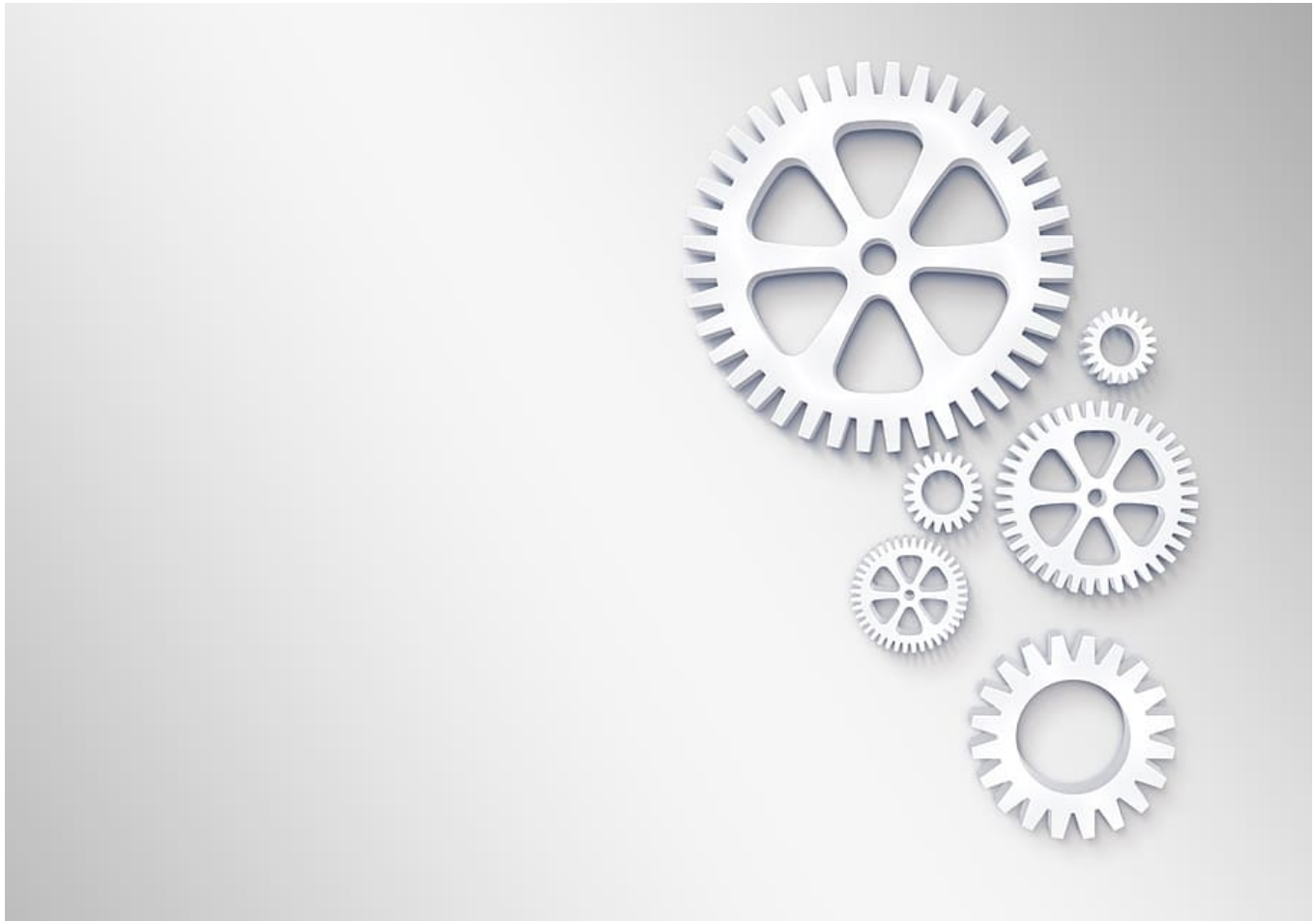


Digital Process Automation



Introduction

New and innovative approaches to business process re-engineering are now possible using emerging tools and technologies, enabling organizations to reimagine business processes and redesign them to be faster, smarter and more intelligent. Some of the emerging tools and technologies in this space are:

Robotic Process Automation (RPA): RPA is a type of business process automation, or the use of technology to execute recurring manual processes that leverages a set of programmed software 'bots' that follow instructions to complete the process error-free and at a higher volume and speed. RPA minimizes costs, increases efficiency, and streamlines processes. Continuously evolving automation tools from UiPath, Automation Anywhere, Blue Prism and others are making RPA more accessible to a broader skill set and more powerful than ever before.

Hyperautomation: An evolution of RPA is Hyperautomation, a term coined in 2019 by Gartner, who named hyperautomation among the top 10 strategic trends for 2020. Hyperautomation employs complementary automation tools to integrate functional and process silos to automate and improve business processes. As Gartner describes

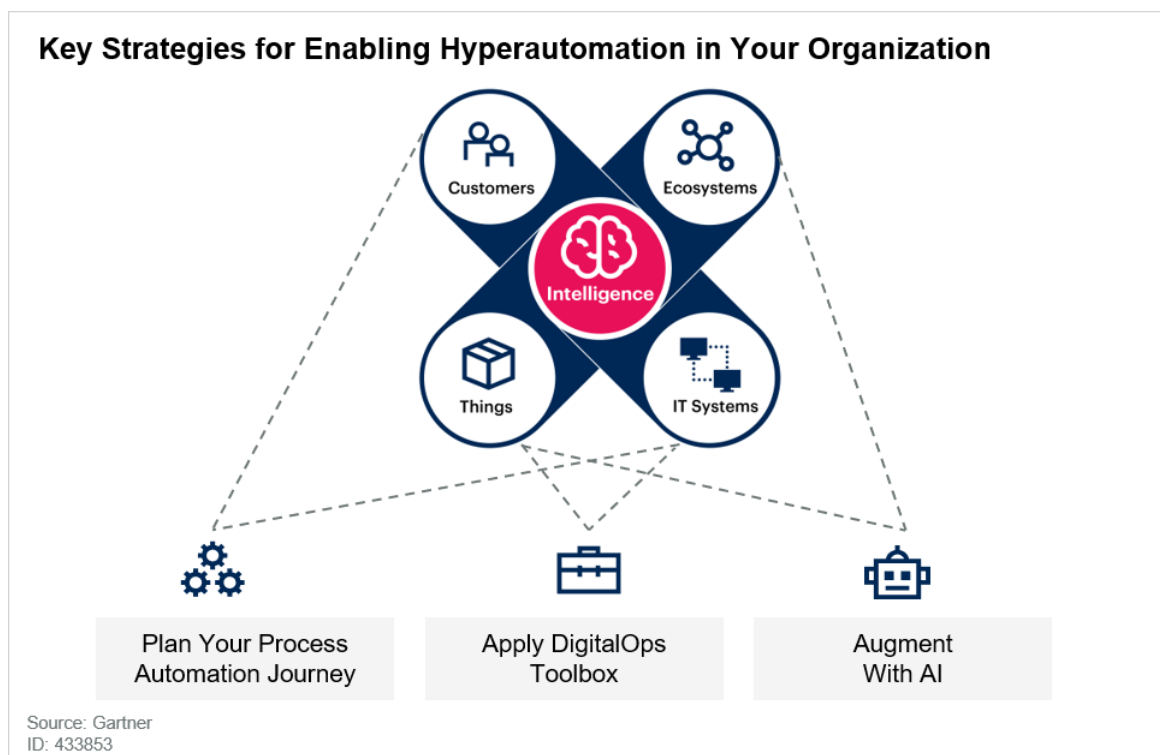


Figure 1. Hyperautomation Strategies

“RPA may provide quick relief as a noninvasive form of integration. However, processes are not always simple, routine, repetitive and stable. They may be long running, and they often involve intelligent automated decision making and optimization. The real challenge — to scale beyond the initial few low-hanging fruits of routine processes — cannot be solved by a single tool or with siloed strategies.” Key strategies for enabling hyperautomation are shown in *Figure 1. Hyperautomation Strategies*.

Low Code (No Code) Platforms:

Low code platforms enable the development of application software using intuitive visual interfaces that provide simple drag-and-drop features to build applications by using preassembled building blocks instead of complicated coding languages, making the development of digital automation solutions more accessible to lower tech resources, beyond the traditional computer programming staff. These tools can be used effectively by both professional developers and non-professional developers, commonly referred to as “citizen developers”, to create applications and components to automate processes, and accelerate digital transformation.

Intelligent Business Process Management Suites (iBPMS):

Intelligent business process management suites (iBPMS) add intelligence to the prior generation of Business Process Management Suites (BPMS). Basic BPMS platforms provide wholistic support for the process improvement life cycle, starting with process discovery to innovation, design and implementation of new processes, monitoring and analysis, and enable continuous process improvement. iBPMS adds intelligence and interactivity to the approach and adds support for human collaboration such as integration with social media, predictive analytics, mobile-enabled process tasks, streaming analytics and real-time decision management.

Process Mining:

Process mining combines the capabilities of data science with process management to support the analysis of operational process using data that is generated by the activity of people and automation bots as they work with business processes. This activity data is then transformed into a process event log providing a detailed visualization of the end to end process. By applying data science to the analysis of the process event log, process mining produces insights and actionable plans for improving, optimizing and ultimately further automating those processes.

Process visualization alone is an automation of the a previous manual approach called Process Mapping. What used to require teams of people and several days of work is now completed in hours or minutes.

Process mining enables processes to be discovered, analyzed and optimized across the enterprise providing complete and accurate analysis based on activities generated by the processes in action. The resulting analysis enables discovery of bottlenecks, exceptions, and inefficiencies that might be targets for improvement and automation. Unlike manual Process Mapping, Process Mining is an automated process that can be run continuously, to monitor processes and measure improvements.

Process

The Ignite Automation Life Cycle follows a Human Centered Design (HCD) and Agile approach to Digital Automation. The life cycle iterates through phases of Discovery, Analysis, Innovation, Design, Automation, Validation, Hardening, Deployment and Monitoring. Although HCD is the process of developing solutions to problems by involving the human perspective and automation is the process of eliminating human manual work, it is critical to involve HCD in all phases of the work to provide transparency, increase adoption rates, and provide intuitive workflow and user experience around the automated processes.

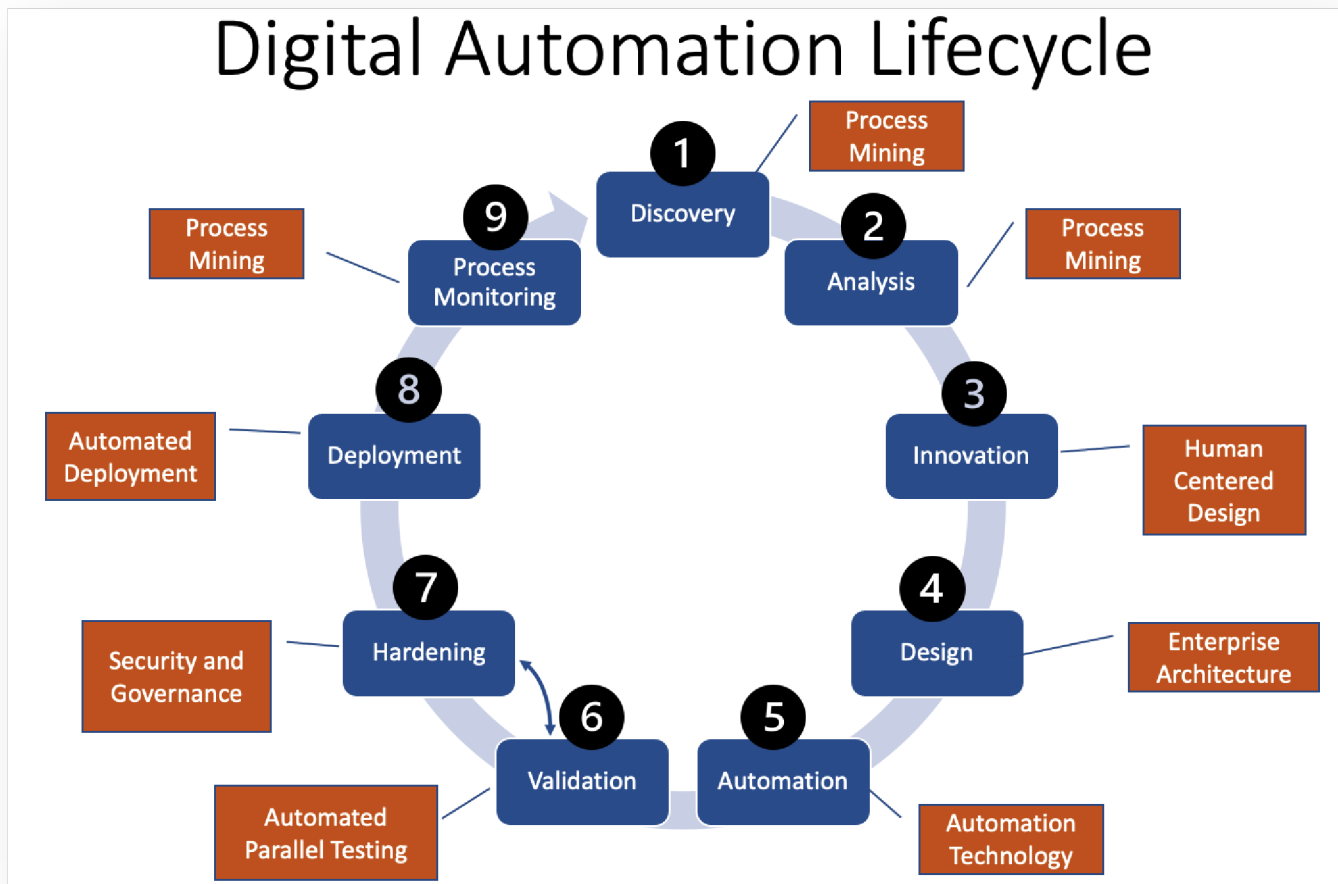


Figure 2. Ignite Digital Automation Life Cycle

CONCLUSION

Digital Automation is the future of work and a driver of digital transformation which is increasing business agility. Automation and Artificial Intelligence (AI) are making business smarter, changing how they think and how their employees work. Contrary to the opinion that automation and AI will be 'putting people out of work' the real impact is far from bleak. In fact, automation and AI are 'advancing people into smarter work'. As employees are freed from repetitive, boring, sometimes dangerous tasks by automation and AI, they become available for smarter work, more valuable to the organizations mission. According to the World Economic Forum's "[*The Future of Jobs Report 2020*](#)", automation and AI is expected to actually create 97 million new jobs worldwide by 2025 while replacing 85 million jobs in the same time frame.

Digital Automation and AI activities are now widespread across the Federal Government. The "[*State of Federal RPA Report*](#)" published by the Federal RPA Community of Practice (CoP) assesses RPA's impact, identifies implementation trends, and highlights best practices for future deployment. In the report Gerard Badorrek, GSA CFO, states that "the President's Management Agenda (PMA) Cross-Agency Priority (CAP) Goal 6 sets an important governmentwide focus for all agencies to shift from low-to high-value work. One important element of this goal is adopting innovative workload automation technologies like Robotic Process Automation (RPA), Artificial Intelligence (AI), and Intelligent Automation (IA)."

The COVID-19 response at GSA provides a good example of an automation success story. The GSA RPA team developed a national COVID-19 automation solution to speed up collection of infection count data in counties where it manages federal buildings. During the early stages of the COVID-19 pandemic, the data was easily collected manually, but the process was quickly overwhelmed as the COVID-19 infection count increased exponentially, requiring more and more staff to complete the daily collection.

The automation solution filled the gap and freed up resources to do the more valuable work of enhancing GSA's mapping capabilities of their buildings across the U.S., enriching the maps to display the buildings locations with the associated infection counts in the areas where they are located. Because the automation solution is scaleable, the collection of infection count data continues to be completed at the end of each day despite continued infection count increases.