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Pillars of IA – The Value of Intelligent Automation

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In today's rapidly evolving digital landscape, businesses are under pressure to innovate, streamline operations, and deliver exceptional customer experiences. At the heart of this transformation lies Intelligent Automation (IA). Over the past decade, IA has grown from a niche technology into a strategic cornerstone for organizations worldwide, with the market expanding from \$250 million to [\\$5.63 billion](#) in less than a decade.

As IA continues to reshape the corporate world, it is clear that management and leadership are increasingly driving it, rather than the IT or technology department, evolving from a technical focus to a more business-orientated approach.

As businesses seek to streamline operations, enhance customer experiences, and drive innovation, the pillars of IA – process-oriented development, unified platforms, and digital twins – are proving essential in navigating the complexities of today's dynamic business environment.

The evolution of Intelligent Automation: From RPA to IA

Since the explosion of Robotic Process Automation (RPA) in the digital landscape in 2018, RPA has continued to grow and develop with a focused mission: to automate repetitive, rule-based tasks traditionally performed by humans. RPA's early adopters quickly realized its potential to reduce costs and increase efficiency, but its limitations became evident as businesses sought to automate more complex processes. The need for more advanced capabilities led to the emergence of IA – a sophisticated integration of RPA with Artificial Intelligence (AI), Machine Learning (ML), and other cognitive technologies.

IA goes beyond simple task automation. It combines cognitive intelligence technologies like AI, analytics, process discovery, and process mining to expand the potential of business process automation. By leveraging AI and ML, IA can handle unstructured data, understand natural language, and even learn from past interactions to improve future performance.



This shift has placed IA at the heart of business development, where it now plays a critical role in accelerating end-to-end customer journeys, enhancing customer experiences, driving significant cost savings, and promoting business expansion.

Pillar 1: Process-Oriented Development

As IA becomes more integrated into business operations, the role of IA developers is undergoing a paradigm shift. Traditionally, automation development was seen as a highly technical role, requiring deep expertise in coding and software engineering. However, as automation tools have become more advanced and user-friendly, the focus has shifted from pure technical skills to a more holistic understanding of business processes.

Modern IA developers need a balance of technical proficiency and business acumen. While basic coding skills are still valuable, the ability to understand and optimize business processes are now paramount. Developers must be able to analyze workflows, identify inefficiencies, and design automation solutions that align with broader business goals. This requires a deep understanding of the software development lifecycle (SDLC), release management, and the specific business areas being automated.

The trend towards low-code and no-code platforms is democratizing IA development. These platforms allow individuals with limited technical backgrounds to contribute to automation projects, provided they have a strong grasp of the underlying business processes. This opens new opportunities for professionals from various backgrounds – whether in finance, operation, or customer service – to become IA champions within their organization.

To succeed in this evolving landscape, IA developers must cultivate both soft and hard skills. Communication and collaboration are crucial, as automation projects often require input from multiple stakeholders across different departments. At the same time, developers must remain proficient in technical areas such as SQL, APIs, and web technologies like HTML, CSS, and JavaScript, especially when working on customizations or integrations that require deeper technical knowledge.

Pillar 2: Unified Automation Platforms

As organizations scale their automation efforts, the complexity of managing multiple tools and vendors can become overwhelming. This has led to the rise of unified automation platforms – integrated solutions that combine various automation tools and technologies into a single, cohesive system. These platforms serve as a digital “Swiss Army Knife,” offering a versatile toolkit that can handle a wide range of tasks across different departments.

Unified platforms are important for scaling automation as they enable organizations to simplify their technology stacks, reduce vendor dependencies, and streamline operations. They integrate key technologies like AI, ML, RPA, Business Process Management (BPM), and Intelligent Document Processing (IDP) into a single solution, providing enhanced visibility and control over automation initiatives. Unified platforms are particularly valuable in organizations with complex, siloed operations. In many businesses, different departments use separate systems for front-end sales, middle-office operations, and back-end processes. This can lead to service gaps, disjointed customer journeys, and insufficient use of resources. A unified automation platform addresses these challenges by providing a holistic view of operations, enabling better collaboration, data sharing, and decision-making across the organization.

For example, global insurer Allianz Group successfully implemented a unified automation platform to streamline operations across its 70 countries, supporting 126 million customers. By integrating RPA with optical character recognition and natural language understanding, Allianz optimized high-volume

processes in underwriting, pricing, finance, and IT, reclaiming 10,000 hours per month for its employees. This success was achieved through a combination of starting small, investing in people, and establishing robust governance and change management frameworks.

Another example is Zurich Insurance Group, which used IA to unify and streamline its claims processing, document management, and customer service operations. By consolidating over 120 processes onto a single platform, Zurich was able to process three million transactions more efficiently, freeing up frontline staff to focus on higher-value customer interactions.

The benefits of a unified automation platform extend beyond operational efficiency. They also enhance compliance and risk management by ensuring that processes are standardized, monitored, and optimized across the entire organization. This reduces the likelihood of errors, ensures consistent customer experiences, and mitigates regulatory risks.

Pillar 3: Digital Twins and Process Mining

The use of digital twins and process mining is a key pillar in optimizing business processes. Digital twins are virtual models that replicate real-world processes, allowing organizations to monitor, analyze, and improve their operations in real time. When combined with process mining – a technique that involves analyzing data from enterprise systems to discover, monitor, and improve real processes – digital twins can become a powerful tool for driving business transformation.

Digital twins and process mining are critical for identifying inefficiencies and uncovering opportunities for automation. Process mining concentrates on the broader view of end-to-end business operations. It seeks to discover, monitor, and improve the entire sequence of activities and interactions within an organization, including the way tasks are connected and how data flows through the processes. This data-driven approach eliminates the guesswork traditionally associated with process optimization, enabling organizations to make informed decisions about where to apply automation for maximum input.

The integration of digital twins and process mining into a unified IA platform enables a holistic view of business operations. For instance, a Fortune 100 financial services firm used process mining to monitor investor compliance onboarding. By automating the analysis of 100 percent of transactions, the firm was able to save \$2 million annually and significantly improve compliance.

In the telecommunications sector, where companies manage vast physical and digital footprints across the globe, process mining is invaluable for preventing issues before they arise. By analyzing billing disputes, payment processing, and other critical tasks, businesses can identify inefficiencies early and implement automation to resolve them quickly.

The future of digital twins in IA is promising. As ML and AI technologies advance, digital twins will become even more sophisticated, capable of predicting future outcomes and autonomously optimizing processes. This will further enhance the agility and resilience of organizations, enabling them to adapt to changing market conditions and customer demands with greater speed and precision.

The Future of Intelligent Automation

As tools become more intuitive, the barrier to entry for automation will continue to lower, enabling more people to contribute to automation projects without needing deep technical expertise. The democratization of IA will accelerate its adoption across industries and empower organizations to harness the full potential of automation.

The focus on IA is also growing in academia. Universities and colleges are increasingly incorporating automation, BPM, and AI into their curricula, preparing the next generation of professionals for the demands of a digital-first world. IA is no longer just a tool for improving operational efficiency – it is a strategic asset that can drive business transformation and create a competitive advantage. By embracing the pillars of IA, organizations can navigate the complexities of the digital age and position themselves for long-term success. The future of IA is bright, and those who embrace it today will be the champions of tomorrow.

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