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Business Automation Tools Impact Assessment

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Abstract. *Digital transformation and automation have emerged as central drivers of contemporary organizational change, fundamentally altering how businesses function, deliver services, and adapt to evolving market demands. These phenomena represent not only a technological upgrade but a paradigm shift in operational strategy—enhancing efficiency, enabling data-driven decision-making, and fostering innovative approaches to problem-solving. This study investigates the multifaceted impact of digital transformation and automation on business practices, customer engagement, and the nature of work itself. Particular attention is given to the challenges these developments pose, such as uneven access to technological resources and the risk of workforce displacement. The analysis underscores the importance of designing inclusive frameworks that ensure technological progress contributes broadly to organizational and societal well-being. The research is anchored in a case study of a technology company—kept anonymous due to confidentiality agreements—focusing on how similar firms manage the automation of complex operational processes. In addition to the case study, the investigation incorporates data from a cross-sectoral survey examining investment patterns in automation technologies and perceived improvements in efficiency. Complementary to this, two semi-structured interviews were conducted with managers positioned at different stages of automation tool adoption, offering qualitative insight into implementation challenges and strategic considerations.*

Keywords: automation tools, technology adoption, business processes, benefits, challenges.

Introduction

In the contemporary business environment, technology plays a pivotal role in reshaping operational models and redefining competitive strategies. At the forefront of this evolution are digital transformation and automation, which are rapidly changing the way organizations function, make decisions, and adapt to emerging challenges. These developments signify more than mere technological adoption—they represent a strategic rethinking of how value is created, delivered, and sustained across industries.

Digital transformation has become one of the most pressing imperatives for modern businesses, with business process automation increasingly viewed as a critical enabler of improved customer experience and operational efficiency (Karjalainen, 2022). As a result, companies are intensifying their investments in IT and automation strategies, accelerating the pace of digital innovation across sectors. At its core, digital transformation involves the holistic integration of

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digital technologies into all facets of an organization's operations. It demands a reevaluation of traditional processes, organizational structures, and performance objectives.

Business processes, fundamentally shaped by an organization's strategic goals, have evolved conceptually to support a more integrated approach to process management. This evolution has led to the widespread adoption of Business Process Management (BPM) frameworks (Crick, 2017). Within this context, intelligent technologies—including Robotic Process Automation (RPA), Artificial Intelligence (AI), and Process Mining—are increasingly leveraged to automate and optimize complex workflows (van der Aalst, Bichler & Heinzl, 2018). Among these, RPA and process mining have garnered significant attention from both academia and industry for their potential to drive efficiency and insight (Hofmann et al., 2020).

A central and enduring question in both theoretical and practical discussions concerns the boundaries of automation: which processes should be automated, and which should remain under human control? Although this debate is not new, the breadth and sophistication of current automation tools have expanded the range of viable options. Notably, Coombs (2020) predicted that by the early 2020s, nearly 60% of job functions could involve at least partial automation, with some roles experiencing task-level displacement.

Organizations today pursue digital transformation not only as a means to innovate but also as a strategy to balance revenue growth and cost efficiency. These two objectives are not mutually exclusive; rather, they are increasingly interdependent. As Payraudeau et al. (2021) suggest, aligning automation efforts with broader organizational and ICT strategies enhances both strategic coherence and implementation success.

Nonetheless, the integration of new digital tools into existing business systems presents a range of challenges. Resistance to change among employees, the complexity of aligning legacy systems with new platforms, and the lack of adequate training often serve as barriers to adoption. Technical concerns, such as data migration risks, cybersecurity vulnerabilities, and difficulties in measuring return on investment (ROI), further complicate implementation efforts. Despite these obstacles, digital tools—ranging from real-time communication platforms to advanced data analytics—continue to play a vital role in enhancing business responsiveness and innovation capacity. This article aims to explore how digital transformation and automation affect how businesses run, how they serve customers, and how people work along with some of the problems and challenges.

Literature review

The first three industrial revolutions brought major shifts: the introduction of mechanical production, the division of labor through assembly lines, and later, the emergence of electronic and automated manufacturing. Today, the industrial revolution continues (Schwab, 2016; Carayannis, 2024). We have entered what is widely known as Industry 4.0, or the age of digitalization (Atiker, 2017). This stage is shaped by new technological frameworks such as the Smart Factory, Internet of Things (IoT), intelligent manufacturing, Cloud Computing, Big Data, and machine-to-machine communication. These innovations are redefining traditional industrial models. As Baur and Wee (2015) note, "The traditional manufacturing business model is changing, and new models are emerging; incumbents must be quick to recognize and react to these new competitive challenges." Fueled by internet connectivity, the real and virtual worlds are merging into integrated systems enabled by IoT and cloud computing (The Federal Government, 2024).

Cloud computing refers to a web-based infrastructure that enables remote access to applications, services, and data, facilitating the management of workflows, machines, and

industrial processes. As Brixel explains, "The Internet of Things builds on this concept by using the cloud to store and automate processes in objects that are synced to the Internet, like internet-enabled automobiles and remote home lighting and shade systems." In essence, Industry 4.0 shifts traditional, internally managed operations into cloud environments, where they can be accessed, monitored, and optimized remotely (Salesforce, 2024). The delegation of decision-making and process control to autonomous systems—enabled by automation and machine learning—offers enhanced agility, scalability, and responsiveness across entire organizational ecosystems.

Defined formally, cloud computing is a model that facilitates convenient, on-demand network access to a shared pool of configurable computing resources (such as networks, servers, storage, applications, and services), which can be rapidly deployed and scaled with minimal administrative effort or direct service provider interaction. This model is grounded in five essential characteristics—on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service—and includes three core service models: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Furthermore, four deployment models exist: private cloud, community cloud, public cloud, and hybrid cloud (Bohn, 2020).

Cloud computing is gaining prominence as a foundational technology across enterprises of all sizes and sectors. While adoption rates differ by company size, large enterprises (with over 250 employees), which currently account for more than 80% of cloud-related expenditures, are expected to maintain their lead in investment. Nonetheless, small and medium-sized enterprises (SMEs)—particularly those with 100–249 employees—are projected to accelerate their cloud adoption in the coming years. Across the European Union, cloud services are already delivering tangible economic benefits, including cost reductions, decreased reliance on technical staff, and improved operational efficiency.

Figure 1 shows that executives are either currently or plan to use artificial intelligence (AI) as part of their process automation initiatives. 25% of businesses are currently using AI and 53% are planning to use it in the future. In 2021 over half (54%) of all organizations spent more than $250,000 on process automation. (Figure 1).

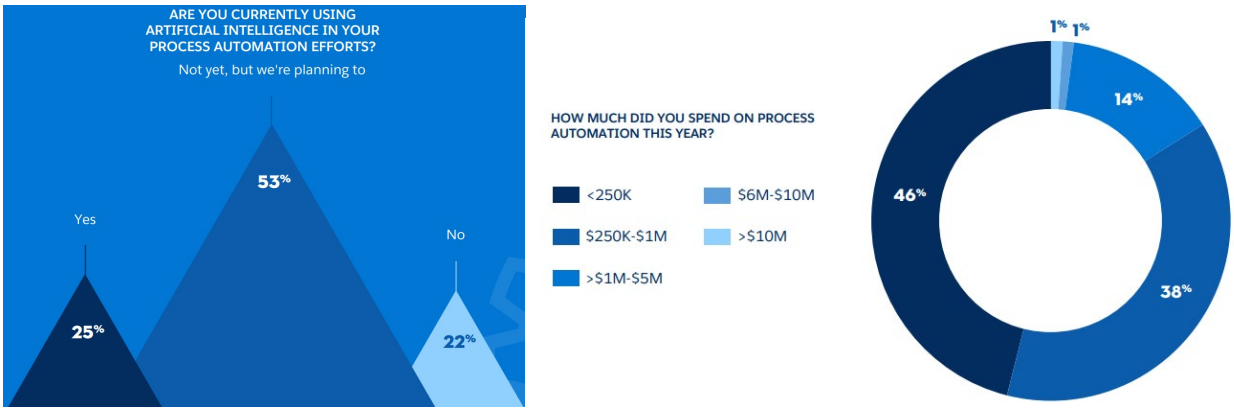

Figure 1. Artificial Intelligence In Process Automation and Money spent on process automation
Source: https://www.salesforce.com.

As a strategic response to the increasing demands of modern business environments, workplace process automation has become a critical driver of operational efficiency on a global scale. This approach focuses on the automation of complex organizational workflows through the integration of technologies such as process orchestration, robotic process automation (RPA), and artificial intelligence (AI). The growing shift toward automation is largely motivated by the

imperative to reallocate valuable time and effort from repetitive manual tasks to higher-value strategic activities, particularly in contexts where human and financial resources are limited. Moreover, the return on investment (ROI) associated with automation—typically reflected in measurable reductions in time, cost, and resource consumption—has proven to be a decisive factor in promoting the widespread adoption of these technologies. By enhancing speed, consistency, and scalability, automation supports not only improved performance but also organizational adaptability in increasingly dynamic markets.

Methodology

The methodology employed in this study was designed to rigorously examine the impact of business automation tools in the context of ongoing digital transformation. A structured survey was developed to gather quantitative data from a diverse range of organizations. The instrument included 17 questions addressing multiple dimensions of automation implementation: respondent demographics, tool usage, perceived impact, encountered challenges, and future adoption plans. The survey utilized a combination of multiple-choice items, Likert-scale ratings, and open-ended responses. Each question was carefully formulated based on an extensive literature review and validated through expert consultation to ensure relevance and clarity.

The survey was disseminated online via Google Forms, chosen for its accessibility and broad reach. It remained open for responses over a four-week period, from May 13 to June 10, 2024, allowing adequate time for participants to engage with the content. A total of 73 responses were collected; however, only 57 were retained for analysis, as these respondents demonstrated sufficient professional experience with automation technologies to align with the study's scope and objectives.

To complement the quantitative data, a second research component involved conducting semi-structured interviews with selected participants. This qualitative strand aimed to explore more nuanced insights into the implementation and organizational impact of business automation tools. Purposive sampling was used to identify individuals with substantial expertise in deploying such tools across various sectors. The selected interviewees included IT managers, operations managers, and business analysts from industries such as technology, healthcare, finance, manufacturing, and retail.

By targeting individuals directly involved in the implementation and management of these tools, the study ensured the relevance and richness of the qualitative data collected. The interviews were conducted on May 20, 2024, with each session lasting approximately 30 minutes. Participants were encouraged to share detailed accounts of their experiences with automation tools, highlighting both benefits and challenges, as well as their views on emerging trends and future developments in the field.

Results and discussions

Survey data collection and analysis

The first step in the analysis was to see gender distribution of respondents which expressed the current trend of an increasing number of women pursuing careers in technology and automation. This shift is supported by various educational and professional initiatives aimed at encouraging female participation in STEM (Science, Technology, Engineering, and Mathematics) fields. 59% of the responders were women.

An analysis of job titles within the dataset reveals a broad spectrum of roles, ranging from technical positions such as Data Scientist and Software Developer to managerial roles like Business Intelligence Manager and Project Manager. Additionally, more specialized roles, such as Social Media Marketing Specialist and Operations and Strategy Manager, illustrate the growing diversity and specialization within the contemporary labor market. The technology sector emerges as the dominant industry represented, reflecting the increasing demand for both technical and managerial talent in this domain. This trend aligns with the global emphasis on digital transformation and technological innovation.

The diversity in job titles suggests that organizations could benefit from customized recruitment strategies and role-specific training programs tailored to the unique competencies required for these positions. Conversely, roles with higher frequency, such as Customer Experience Engineer, Software Developer, and Inside Sales Specialist, may necessitate scalable workforce solutions to manage larger teams efficiently while maintaining productivity and performance standards.

Further analysis reinforces the technology industry's dominance in the dataset, underscoring its pivotal role in shaping modern employment trends. This prevalence mirrors the broader global shift towards digitalization and innovation-driven economies. The healthcare industry ranks second in representation, reflecting its critical societal importance and the breadth of roles required to support complex healthcare systems. These positions span technical, administrative, and clinical functions, highlighting the need for a multidisciplinary workforce.

Although less prominent, the manufacturing sector also holds a meaningful place in the dataset. Roles within this industry are primarily focused on production, engineering, and maintenance, underscoring the sector's continued reliance on skilled labor and operational efficiency. Overall, the distribution of job titles across industries highlights a concentration of workforce demand in the technology sector, while also revealing the varying scales and structures of employment in healthcare, manufacturing, and other fields. Such insights are essential for strategic workforce planning, informing both organizational practices and policy-making related to labor market development.

In examining the adoption of automation tools, survey results indicate that 91% of organizations currently use such technologies (Figure 2a). This high adoption rate reflects the widespread recognition of automation’s advantages, including increased operational efficiency, reduction in human error, and enhanced capacity to handle repetitive tasks. The strong uptake suggests that businesses are increasingly investing in digital tools to remain competitive and optimize workflows.

Conversely, the 9% of organizations not utilizing automation tools may include smaller enterprises or those operating in sectors where automation is less critical or viable. Possible barriers include limited budgets, inadequate digital infrastructure, or organizational resistance to change. However, as technology evolves and becomes more accessible, it is expected that the adoption of automation tools will expand, further influencing productivity and organizational design.

A closer look at the most widely adopted automation tools reveals that CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning) systems each account for approximately one-quarter of reported usage (Figure 2b). The widespread use of CRM platforms highlights the strategic importance of customer engagement and satisfaction, while ERP adoption underscores the need for streamlined internal operations and effective resource management. The nearly equal adoption of CRM and ERP tools reflects a balanced organizational focus on both external client relations and internal process optimization.

Additionally, the substantial use of HR automation tools indicates growing awareness of the need for efficient human resource management, particularly in organizations undergoing growth or restructuring. As the complexity of HR tasks increases, automation becomes an increasingly attractive solution. While the adoption of Robotic Process Automation (RPA) remains lower than CRM or ERP, its presence in the dataset suggests that organizations are beginning to explore more advanced automation technologies. As RPA systems mature and their benefits become more tangible, adoption rates are expected to rise, contributing further to digital transformation efforts across sectors.

The relatively low use of marketing automation suggests potential growth opportunities. Organizations that leverage these tools can gain a competitive edge in targeted marketing efforts and customer engagement.

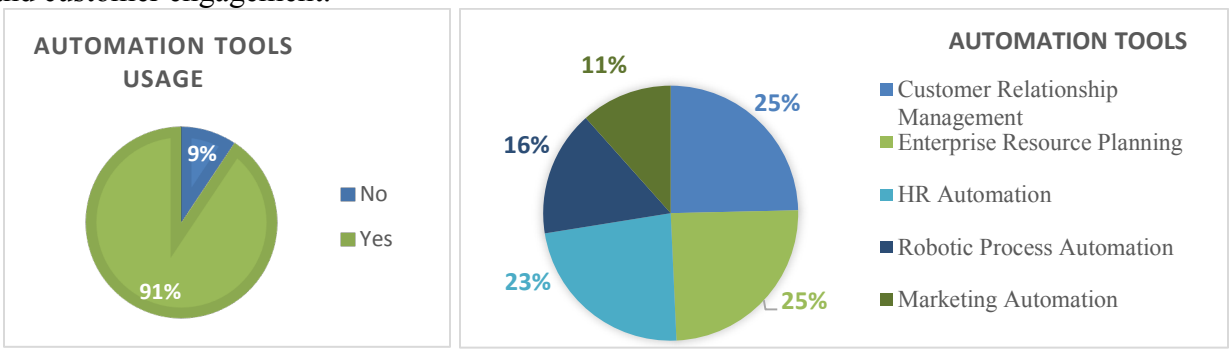

Figure 2. a. Automation tools usage, b. Automation tools types

Source: Author's own creation.

The analysis of the duration of automation tool usage reveals considerable variation in organizational experience, reflecting differing stages of technological maturity. A significant proportion of organizations reported using automation tools for over five years, indicating a high level of maturity in their automation practices. These organizations are likely to have well-established infrastructures, standardized processes, and a clearer understanding of the operational and strategic benefits that automation can deliver over time.

In contrast, the largest response category was "I don't know," suggesting a notable lack of awareness regarding the duration of automation tool usage within many organizations. This lack of clarity may stem from employee turnover, insufficient internal communication, or a lack of documentation surrounding the historical implementation of automation technologies. These findings highlight a need for improved organizational knowledge sharing and transparency regarding automation initiatives.

Organizations with 3–5 years of automation experience appear to represent an intermediate level of maturity. These respondents likely moved beyond the initial phases of adoption and are now focused on refining, scaling, and optimizing the use of automation tools across departments. Similarly, three organizations reported using automation tools for 1–2 years, indicating recent adoption. These organizations are likely still in the integration and adaptation phase, working to embed automation into their daily workflows while overcoming early-stage challenges. Only one organization reported using automation tools for less than one year, reflecting the early implementation stage, where focus typically lies on configuration, pilot testing, and internal alignment.

Across all maturity levels, the implementation of automation tools appears to have brought tangible organizational benefits. According to the survey results, productivity was the most

positively impacted area, with 97% of respondents indicating noticeable improvements in operational efficiency. Employee satisfaction was also reported to have improved in 62% of cases, primarily due to the reduction of monotonous or repetitive tasks, which contributes to a more engaging and meaningful work environment. In terms of customer satisfaction, 47% of respondents observed positive outcomes, likely linked to faster service delivery and greater accuracy facilitated by automation technologies.

Despite these benefits, only 63% of respondents confirmed a reduction in operational costs following the adoption of automation tools. This finding suggests that cost savings may not always be immediate or uniform across industries and may depend on factors such as tool selection, implementation strategy, and the scale of deployment.

The survey also explored the key challenges organizations encounter when implementing automation tools. The most frequently cited difficulties—each noted by more than 23% of respondents—were the complexity of implementation and integration with existing systems (Figure 3). These issues point to significant technical and logistical obstacles that can delay or hinder the successful adoption of automation technologies.

Implementation complexity refers to the often-intricate process of configuring automation tools to meet specific organizational requirements. This challenge typically arises due to the need for specialized technical expertise, as automation solutions frequently require alignment with existing workflows, data systems, and operational structures. Overcoming this complexity generally demands careful planning, cross-functional coordination, and in some cases, the development or acquisition of internal expertise.

To manage this challenge effectively, organizations may benefit from starting with small-scale, low-risk pilot projects, which can build internal confidence and technical competence before broader deployment. Incremental implementation strategies also allow organizations to adapt tools gradually, test configurations in real-world scenarios, and refine processes iteratively—thereby reducing risk and enhancing long-term success.

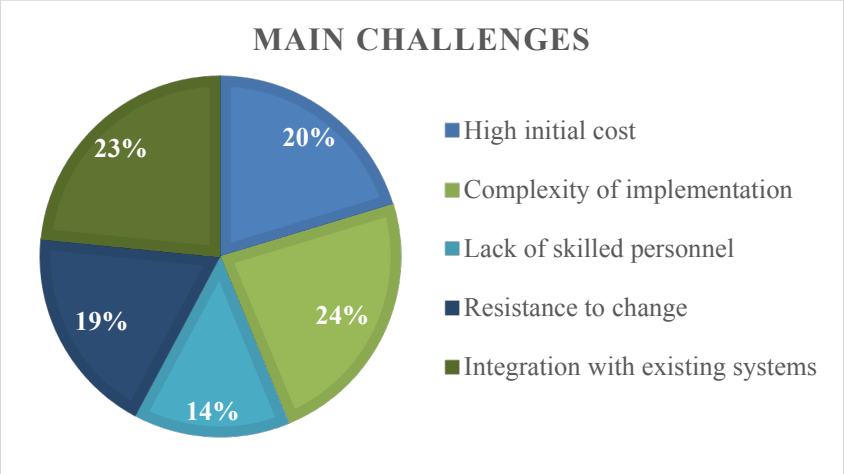

Figure 3. Automation tools main callenges

Source: Author's own creation.

Integration with existing systems emerged as another prominent challenge in the implementation of automation tools. This issue involves ensuring compatibility between newly adopted technologies and an organization's existing IT infrastructure, software platforms, and operational workflows. In practice, the integration process is often complicated by differences in

system architectures, data formats, and the functional limitations of legacy systems. Addressing these challenges typically requires a comprehensive assessment of current infrastructures and, where necessary, the implementation of middleware solutions or integration platforms capable of facilitating seamless data exchange and operational continuity.

A phased approach to integration can prove particularly effective in managing these complexities. By segmenting implementation into manageable stages, organizations can conduct testing, identify bottlenecks, and fine-tune configurations before scaling automation initiatives more broadly. This iterative process reduces the risk of operational disruptions and allows for incremental learning and adaptation.

The challenges of both technical complexity and system integration underscore the necessity of a robust internal technical foundation. Organizations must ensure they have access to skilled IT personnel, modern infrastructure, and a holistic understanding of both existing and emerging systems. From a logistical standpoint, these challenges imply that organizations must allocate sufficient time, financial resources, and strategic planning to the automation adoption process. This includes establishing clear goals, realistic timelines, and mechanisms for ongoing support and evaluation.

To address these issues effectively, organizations may benefit from expert engagement, either through internal capacity building, consulting partnerships, or outsourcing specialized implementation tasks. Moreover, robust planning—grounded in thorough system audits and aligned with strategic objectives—is essential for minimizing disruptions and ensuring successful long-term integration.

At the conclusion of the survey, respondents expressed a notably optimistic outlook regarding the future importance of automation tools. A substantial majority rated automation as "very important" for the next five years, signaling a strong collective belief in its potential to reshape business processes, improve competitiveness, and enhance strategic decision-making across industries. Even among those who assessed automation as merely "important" or "moderately important," there was still a clear acknowledgment of its growing role in operational evolution.

This forward-looking perspective reflects a broader recognition of automation's capacity to drive efficiency, innovation, and organizational adaptability in a fast-changing technological and economic landscape. As such, the findings suggest that automation will remain a central component in shaping future business strategies, workforce models, and digital infrastructures.

Interviews results

Manager A described the gradual integration of tools like CRM systems, noting significant improvements in customer service and data management. Initial employee resistance was overcome through continuous training.

Manager B reported recent adoption of automation tools for logistics and inventory management. Despite initial disruptions, the tools enhanced departmental coordination and resource tracking. Ongoing education was crucial for a smooth transition.

The semi-structured interviews provided detailed insights into the implementation and integration processes of automation tools from the perspective of two experienced managers. Manager A described a deliberate and methodical approach to integrating a Customer Relationship Management (CRM) system into day-to-day operations. Initial challenges included employee resistance and difficulties with data migration, both of which posed risks to the project's success. However, these obstacles were addressed through a combination of comprehensive staff training

and a phased implementation strategy, which facilitated gradual adaptation and minimized operational disruption.

Similarly, Manager B recounted the introduction of Robotic Process Automation (RPA), which was initially affected by technical glitches and system compatibility issues. To overcome these, the organization engaged external specialists and adopted an iterative testing approach, allowing for problem identification and correction at each stage. This proactive methodology contributed significantly to the successful deployment of RPA within the company's operational framework.

Both managers reported notable positive impacts of automation on business processes. Manager A observed that the CRM system streamlined customer interactions, resulting in enhanced data accuracy, faster service delivery, and greater employee productivity. By automating repetitive tasks, staff were able to redirect their efforts toward more complex, value-adding activities. In Manager B's case, the implementation of RPA led to a marked improvement in operational efficiency, particularly in the processing of large transaction volumes. Processing times were significantly reduced, though Manager B also acknowledged mixed reactions from employees, some of whom expressed concerns regarding job security.

In discussing the benefits of automation, both managers provided concrete examples. Manager A emphasized increased efficiency in the sales process and the generation of deeper customer insights through the CRM platform. One notable success was a targeted marketing campaign informed by CRM data, which resulted in improved customer engagement. Manager B highlighted cost reductions and increased throughput as key outcomes of RPA implementation, citing a significant decrease in transaction processing times as a critical performance gain.

Despite the reported advantages, both managers acknowledged the presence of ongoing challenges. Manager A noted the continued need for regular system updates and staff training, pointing to the fast pace of technological change and the need for employees to stay current. Manager B expressed concern about maintaining a personalized customer experience, stressing the importance of balancing automation with human interaction to preserve customer satisfaction and trust.

Looking to the future, both organizations have expansion plans for their automation strategies. Manager A indicated that the company intends to integrate AI-driven analytics into its CRM system, aiming to support broader business functions and enhance data-informed decision-making. These developments are motivated by technological advances and increasing market competition. Meanwhile, Manager B's organization is planning to adopt machine learning capabilities and expand automation to include supply chain management. These efforts are driven by factors such as regulatory shifts and cost-efficiency goals.

Conclusion

This study has examined the adoption and impact of business automation tools across a variety of organizational contexts, drawing on empirical data collected through a structured survey and in-depth interviews. The findings provide a nuanced understanding of how automation technologies are utilized, their perceived effectiveness, and the organizational factors that influence successful implementation. These insights are intended to inform strategic decision-making and support organizations in optimizing their use of automation tools.

The analysis reveals a diverse landscape of automation technologies, with varying levels of adoption across industries. Larger organizations tend to lead in implementation, capitalizing on automation to streamline operations, reduce operational costs, and enhance overall efficiency. The

data also indicate that widespread automation adoption correlates with significant improvements in workflow performance and business productivity.

Several key practical implications emerge from the findings. First, organizations that adopt a strategic, phased approach to automation are more likely to achieve sustainable gains in performance and cost efficiency. Second, employee training and support mechanisms are essential to ensure that automation tools are effectively integrated into existing workflows and that staff can adapt to technological changes. Third, smaller organizations, which may face resource constraints, could benefit from customized automation solutions designed to meet their specific operational needs.

The interviews with two senior managers provided valuable qualitative insights that complement the survey findings. Manager A emphasized the importance of continuous training, system updates, and ongoing adaptation to evolving technologies. Manager B highlighted the need to maintain a balance between automation and human expertise, particularly in customer-facing processes. Both managers offered reflective, experience-based perspectives that enrich the understanding of the challenges and opportunities associated with automation in large-scale organizational environments.

Overall, the study underscores the transformative potential of automation technologies in enhancing organizational performance. As automation tools continue to evolve, their strategic integration—guided by thoughtful planning, adequate resources, and a focus on human-technology collaboration—will be critical in shaping the future of work and driving sustainable business innovation.

References

Atiker, Ö. (2017) In einem Jahr digital: Das Praxishandbuch für die digitale *Transformation Ihres Unternehmens*, 7; ISBN: 978-3-527-81123-6;

van der Aalst, W. M.; Bichler, M., & Heinzl, A. (2018). Robotic Process Automation. *Bus Inf Syst Eng* 60, pp.269–272. https://doi.org/10.1007/s12599-018-0542-4

Baur, C. and Wee, D. (2015)"Manufacturing's next act," *McKinsey&Company*, [Online]. Available: https://www.mckinsey.com/capabilities/operations/our-insights/manufacturings-next-act#/. [Accessed 2024].

Bohn, R. B.; Lee C. A. and Michel, M. (2020) "The NIST Cloud Federation Reference Architecture (NIST SP 500-332)," *United States government*, 13 February. [Online]. Retrieved from: https://www.nist.gov/programs-projects/nist-cloud-computing-program-nccp. [Accessed 2024].

Carayannis, E.G.; Morawska-Jancelewicz, J. (2022) The futures of Europe: Society 5.0 and Industry 5.0 as driving forces of future universities. *J. Knowl. Econ.*, *13*, 3445–3471

Crick C. and Chew, E. K. (2017) "Business processes in the agile organization: a socio-technical perspective," *Software and Systems Modeling*.

Coombs, C.; Hislop, D.; Taneva S. K. and Barnard, S. (2020) "The strategic impacts of Intelligent Automation for knowledge and service work: An interdisciplinary review, *The Journal of Strategic Information Systems*, Volume 29, Issue 4, 101600, ISSN 0963-8687, https://doi.org/10.1016/j.jsis.2020.101600. (https://www.sciencedirect.com/science/article/pii/S0963868720300081)

Hofmann, P.; Samp, C.; Urbach, N. (2020). "Robotic process automation," *Electronic Markets,* Springer;IIM University of St. Gallen, vol. 30(1), pages 99-106, March.

Karjalainen, J. (2022) "Developing business process automation strategy," LUT University, Global Management of Innovation and Technology, Master's thesis

Payraudeau, J.-S.; Marshall, A.; Dencik, J. and Ballou, S. (2021) "The Virtual Enterprise: enterprise transformation enabled by strategic digital acceleration," Strategy and Leadership ahead-of-print

Schwab, K. (2016). The Fourth Industrial Revolution, "Future strategy research and innovation," The Federal Government, [Online]. Retrieved from: https://www.bmbf.de/bmbf/de/forschung/zukunftsstrategie/zukunftsstrategie_node.html. [Accessed 2024].

Salesforce, "How To Collaborate With Your Salesforce Admin for Sales Success," Salesforce, [Online]. Retrieved from: https://www.salesforce.com/eu/blog/. [Accessed 2024].