

Survive & Thrive with



Smart Process Automation

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White Paper

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Executive Summary

In this whitepaper, we explore how recent and emerging technology trends provide organizations with the opportunity to rethink their approach to automation and thrive in fast-moving markets.



1. Introduction

Enterprise IT has always been the business of automation, whether that be eliminating repetitive tasks such as book-keeping, or providing entirely automated processes such as those found in web-based commerce or financial trading.

The positive impact of enterprise IT is obvious when the level of automation in a modern organization is considered. It is safe to simply say that many organizations can't operate their businesses without the automation that they have already achieved.

However, the world is changing quickly, and yesterday's automation technology is becoming today's legacy problem, which does not meet the needs of the agile, connected digital organization. Today's companies need to be able to quickly

respond to clients who are used to information and services on-demand from organizations like Amazon, Google, Uber and Netflix.

Much of what today's organizations know about automation is valuable, and many key skills carry over from the previous era into today's automation work. Still, new technology is creating new opportunities, and enterprise IT organizations need to adapt, reskill, and rethink how they approach automation in today's environment.

To avoid being surpassed by new competitors in the market, organizations need to identify how to modernize the technology they have, update what isn't suitable for the new era, and reinvest what they can to take them forward into the next epoch of enterprise automation.

2. Why Smart Automation?

- Increased scalability of the business
- An efficiency which can't be gained from manually intensive processes
- Transparency of operation due to the ability to monitor automated processes accurately
- New insights about their business and customers using the data available from automated processes
- Reduced time to market, the ability to focus on value discovery and delivery
- The ability to focus on value delivery rather than day-to-day execution problems caused by manual processes
- Increased reliability due to the repeatability and consistency that automation brings



Making Smart Choices



3. Automation Unrealized

Throughout history, “automation” intended to create large monolithic applications for a business process such as claims processing.

These applications slowly progressed as the organizations changed. Business Process Management (BPM) was added to enable the automation of complex processes.

These processes created a complicated environment that combined several applications to automate the organization’s processes.

This style of automation creates an effective but complicated and slow-moving, organizational automation.

Changing these environments is usually a painstaking process of specification, design, implementation, and long periods of manual testing, with occasional, high-risk, manual releases to production.

These environments were a hindrance to change in yesterday's business environment and simply cannot support the high-speed, scalable processes needed to support today's digital workloads. Nor can these environments allow for the adaptability needed to support rapidly changing agile businesses, or the need to deal with new challenges like unstructured text and image data we find today in digital businesses.



4. Emerging Technology

A practical problem many organizations encounter is the need for systems to provide APIs to allow automation. Older monolithic systems do not have external APIs until recently, could not be easily integrated into this new fast-paced world. While the long-term solution is almost always a re-engineering project to modernize those applications, an effective short-term solution can be Robotic Process Automation (RPA). RPA is a new technology that allows applications to be automated through their user interfaces, by simulating a human interacting with them.

Beyond application architecture, traditional software development has well-known limitations when it meets problems involving unstructured data, images, or situations where judgment is required.

These problems, which are more and more common as processes become digitized, are part of the reason for the recent interest in artificial intelligence techniques like machine learning. Machine learning can perform sophisticated classification and matching processes, automating many recognition, classification, and heuristic decision-making tasks that take considerable human effort today.

Another emerging area is natural language user interfaces, harnessing technologies like bots, natural language processing, and voice recognition. By allowing people to interact with systems via simple, but natural, voice or textual interactions, we open up a new set of options for automating our essential organizational processes.



4. Emerging Technology

Although much of this emerging technology is new, as we said earlier, many of the fundamental skills needed to automate businesses successfully are shared with existing approaches. The most underlying ability for successful automation is good software engineering practice. And this has become even more important

as more sophisticated approaches are used for automation. When combining technologies like microservices, cloud, continuous delivery, automated testing, machine learning and natural language interfaces, the core engineering capabilities of architecture, development, testing and application, and infrastructure management are crucial to creating consistent, sustainable automation solutions.

5. Automation: The New Enabler

These emerging technology trends create the potential to transform automation from being a barrier to innovation and change, to be a key enabler for the modern digital and agile organization.

We refer to choosing the right mix of automation technology for an organization as “smart automation,” and it includes both automating ourselves as a technology organization and automating our customers, the business users.

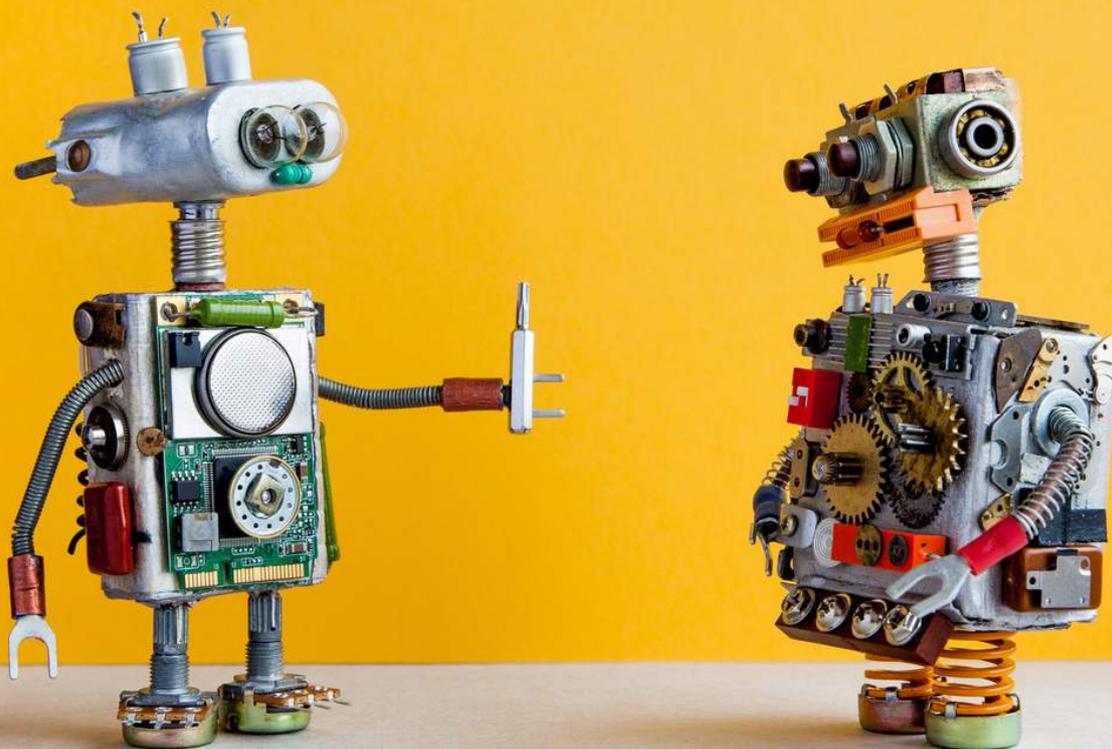


When we talk about automating, this can include:

- Cloud automation that allows us to remove the traditional barriers to change caused by manual infrastructure provisioning & change control.
- Continuous delivery that revolutionizes the application delivery process by removing the manual effort and hand-offs required to get application code to production, so eliminating the delays, and much of the risk, of a manual release process.
- Test automation to ensure consistency, repeatability, and efficiency of the testing process, to allow us to test frequently and repeatedly whenever we change our software.

When we talk about automating our business customers, this can include:

- RPA allows us to integrate applications without APIs into our automated processes, giving us time to modernize them or providing options for systems where there isn't a strong business case for modernization.
- AI technologies, such as machine learning, allows for the automation of processes that involve matching, classifying and extracting information from unstructured or semi-structured data that are not amenable to traditional automation approaches.
- Natural Language Interfaces empower users to interact with automated systems in a natural and fluid way, allowing their use in situations where traditional desktop or mobile device user interfaces are too restrictive or unavailable.



6. The Implementation Challenge

The possibilities opened up by modern automation technology are an exciting opportunity for IT and broader organizations alike but can also be a significant challenge for traditional technology groups.

This sort of modern, agile and adaptive automation does not need a vast number of low-skilled programmers making small changes.

Instead, it needs highly capable software engineers who understand the entire system and its value and can adapt to work with

fast-moving, sophisticated technology, in a way that delivers robust solutions for the organization.

The partners needed by a modern organization must be able to deliver robust solutions, using responsive, agile approaches. This work requires a strong understanding of agile and lean working, plus the ability to find, adopt and apply evolving technologies in order to keep their clients at the forefront of the opportunities offered by Smart Process Automation.

7. Getting Started on the Smart Automation Journey with Royal Cyber

The goal is to deliver something useful, to validate your ideas and build confidence in the approach. Given the chances available and embracing new automation technology across many industries, it is not too dramatic to say that in many cases, Smart Process Automation is now a survival skill for the modern digital enterprise.

Smart Process Automation has huge potential to enable organizations to stay relevant and to deliver benefits, including efficiency, transparency and reliability. Automation has always been a vital part of IT delivery and has had a significant impact over time.

Nevertheless, a changing, digitizing environment means that we need to re-evaluate our existing automation approaches and harness the Smart Process Automation to make automation the enabler of the digital business, rather than a legacy that lurks its existence.

Discover how to realize business process improvements by complementing your Robotic Process Automation (RPA) solutions with Royal Cyber's Smart Process Automation.





Royal Cyber Simplifying IT for Customers & Partners

Royal Cyber Inc. is an IT Consulting & digital transformation company specializing in services, solutions, and software. Royal Cyber is recognized and acknowledged by customers and partners worldwide, including Fortune 500 companies. Through its offices in the USA and 9 countries across the globe, Royal Cyber provides reliable and high-performing Commerce, Cloud, Analytics, Mobile, AI and Middleware solutions & services.

In ME & KSA specifically, Royal Cyber has been serving major enterprise accounts for the last 8 years, as an IT System Integrator and trusted technology partner, to overcome their complex Enterprise Modernization challenges and achieve their Digital Transformation journey.

We provide customized solutions to help achieve your business and technology goals

[See Our Strategic Partners](#)

OUR VISION

Encourage Growth & Achieve Excellence

500

600+

Clients



17+

Years in IT Business



1,000+

Employees / People