Maximizing Digital Transformation with a Hyperautomation Ecosystem

by Juan Rella, Solution Architect, Diego Mujica, Solution Architect; and Aldo Del Peso, Associate Specialist Engineer. Reviewed by Technology Director Harsimrat Singh.

Adopting digital transformation means integrating digital technology across all of a company's functions, transforming operations and their approach to providing value to their customers.

This digital transformation process requires a comprehensive review and redefinition of all areas of the organization, including supply chain and workflow, employee skills, board-level discussion processes, customer interactions, and stakeholders' value proposition.

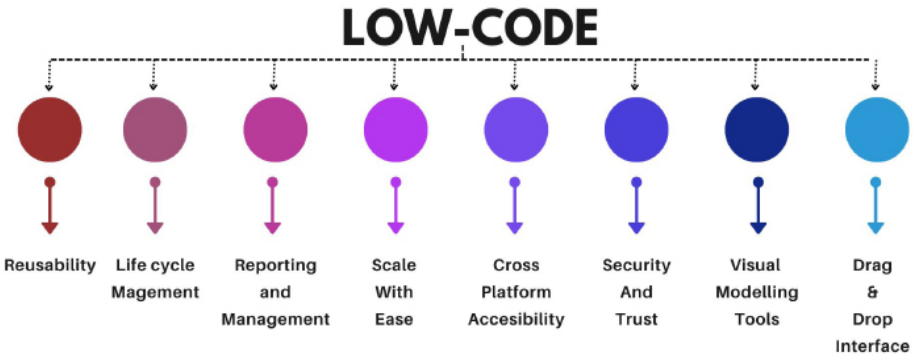
Technological advancement and digitization of the organization are driving forces behind the demand for digital transformation, and here, hyperautomation plays a pivotal role.

The trend is to strengthen the digitization of processes while automating everything possible, even delegating some decisions to technology, to enhance efficiency and reduce costs.

Flexibility and scalability are highly valued characteristics in a digital transformation, enabling the company to adapt to different situations in the future.

Often, as they embrace hyperautomation, businesses rely on a range of essential and optional digital tools that provide both agnostic and turnkey solutions for end-to-end automation.

In digital transformation, low-code application platforms can be a key factor in enabling companies to shift their focus from traditional programming to creating customized applications and workflows more quickly and efficiently.



This can help companies modernize their legacy systems and processes, reduce development costs, and improve the customer and user experience.

Additionally, low-code platforms can help companies experiment with new ideas and solutions without the risk and investment associated with building a custom application from scratch.

An LCAP solution should include at least the following features:

- Low-code capabilities, such as model-driven or graphical programming with scripting to develop a full-fledged application.
- Support for developing applications that have user interfaces, business logic, workflow, and data services.
- And simplified application testing, deployment, and management.

There are several low-code application platforms in the market, each with its own features and advantages.

It is important to carefully evaluate each option before making a decision.

Here are a few examples of the top low-code platforms and their respective providers:

Software	Website
Microsoft Power Apps	https://powerapps.microsoft.com/en-us/
Salesforce Lightning Platform	https://www.salesforce.com/ap/products/platform/app-dev/lightning-platform/
Mendix	https://www.mendix.com/platform/
Appian	https://appian.com/products/platform/low-code.html
Betty Blocks	https://www.bettyblocks.com/bettyblocks-platform

Tools considered vital include:

- Business Process Management (BPM) systems
- Robotic Process Automation (RPA) software
- Low/No code process templating platforms that use drag-and-drop functionality
- Process mining and discovery analytics tools
- Decision Management Suites or Business Rules Management Systems.

In addition, hyperautomated processes may use Application Programming Interfaces (APIs), Enterprise Service Buses (ESBs) for legacy systems, and integration Platform as a Service (iPaaS) tools.

We'll explore various interfaces, integrations, and tools and their influence on the crucial process of digital transformation in this paper.

Overview of the Hyperautomation Ecosystem

Tools & Frameworks

Various tools and frameworks can aid in the process of hyperautomation. These are some of the most popular and widely used:

- UiPath
- Automation Anywhere
- Blue Prism

Apart from RPA platforms, other frameworks and tools that can be helpful for hyperautomation include Python, Apache Kafka, or Docker.

While there are many other tools and frameworks in the market that can contribute to hyperautomation, each organization's selections will vary depending on their specific needs and goals.

Let's take a look at how different hyperautomation tools and frameworks can positively impact a digital transformation in many different ways.

Low-Code Applications

An Enterprise Low-Code Application Platform (LCAP) enables quick development and deployment of custom applications by minimizing or replacing the need for coding.

Low-code application platforms are valuable in hyperautomation because they allow business users to create customized applications and automated workflows without needing an experienced software developer.

This speeds up the application creation and deployment time, which can help companies become more agile and respond more quickly to market changes.

Business Process Automation (BPA)

BPA (Business Process Automation) software is the latest evolution of BPM (Business Process Management) software, incorporating advanced technologies like predictive analytics and process intelligence.

It offers numerous benefits, including better integration with other tools, advanced analytics, low-code tools for citizen developers, and complex event processing, optimization, monitoring, and management.

BPA tools are cloud-based and can integrate with IoT for continuous process improvement.

Common features of BPA solutions include process modeling and automation, integration with existing systems, data collection and analysis, and process improvement through monitoring and analysis.

There are several providers of Business Process Automation (BPA) solutions in the market, each with different features and approaches. Some of the major providers are:

Software	Website	Characteristics
UiPath	https://www.uipath.com/	RPA platforms with BPA capabilities
Automation Anywhere	https://www.automationanywhere.com/	RPA platforms with BPA capabilities
Blue Prism	https://www.blueprism.com/	RPA platforms with BPA capabilities
Appian	https://appian.com/	BPA solutions with additional capabilities beyond just RPA
Pega	https://www.pega.com/es	BPA solutions with additional capabilities beyond just RPA

Each provider offers an RPA platform and tools to automate, integrate, and manage business processes, as well as capabilities in artificial intelligence and machine learning to improve process efficiency and automation.

In summary, there are many options in the market, and each provider has their own unique strengths and capabilities.

BPA is an important technology in the hyperautomation process and can have a significant impact on the digital transformation of businesses by increasing their efficiency, agility, and customer focus.

In this way, BPA can help companies gain a competitive advantage in a dynamic business environment.

Decision Management Suite (DMS)

Decision Management System (DMS) software automates and manages complex business decisions.

It includes features such as decision modeling, real-time or scheduled execution, integration with enterprise systems, and analytics capabilities.

The use of a DMS in hyper-automation enables fast and accurate decision-making in complex processes with large amounts of data.

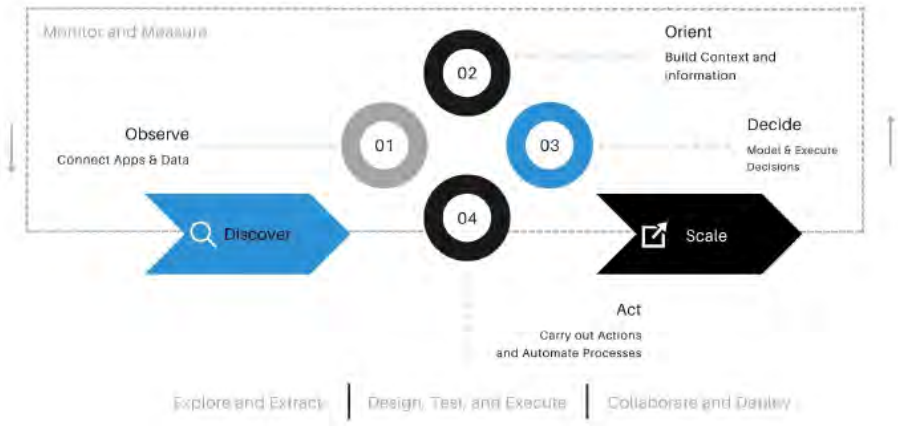
Additionally, DMS is a key tool in digital transformation, improving the efficiency and quality of business operations by automating decision-making and reducing manual intervention, thereby contributing to achieving digital transformation goals.

Here are some examples of Decision Management Suites (DMS) providers and their solutions:

Software	Website
FICO Decision Management Suite	https://www.fico.com/en/products/decision-management-fico-platform
SAS Decision Manager	https://support.sas.com/en/software/decision-manager-support.html
TIBCO BusinessEvents	https://www.tibco.com/products/tibco-businessevents
OpenRules	https://openrulesdecisionmanager.com/

Each of these providers offers tools to model, automate, and optimize business decisions, but each has its own characteristics and approach.

When selecting a DMS solution, it is important to carefully evaluate business needs and objectives to choose the best-fitting platform.



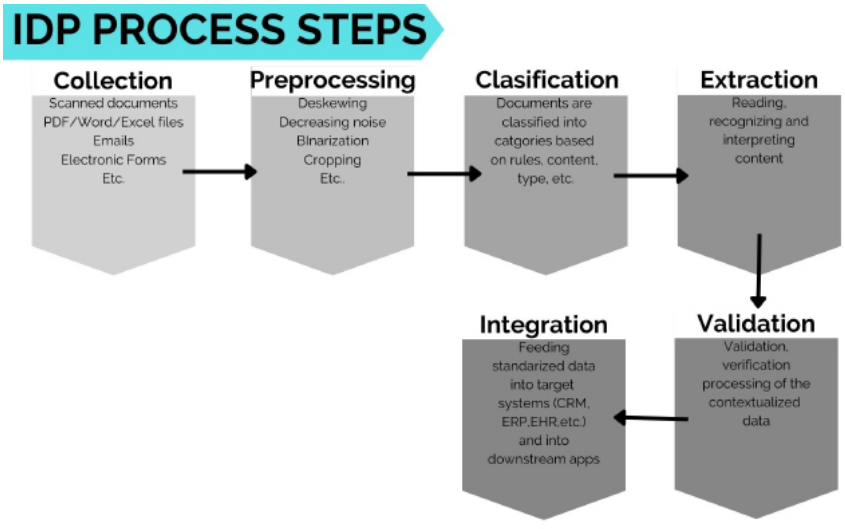
Intelligent Document Processing (IDP)

Intelligent Document Processing (IDP) extracts information from documents with defined and undefined structures to automate repetitive and high-volume processing tasks, and analyzes extracted data using advanced technologies such as natural language processing (NLP) and computer vision.

IDP plays a crucial role in improving automation and efficiency in document processing.

When used in the hyperautomation process, IDP can enhance efficiency and accuracy by automating information capture and processing from unstructured documents, reducing manual errors, and improving processing speed. This can accelerate decision-making and improve results quality.

In terms of digital transformation, IDP can help organizations digitize previously manual and paper-based processes, leading to increased efficiency, cost reduction, and improved responsiveness. Additionally, IDP frees employees from repetitive tasks, allowing them to focus on higher-value tasks.



Here are some examples of Intelligent Document Processing (IDP) solutions:

Software	Website
ABBYY FlexiCapture	https://www.abbyy.com/flexicapture/
Kofax TotalAgility	https://www.kofax.com/products/total-agility
IBM Datacap	https://www.uipath.com/product/document-understanding
Rossum	https://rossum.ai/

Recommended Reading

Is sustainable growth keeping you up at night? Staying current with tech advancements is hard; coming from behind is even harder.

Get the guide:

Digital Transformation: Leveraging Technology to Drive Business Growth & Sustainability

Integration Platform as a Service (iPaaS)

Integration Platform as a Service (iPaaS), plays a critical role in the hyperautomation ecosystem by providing a cloud-based platform for the seamless integration of systems, applications, and data, along with automating business processes.

Leveraging iPaaS can significantly boost the efficiency of business processes while reducing errors and data duplication within an organization.

iPaaS simplifies data exchange between diverse systems and applications, empowers the creation of automated workflows across the entire enterprise, and encompasses business processes, applications, and third-party systems.

iPaaS serves as a valuable tool for digital transformation, enabling the integration of new applications and services into existing infrastructure to improve efficiency and collaboration across the organization.

Key advantages of iPaaS include system and application integration, business process automation, flexibility and scalability to adapt to market changes and customer demands, and reduction of errors while enhancing work quality.

Other important iPaaS benefits include:

- Enable Business Agility and faster delivery of digital solutions.
- Rapidly integrate dispersed systems and applications to accelerate Time to Market.
- Reduce dependencies on highly skilled integration specialists.
- Improve customer experience by automating the integration of scattered applications and presenting a 360-degree view of customer information.
- Empower developers to boost productivity and improve business outcomes.
- Reduce dependencies on IT departments for functional activities using drag & drop low code features.

There are different types of iPaaS available in the market, each with unique features and capabilities, including Internet of Things (IoT) iPaaS, Security iPaaS, Integration-focused iPaaS, Process automation iPaaS, and Data connectivity iPaaS.

Based on the capabilities described above, the following platforms can be used for iPaaS integrations:

Software	Website
MuleSoft	https://www.mulesoft.com/integration-solutions/api/saas
Zapier	https://zapier.com/
Microsoft Azure IoT Central	https://azure.microsoft.com/en-us/products/iot-central/
Auth0	https://auth0.com/

Process & Task Mining

Process Mining and Task Mining technologies are used in hyperautomation to improve business processes and increase efficiency.

Process mining involves applying data analysis and mining techniques to discover, monitor, and improve business processes within an organization.

This technology allows companies to visualize their business processes in detail, identify bottlenecks and areas for improvement, and evaluate process performance.

On the other hand, task mining uses AI to collect and analyze data from the activities performed by workers on their computers.

It automates tasks by capturing mouse clicks and keystrokes, then uses AI to identify behavioral patterns and suggest process improvements.

Both technologies can be used simultaneously in the hyperautomation process to improve business processes and increase efficiency.

Process mining helps companies identify critical processes and improve them to increase efficiency and reduce costs. Task mining can identify repetitive and boring tasks that can be automated.

Process and task mining are critical tools in digital transformation and intelligent process automation, allowing companies to improve process quality, reduce costs, increase efficiency, and improve customer experience.

By improving automation and efficiency in processes, companies can free employees from repetitive tasks and allocate their time to more strategic and high-value tasks.

There are a variety of process and task mining tools in the market. Some of the more popular options include:

Software	Website
Celonis	https://www.celonis.com/
UiPath Process Mining	https://www.uipath.com/product/process-mining
Signavio	https://www.signavio.com/products/process-intelligence/

Content Services Platforms (CSP)

A content services platform (CSP) provides a wide range of tools for managing and storing an organization's content.

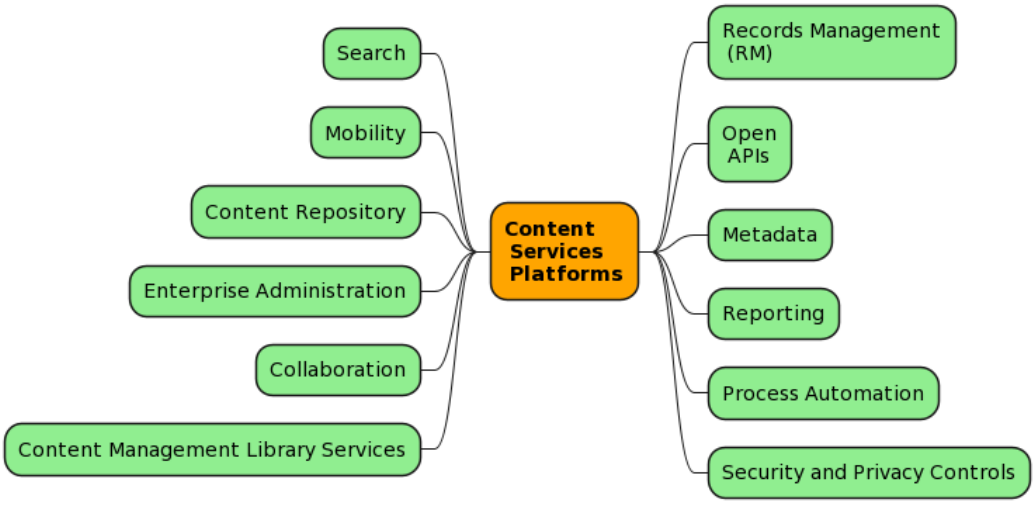
The content can be anything from documents and multimedia files to emails and chat logs.

CSPs enable businesses to organize, search, share, and protect content, as well as automate content-based processes.

Within the hyperautomation process, CSPs are important because they can help automate content workflows, allowing businesses to save time and resources.

For example, automated content workflows can include document digitization, information extraction, and document classification, enabling businesses to process content more efficiently.

Here are some examples of CSP use cases in common business activities:



Additionally, CSPs can also be an important tool for digital transformation, as they help businesses manage and access content more efficiently.

CSPs can enable businesses to share information more effectively, which can improve collaboration and decision-making throughout the organization. They can also help businesses comply with privacy and security regulations, an increasingly important consideration in today's digital world. Options here include:

Software	Website
Microsoft	https://learn.microsoft.com/en-us/partner-center/csp-overview
Alfresco	https://www.alfresco.com/
Nuxeo	https://www.nuxeo.com/content-services-platform/

Conversational AI Platforms

Conversational AI enables businesses to create and deploy chatbots, voice assistants, and other conversational agents that can interact with customers and employees using natural language, thanks to machine learning and NLP technologies.

They are crucial in hyperautomation by way of automating customer service, internal workflows, and other processes.

Conversational AI enables businesses to offer 24/7 support, handle routine tasks, and streamline internal operations such as HR and IT support. This results in improved customer satisfaction and efficiency, and reduced costs, making it a significant component of digital transformation for businesses.

The most popular technologies for customer service automation are chatbots and Interactive Voice Response. Here are some of the best providers for these technologies:

Software	Website
Chatbot: Intercom	https://www.intercom.com/
Voice Interactive Agent: Cloud Talk	https://www.cloudtalk.io/
Watson Assistant by IBM	https://www.ibm.com/products/watson-assistant

Chatbots

Chatbots are AI programs that interact with humans via messaging or voice assistants, automating interactions with customers, employees, or stakeholders. They can address FAQs, deliver accurate information, and handle transactions.

Chatbots scale operations without increasing headcount, reducing wait times and gathering data to enhance processes and experiences.

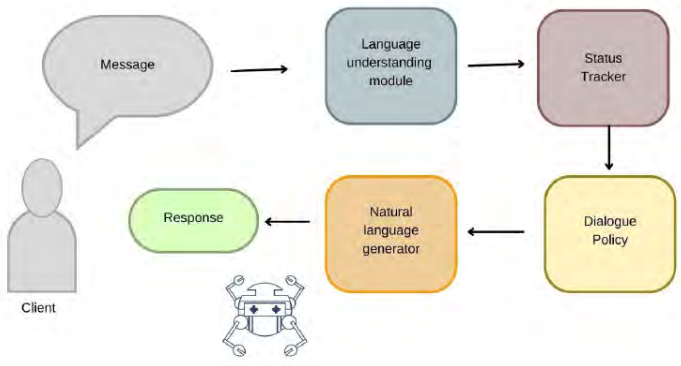
Voice Interactive Agents

Voice Interactive Agents use natural language processing to interact with users through voice commands and provide assistance or information.

They automate customer service and various tasks like scheduling appointments, providing personalized experiences, and gathering feedback. Voice Interactive Agents are increasingly popular due to the adoption of voice-enabled devices.

Components of an AI-based chatbot

To better understand how an AI-based chatbot works, we can analyze the elements that make it up. Below is one of the most commonly used configurations among globally recognized companies:



Maximizing Digital Transformation with Hyperautomation: A Use Case Example

Now that we have an understanding of the hyperautomation ecosystem and what tools and frameworks are involved, let's take a look at how specific tools can be applied to achieve hyperautomation.

The Challenge: A financial services company seeks to automate its personal loan approval process.

Currently, personal loan approvals are a long, costly, and error-prone process. Humans must manually review large amounts of information from loan applicants and generate personalized loan contracts, consuming valuable time and resources. Mistakes are i ntroduced through human error, adding complexity and additional resources to an already onerous process.

Hyperautomation presents a viable solution to these problems, by integrating different automation tools such as RPA, BPM, ML, and IDP,

This makes it possible to automate much of the personal loan approval process, from collecting information from loan applicants to generating personalized loan contracts.

Hyperautomation also allows for greater accuracy and efficiency in decision-making, which can improve customer satisfaction and increase business profitability.

First, an RPA robot can be implemented to gather and structure the personal and financial data of loan applicants, including information from internal and external databases.

This robot could use an iPaaS platform to integrate with different systems and applications, allowing it to efficiently obtain and consolidate information.

Next, a BPM tool can coordinate and monitor the loan approval process, using a Machine Learning model to analyze applicant data and predict their ability to pay.

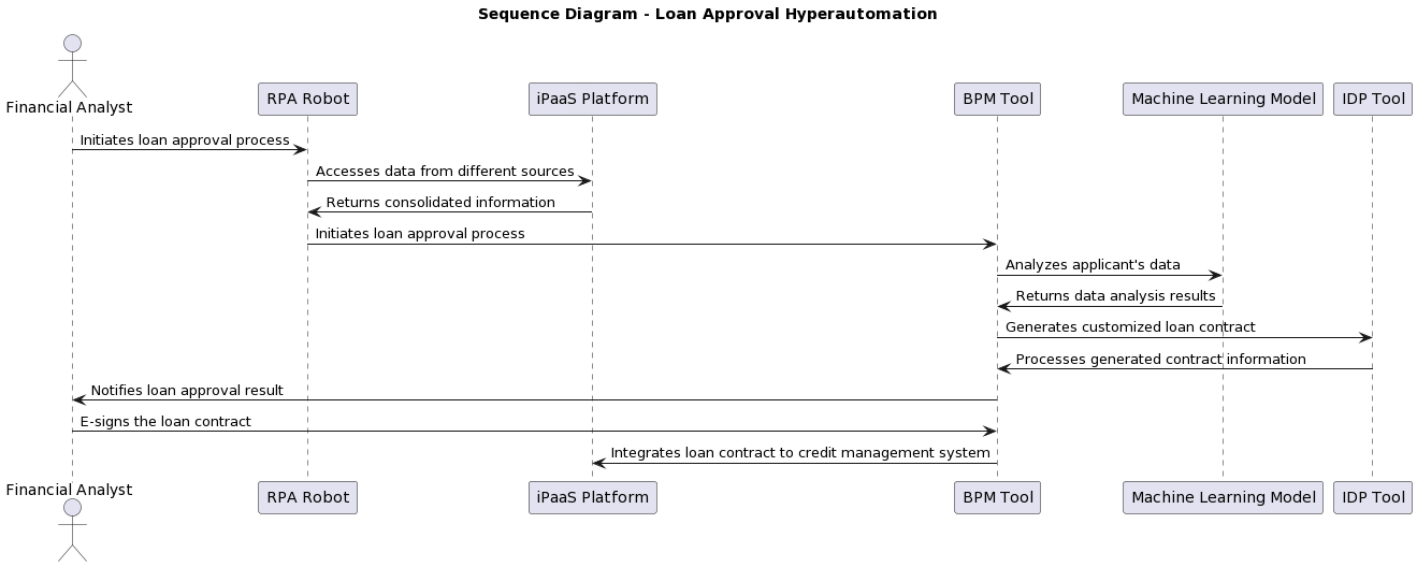
Suppose the model determines that the applicant meets the requirements for a loan.

In that case, an IDP tool could automatically generate a personalized loan contract by processing and extracting information from the company-generated documents.

Finally, the loan contract could be sent to the applicant for electronic signature and automatically integrated into the company's credit management system using the iPaaS platform.

This entire hyperautomation process would drastically reduce the time and cost associated with the personal loan approval process while minimizing the risk of human errors and fraud.

See our sequence diagram for our loan approval hyperautomation example using tools such as RPA, BPM, IDP, and iPaaS platforms, on the next page.



This example of hyperautomation demonstrates how companies can use digital tools such as RPA, iPaaS, BPM, ML, and IDP to digitally transform their processes and improve the efficiency and accuracy of their business decisions.

By combining automation and data analysis tools, companies can significantly reduce the time and cost associated with manual and repetitive processes, allowing employees to focus on more strategic and high-value tasks.

Further, automation and data analysis tools enable companies to make more informed and accurate decisions, which can significantly improve customer satisfaction and business profitability.

Hyperautomation promotes digital transformation by enabling companies to improve their processes, increase efficiency and accuracy, and make more informed and strategic decisions.

Recommended Reading

Hyperautomation means automating everything possible.

Using RPA and AI together in this way can profoundly impact productivity, people management, profitability, and the sustainability of the business as a whole.

Read more in GlobalLogic's 'Hyperautomation: Expanding Robotic Process Automation (RPA) with AI.'

Conclusion

Hyperautomation can have a significant impact on a business or other organization's digital transformation.

By integrating various digital tools such as RPA, BPM, ML, and IDP, companies can streamline their processes, reduce costs, and make more informed and strategic decisions.

In just one example use case of applying hyperautomation to the personal loan approval process, we can see how how it can reduce the time and cost associated with the process, increase efficiency and accuracy, and minimize the risk of errors and fraud.

Hyperautomation has potential use cases and benefits to offer in every industry, from finance and banking to consumer retail, manufacturing and industrial, communications, media and entertainment, and beyond.

Hyperautomation is a powerful tool for businesses looking to transform their operations and improve their bottom line.

By freeing up employees from repetitive and manual tasks, they can focus on higher-value activities that can lead to innovation and growth.

It has the potential to revolutionize the way businesses operate, and those that embrace it will have a distinct advantage in this digital age.

Companies that prioritize digital transformation and embrace new technologies using hyperautomation will continue to thrive in the years to come.

Whether ideating on a new concept, looking for new revenue streams, or attempting to transform an existing product or service, our experts help you take an outside-in approach to defining your desired business outcomes.

Our Digital Advisory teams can help you form the initial concepts you've been looking for. Want to learn more?

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