State of **Process Orchestration & Automation**

Are organizations at risk of digital chaos and "Automation Armageddon"?

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Introduction

Digital transformation has become ubiquitous — business as usual, even — as organizations look to increase efficiency and competitive advantage. It has been driving many businesses towards automation and, more recently, fueling the hype around artificial intelligence (AI) as a means to manage and automate processes from end to end.

This level of process automation is easier to achieve when you're building a business from scratch. But for most large organizations, this isn't the reality. Today's digital infrastructures and processes are complex and interdependent, making end-to-end process automation a significant challenge.

Creating or changing an end-to-end process is often difficult, since it leads to potential changes in many different systems. It's why process orchestration — bringing together and coordinating all the manual or automated tasks that make up a process — is important. Process orchestration doesn't only allow tying together all these different endpoints (people or systems), it also enables organizations to update all their different processes from a single location, providing IT and business teams with greater visibility and control.

Furthermore, with many organizations increasing their investment in AI, this will need to be orchestrated like any other endpoint within automated business processes. This approach ensures organizations stay compliant, avoid adding siloed systems that increase technical debt, and maximize the benefits of their AI investments.

For this report, we talked to 800 senior IT decision makers, business decision makers, and enterprise software architects responsible for process automation in large organizations (1,000+ employees). We asked about the current state of process orchestration and automation in their business, the impact of AI, and the challenges they face in managing process complexity.

The Rise of Uncontrolled Complexity

For large organizations, digital transformation increasingly means the digitalization of processes and data. However, the growing API economy means there are more connected applications than ever, and most large organizations typically use hundreds of different systems daily. So the overall process complexity has grown significantly, because processes are rarely a simple series of linear steps.

Many organizations are seeing considerable year-on-year **growth in the volume and variety of endpoints**, including core systems such as enterprise applications (e.g. SAP, Oracle, and Salesforce), task automation (e.g. robotic process automation (RPA) and decision management tools), and AI or machine learning (ML) solutions.

In this landscape of constant change, **and siloed tools and technologies, organizations are struggling to streamline and gain visibility over operations**. Most organizations say that as their business becomes more complex, digital, interconnected, and automated, there's an increased risk of core processes failing — and that it's increasingly difficult to effectively analyze and optimize them.

Reasons for Process Complexity

50 Organizations average about **50 components/endpoints**. This number has grown by approximately **19%** over the past five years.

Most common components/endpoints:

70% – Enterprise applications (SAP, Oracle, Salesforce, etc.)

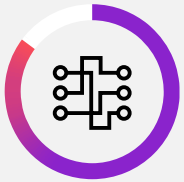
65% – Task automation technologies (Robotic Process Automation (RPA), iPaaS, decision management/ business rules)

48% – AI/ML applications (OpenAI, Azure OpenAI, Hugging Face, intelligent document processing)

41% – APIs

86% say regulations have increased.

78% say complex workflow patterns and/or long-running processes are increasing the difficulty in automation.



85% say as multiple automated tasks are combined, managing the overall end-to-end process becomes more complex.

This complexity is caused by:

60% – Branching and/or conditional logic that spans complex business rules

56% – Systems are legacy and difficult to connect to

49% – Multiple systems need to be spanned

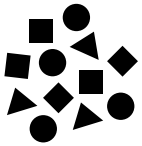
39% – Having to deal with human logic

34% – Systems are home-grown and difficult to connect to

23% – Subprocesses or systems involved are owned by another team

83% **say they are considering tools to help orchestrate and coordinate tasks from end to end across diverse process endpoints.**

As processes become more complex, digital, interconnected, and automated...



82%

are concerned that a lack of control will lead to digital chaos.

77%

say that a lack of control has resulted in increased risk that core business processes are not working anymore.

82%

say that a lack of control has resulted in increased business risk in regard to compliance.

69%

say that it becomes increasingly difficult to effectively analyze and optimize them.

82% say if this risk is left unchecked, it could lead to what could be described as "Automation Armageddon."

There's overwhelming consensus that if these issues are not addressed with decisive action, it could lead to digital chaos and "Automation Armageddon," where automation errors snowball to deliver catastrophic outcomes. As a result, companies are increasingly looking for better tools to help orchestrate and coordinate tasks from end to end, and across diverse process endpoints.

AI: The Double-edged Sword

Organizations today understand the value that AI could bring to their business, transforming business operations and customer experiences. AI can augment many different human workflows, helping to streamline complex processes, improve decision making, and unlock efficiencies that simply can't be achieved manually.

Most organizations are looking to add more AI capabilities to their business over the next three years, with the aim of better analyzing and improving processes. However, these organizations also admit that they face challenges being able to scale and operationalize AI across their whole business. AI strategies remain in their infancy as organizations also weigh the effects of AI on existing processes and technologies, and the potential impact on compliance and security. Many organizations are concerned that there is a lack of transparency into how AI applications are being used within business processes, and a corresponding risk to regulatory compliance.

For AI to deliver positive impact and maximum benefit, there's overwhelming agreement that organizations need to develop robust strategies. There needs to be a clear definition of AI's role within process automation — one that addresses security, governance, and integration concerns and ensures alignment with the organization's broader goals.

Ultimately, almost all the people we spoke to believe that AI will need to be orchestrated within automated business processes just like any other endpoint.

AI now

85%

say they face challenges being able to **scale and operationalize AI** across their organization.

93%

say, ultimately, **AI applications and services will need to be orchestrated** across their business processes if the organization is to get the maximum benefit from its investments in AI.

AI in the future

84%

say they are looking to **add more AI capabilities** over the next three years.

88%

say they are looking to use AI to help their organization better **analyze and improve processes**.

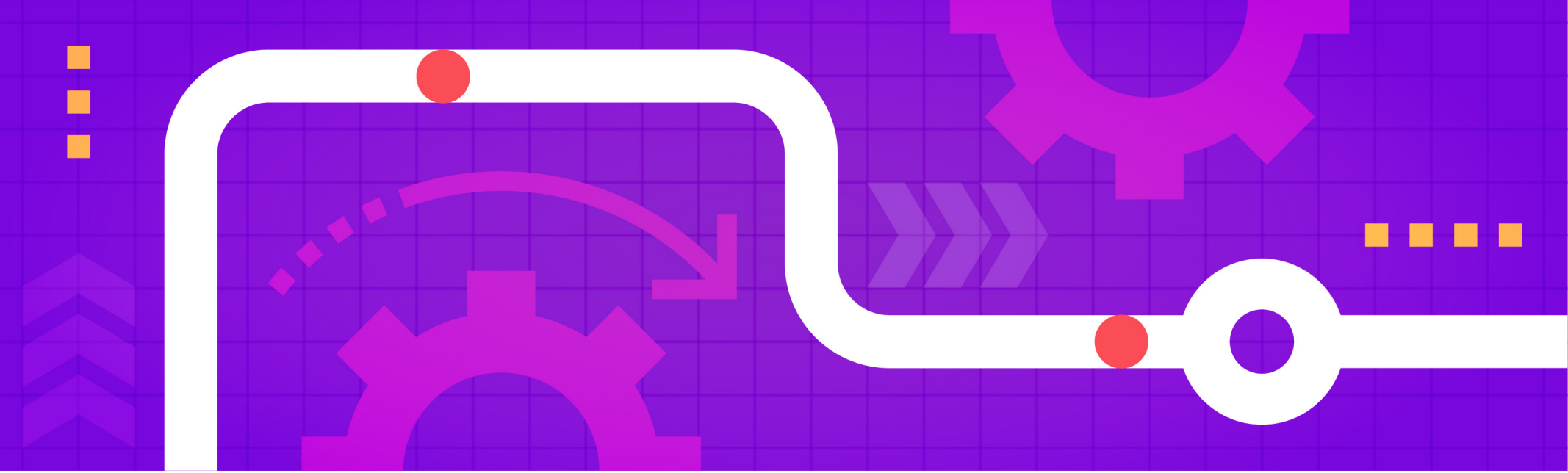
AI and compliance

84%

say a **lack of transparency** into how AI applications and services are being used within business processes is leading to regulatory compliance problems.

90%

say **AI applications and services need to be orchestrated** like any other endpoint within automated business processes to ensure compliance with regulations.



The Current State of Process Automation

There's a common agreement in large organizations that process automation is essential for digital transformation, with almost all of them having a center of excellence for process automation.

Many organizations have seen an increase in business growth over the past year due to process automation and are committed to increasing their spending on process automation by 10% or more.

But despite this, organizations today have, on average, automated less than half of their operational processes. They also say that their existing process automation is becoming outdated, with automation initiatives failing to keep pace with the rate of business change. This is a particular problem for businesses that have invested in point solutions to automate particular tasks, which have been left with siloed automation solutions that deliver limited value.

Process Automation – What Works and What Doesn't

Yes...

93% have a center of excellence for process automation.

87% say they've seen increased business growth due to process automation over the past year.

83% plan to increase their automation investment by 10% or more.

But...

On average, only **46%** of organizational processes are automated.

82% say their process automation is beginning to become outdated.

72% say automation initiatives cannot keep pace with the rate of change in today's organizations.

Overall, there's very strong support for the move away from large monolithic enterprise applications (e.g. ERP) towards composable architectures that promote flexibility. But while the overwhelming majority of organizations think it's important to bring together best-in-breed solutions, they have found there are two big challenges.

First, most organizations are struggling with inflexible IT systems that prevent them from meeting the demand for new automated business processes. Having business processes locked in "black box" legacy systems is a key blocker to process automation and orchestration. So, too, is a reliance on antiquated process design, which in many cases is based on proprietary tools and languages that are limited in functionality and hard to expand. Second, as is often the case, there is internal resistance to adopting new technologies, indicating a need for closer collaboration between IT and business teams.

Challenges Implementing a Composable Architecture

94% say it is important for their organization to have a composable architecture that allows for flexibility in integrating best-of-breed solutions.

Biggest challenges when adopting composable architecture

55% Transitioning from deeply entrenched legacy or monolithic automation platforms

51% Internal resistance to adopting new technologies

The Legacy System Problem

81% say having business processes locked up in "black box" legacy applications is holding their organization back from achieving efficient end-to-end automation.

85% say legacy systems and a lack of IT agility mean they can't always meet business demands for changes to, or new automated business processes.

83% say large monolithic enterprise applications such as ERP systems, that dictate business process design, need to become a thing of the past.

Understanding the Value of Process Orchestration

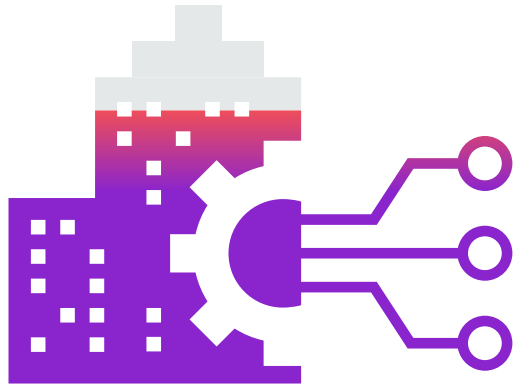
Organizations have turned to technology and automation to improve efficiency, increase operational agility, and reduce manual work. Yet many say automation hasn't fully delivered on its potential, usually as a result of process or business complexity.

For organizations that are successfully delivering or unlocking additional value through automation, a key success factor is process orchestration (coordinating the various moving parts or endpoints of a business process, and sometimes even tying multiple processes together). The business benefits of process orchestration are well recognized.

Organizations that have successfully implemented orchestration see improved customer service and experience, better employee satisfaction, and greater business efficiency.

Benefits of Process Orchestration:

- **55%** Improved customer service and experience
- **44%** Increasing process standardization, resulting in higher efficiency
- **42%** Faster decision making
- **42%** Better process integration and reuse
- **41%** Increased employee satisfaction

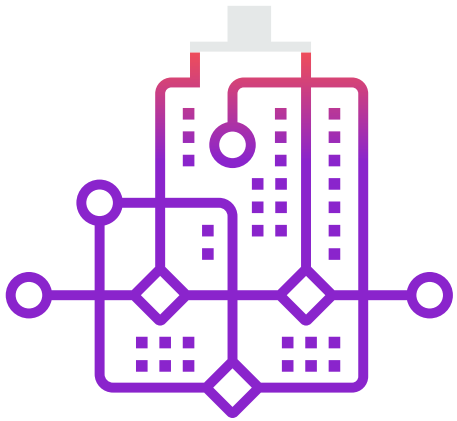


72%

of organizations believe process orchestration plays an important role in digital transformation.

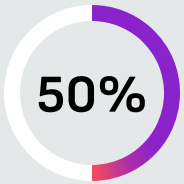
Process Orchestration Maturity

However, maturity levels of process orchestration vary from one organization to another. Few have reached the advanced stages, with all the benefits those entail. Most organizations say they are practicing process orchestration, but for a good number this simply means using it for a single use case or workflow. Some organizations have been able to incorporate process orchestration into multiple use cases across several functional areas or departments, but the reality is that very few companies have been successful in incorporating it organization-wide.

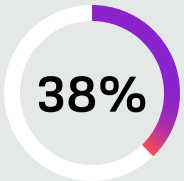


89%

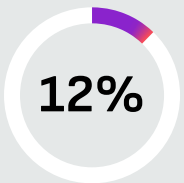
of organizations say they are practicing process orchestration.



Have incorporated a single use case for process orchestration.



Have incorporated it in multiple use cases across several functional areas or departments.



Have incorporated it organization-wide.

The Need for (Better) Process Orchestration

Regardless, there is a consensus across organizations of the need for better tools to manage how business processes intersect. There's a strong feeling that while there is considerable process automation happening, there's a variety of systems and processes — and no single good way to control it all. Similarly many believe that without orchestration, companies will struggle to achieve the significant business benefits of hyperautomation and the autonomous enterprise.

82%

say they need to have better tools to manage how their processes all intersect.

79%

say while they have a lot of process automation, they do not have a good way to control all of it.

86%

say a company cannot have hyperautomation without having process orchestration.

81%

say without process orchestration achieving an autonomous enterprise will be a pipe dream.

The Risks of IT and Business Misalignment

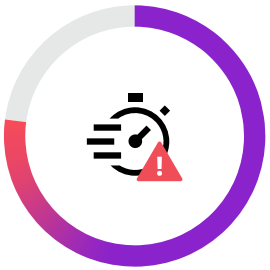
In most organizations, business and IT teams find it hard to collaborate on individual processes and projects at the setup stage, as well as for ongoing maintenance and optimization. Miscommunication between these teams can lead to the wrong things being built or rolled out to customers — which can clearly have a significant impact on the time-to-market as well as customer (and employee) experience and satisfaction.

Across organizations, there's recognition of a gap between business and IT teams when it comes to the challenges of delivering on business requirements. This creates a very real risk when considering automation projects, which can struggle to succeed in complex environments with legacy systems. In large organizations, business and IT leaders agree that automation efforts and business strategies don't align often enough.

The Struggles Between Business and IT Teams

62%

say business users and IT are not able to easily collaborate on individual processes and/or projects.



77%

say the time it takes to design and agree upon process changes is a bottleneck at their organization.

82%

say miscommunication between teams leads to the wrong thing being built and/or rolled out to customers.

In addition, business teams don't always understand the amount of work they're creating for IT when they change business processes. At the same time, IT teams are perceived by business stakeholders to be blockers, even when technical limitations, such as legacy systems, prevent them from delivering what's required by the business.

By adopting open standards such as Business Process Model and Notation (BPMN) and Decision Model and Notation (DMN), organizations can visualize and simulate end-to-end processes to ensure teams are speaking the same language when it comes to automation design and implementation. Furthermore, **implementing technologies with open architectures makes it far easier to integrate different tools and systems, providing IT teams with the flexibility to meet specific business requirements**. This further helps with alignment, as IT teams can be positioned as an enabler rather than a blocker.

Business says...

46% of business respondents say there is a gap between the business and IT when it comes to understanding business requirements.

39% of business respondents say IT often says no to their requests, stating tech limitations.

39% of business respondents say they want to make changes to business processes, but IT challenges often mean it takes longer than the business would like.

43% (business) agree - Projects are sometimes delayed due to a lack of understanding and miscommunication between the business and IT.

IT says...

44% of IT respondents say business executives don't understand the amount of IT work that is created when they change business processes.

61% of IT respondents say if business executives want them to say yes more often, they need to invest in modern technology, and allow IT to move away from legacy systems.

28% of IT respondents say business executives make demands without understanding IT.

59% (IT) agree - Projects are sometimes delayed due to a lack of understanding and miscommunication between the business and IT.

Conclusion

Digital transformation is a major success factor for organizations today, as they look to become more agile and efficient, and deliver greater value. While AI and automation are key elements of a successful digitalization project, many organizations are struggling to implement these capabilities effectively, due to overly complex system landscapes, siloed applications, and legacy solutions that are difficult to update.

Camunda enables organizations to tame complexity, operationalize AI, and accelerate transformation with process orchestration and automation. Organizations can design, manage, and improve the processes that underpin their business, no matter what the processes entail or where they run. With a composable architecture, Camunda is designed for businesses looking for a best-of-breed, truly blended automation strategy that builds on existing technology investments and is ready to implement any systems that come next.

Working with Camunda means better communication and faster collaboration between business and IT users, creating a single team that can successfully adapt process and decision models as business needs change, and deliver the observability needed to keep operations running smoothly.

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About the report

Camunda commissioned Coleman Parkes to conduct a survey among 800 respondents (350 US, 150 UK, 150, Germany, and 150 France) at organizations with at least 1,000 employees. All respondents are either responsible for, or significantly involved in, process automation in their organization. This survey was conducted online between September 30 and October 28, 2024.

For more information about anything in this report, please get in touch.

CONTACT US

About Camunda

Camunda enables organizations to orchestrate and automate processes across people, systems, and devices to continuously overcome complexity, increase efficiency, and fully operationalize AI. Built for business and IT, Camunda's leading orchestration and automation platform executes any process at the required speed and scale to remain competitive without compromising security, governance, or innovation. Over 700 companies across all industries, including Atlassian, ING, and Vodafone trust Camunda with the design, orchestration, automation, and improvement of their business-critical processes to accelerate digital transformation. To learn more visit camunda.com.

Schedule a customized demo of Camunda's Process Orchestration and Automation Platform.

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