could also see integration with new technologies and business models necessary for operations.

The Strategic Value and Benefits Tree

The Strategic Value and Benefits Tree is a cognitive mapping of how LACCS benefits from implementing AI. As demonstrated in Figure 2 below, strategic goals are at the core, including operational efficiency, customer satisfaction, and creativity. The above objectives are classified under strategic enablers such as real-time analytics, decision support and automation.

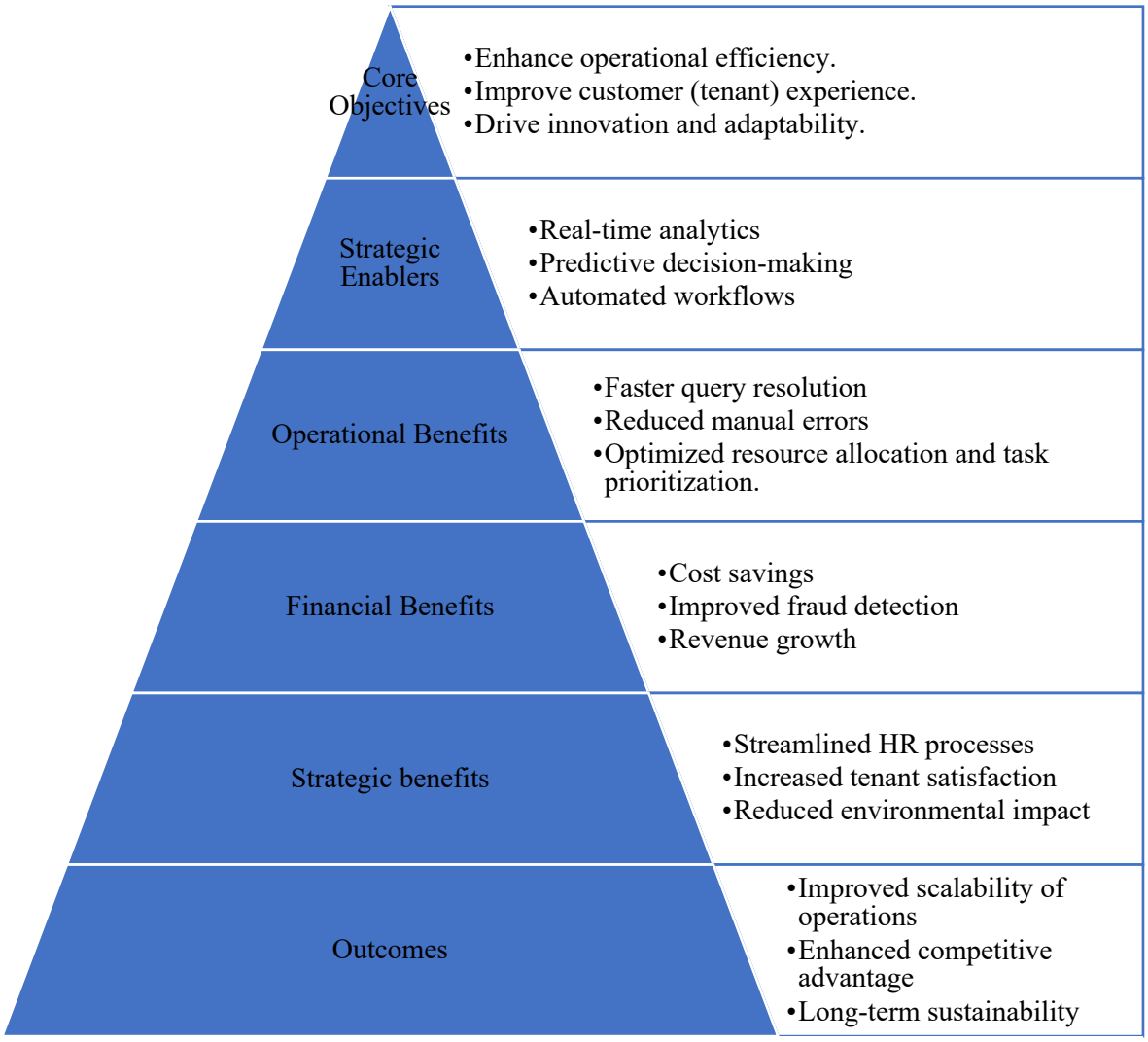

Figure 2

The Strategic Value and Benefits Tree

Applying AI in a housing association may expand into the operational benefits, including handling queries, whereby query resolution times are cut and manual errors are reduced. Financial benefits, such as resource savings and reduced fraudulent activities, are a brunch, too. Middle management layers of the tree contain strategic advantages, such as changes in human resources or improvements for current tenants. These are directly linked with strategic objectives like organisational efficiency and reputation for innovation. The top branches depict increased scalability, better competitive position, and long-term viability. According to Kaplan and Norton (2014), this hierarchical arrangement avoids confusion when establishing how AI affects the organisation along different dimensions.

Managing the Adoption Process

Effective Change Management

Adopting change management frameworks that best suit the distorted change that AI will bring to the organisation is crucial. Implementing pilot schemes enables organisations to start using AI systems with more caution due to the constraints of limited feedback data before widespread adoption. For instance, piloting AI in customer service applications or internal data analytics reveals problems such as data accuracy or usability deficits (Ross et al., 2016). It is a phased pattern that gradually creates employee confidence regarding the change and reduces interruption.

Upskilling and Reskilling

The other component of AI adoption is upskilling and reskilling efforts. When AI replaces jobs and performs traditional tasks, employees should be knowledgeable enough to handle and engage with these tools. Organisations should develop training initiatives to prepare for the job revolution that comes with artificial intelligence deployment. For instance, when support staffers need to be converted to new duties, the organisation can opt for digital literacy training sessions or data analytics training (Dery et al., 2017). Furthermore, organisations should include IT, HR, and the relevant operational business areas in the adoption process to ensure the implemented AI solutions support the organisation’s strategic vision.

Ethical Frameworks

Ethical issues should also be tackled, and the model may be helpful here. AI systems must have governance structures that enhance transparency, fairness, and accountability. One of the significant consequences of bias, if not handled appropriately, is usually the promotion of unfair employment practices and uneven distribution of work among employees (Stamper, 1996). Organisations may set up an organisational oversight mechanism to overcome these issues through ethical committees or auditing processes to deal with emerging challenges. This means that change and diversity must be embraced in the organisation, and employees must be involved (Emmett et al., 2021). Engagement of feedback mechanisms and dialogue can make the workers heard and appreciated, hence eradicating resistance and building trust (Baptista et al., 2020). Exploring technical aspects and people-oriented processes allows organisations to benefit from AI's possibilities without drawbacks. One common bias appears when AI recruitment tools favour certain demographic attributes due to skewed historical data. An example is algorithmic policing systems that targets specific communities. To reduce these, organisations should perform fairness assessments and deploy transparent datasets. Regular bias audits conducted can also detect and address issues before they become systemic.

The Role of HR in AI Adoption

1. Driving Workforce Readiness

HR plays an essential role in building employees' AI readiness with the assistance of reskilling and upskilling. When AI is applied to reap the benefits of automation from repetitive tasks, employees must move to a newer form of work, which demands critical thinking and data interpretation skills. For instance, Telefónica O2's use of RPA relied on training programs that would assist employees to embrace new tasks and responsibilities (Willcocks et al., 2016). They must be able to discover deficiencies, develop training that effectively fills them, and constantly try to keep the workforce well-equipped and confident of their capabilities. Other digital tools relying on AI include virtual collaboration tools that may force organisational employees to cross geographical and organisational divides (McAfee, 2006). To achieve this, HR needs to encourage the creation of group cohesion and continually increase tolerance for change.

2. Promoting the ethical adoption

AI-integrated solutions bring in more social issues like algorithm bias, privacy concerns, and displacement of human resources. As a result, HR needs to have a central position in addressing these challenges. For example, HR could work with IT and Legal to devise an AI Code of conduct based on openness, equity, and responsibility (Stamper, 1996). professional AI check-ups on the chosen system, especially in risky fields like recruitment or performance evaluation, should be conducted periodically to eliminate the possibility of discrimination and maintain trust in AI decisions. HR stakeholders continue to press fairness in AI incorporation by guaranteeing that individuals dismissed due to automation are retrenched by adequate programs or severance packages (Baptista et al., 2010). While promoting equity and transparency, HR enables employees to maintain morale and ensure trust during considerable change at the organisational level.

3. Enhancing Employee Experience and Well-Being

Humans can only know that artificial intelligence can help simplify HR services, including recruitment, onboarding, and performance. For instance, the use of Chatbots can help answer questions from employees in real-time and in this way, the level of employee satisfaction will also increase (Razmerita et al., 2014). Likewise, in the case of HR systems, predictive analytics may highlight the nature of trends impacting engagement, empowering HRs to act early in resolving potential issues. HR ensures these tools are implemented, observing employees' rights to self-organisation and informational privacy.

Developing generative AI tools, which produce advanced text and imagery, offers exciting avenues for innovation, however, raises concerns over misinformation and copyright. Measuring success demands clear indicators, for example, error rates and cost savings, as well as transparent governance. This ensures organisations remain agile, ethical, and competitive.

Conclusion

With the advent of digital disruptions, AI has become one of the foundational elements that can help an organisation realise business strategies by improving productivity,

creation, and personalisation. To minimise the impact of AI innovations on organisational workforces, organisations must focus on training workers, openness, and flexibility. HR facilitates the integration of AI with organisational values, so both technical and social aspects are effectively considered in this process. Responsible adoption of AI bridging organisations for the future Silicon Valley, so they are ready to rebound from a rear-guard action in a fast-approaching digital war.

Organisations should consider adopting systematic AI readiness frameworks that look at both data quality and scalability. By identifying clear success factors and prioritising ongoing training, leaders can more accurately gauge their AI's maturity. Future investigations could see how emerging AI technologies influence different sectors, comparing diverse implementations to uncover their optimal use. Ultimately, a forward-thinking perspective that balances innovation with social responsibility will prove crucial in achieving sustainable, long-term advantage.

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