

The Future of Workload Automation and Orchestration: *Driving Digital Transformation with Orchestration and Generative AI*

February 2025 EMA Research Report
By Dan Twing, President and COO
Intelligent Automation



Table of Contents

1	Executive Summary	22	Shifting Focus Toward IT Automation and Orchestration
2	Key Findings	23	Evolving Role with Subgroups and Expansion
3	Strategic Recommendations	24	Balancing Centralized Governance with Decentralized Innovation
3	For Organizations	25	AI and WLA: A Game-Changer
3	For Vendors	26	Adoption of AI-Driven Orchestration and Decision-Making Tools
4	Introduction	27	Leveraging AI for Enhanced Workload Automation
6	Expanding Scope and Stabilization of WLA Usage	29	Empowering Citizen Developers with AI for Workflow Standardization and Optimization
9	Cloud Adoption is Driving WLA Evolution	30	Executive Perspectives on WLA and AI
10	Effectiveness of WLA Across Workflows	31	Insights into Executive Attitudes Toward Automation and AI
11	Expanding User Base	31	Strategic Importance of WLA for Achieving Business Objectives
13	Challenges in Implementing and Scaling WLA	32	EMA Perspective
15	Key Challenges Identified in the Survey	33	Historical Perspective: A Decade of Transformation
15	Security and Compliance Concerns	33	Key Elements Defining WLA and Orchestration
15	Lack of Skilled Personnel	33	Comprehensive Coordination Across IT and Business Domains
15	Complexity in Migration and Multi-Cloud/Hybrid Management	33	Empowering Human Processes Alongside IT Automation
15	High Costs of Implementation and Scaling	33	Enhancing Visibility and Control Across Environments
15	Tool Complexity and Integration Challenges	34	Observability and AI: The Future of Orchestration
15	Team Structures: Centralized vs. Decentralized Models	34	Strategic Recommendations for Organizations and Vendors
16	Automation and Orchestration in Digital Transformation	34	For Organizations
17	Evolving Digital Transformation Stages	34	For Vendors
17	Increased Expectations for WLA and Orchestration	34	Conclusion
18	Critical Roles of WLA in Digital Workflows		
19	Aligning Automation and Digital Transformation		
19	Key Takeaways		
20	Role of Automation Centers of Excellence (CoEs)		
21	Prevalence and Structure of CoEs		
22	Driving Automation and Digital Transformation		



Executive Summary

Workload automation (WLA) evolved into a strategic enabler for modern enterprises, playing a dual role as both a foundational technology for IT operations and a driver of digital transformation. This report, based on insights from 421 respondents across industries, examines the current state, challenges, and future of WLA, emphasizing its expanding role in process automation, orchestration, and integration with AI technologies.

Key Findings

- **High Adoption and Operational Importance**

WLA adoption is nearly universal among large enterprises, underpinning critical IT workloads and serving as a cornerstone of operational efficiency. With 81% of respondents reporting increased monthly WLA jobs, it is evident that automation remains a critical focus area, even as adoption begins to stabilize in mature organizations.

- **Cloud-Driven Modernization**

The shift toward cloud native architectures is reshaping WLA strategies. Approximately 30% of WLA jobs now run in public clouds, with another 14% in hybrid cloud environments. This trend highlights the importance of multi-cloud orchestration and the growing adoption of SaaS-hosted WLA solutions.

- **Expanding Scope of Use Cases**

WLA is no longer confined to traditional batch processing. It evolved to include end-to-end orchestration, event-driven workflows, application release management, and complex orchestration across IT and business processes. Citizen developers and non-technical users are also increasingly contributing to automation initiatives, signaling a broader democratization of WLA and the rise of self-service orchestration frameworks empowered by low-code and AI-driven tools.

- **Challenges in Scaling WLA**

Key barriers to WLA adoption include security and compliance concerns, skill gaps, and the complexity of integrating WLA with emerging technologies, like Kubernetes and containerized environments. Simplifying tool ecosystems and addressing these foundational challenges are critical for organizations to fully leverage WLA's potential.

- **The Role of AI in Transformation**

AI, including generative and agentic capabilities, is poised to revolutionize WLA by enabling intelligent decision-making, dynamic resource allocation, and self-healing workflows. While adoption remains in its early stages, 70% of organizations plan to implement AI-driven capabilities within the next 12 months, underscoring its transformative potential. This shift will not only optimize operations, but also democratize automation, empowering broader participation through accessible, intelligent tools.

- **Orchestration as a Strategic Imperative**

Orchestration transcends automation by coordinating complex workflows across diverse environments, bridging legacy systems, cloud platforms, and human-centric processes. Observability and AI are key enablers, providing the visibility, adaptability, and intelligence required for effective orchestration. With observability ensuring real-time workflow performance and AI enabling predictive and adaptive processes, orchestration becomes the unifying layer for modern automation initiatives.

- **Automation Centers of Excellence (CoEs)**

CoEs are central to scaling automation, with 78% of organizations reporting formal or informal CoE structures. While CoEs establish governance and standardization, the growing complexity of automation necessitates a hybrid approach that empowers decentralized teams while maintaining centralized oversight.

Strategic Recommendations

For Organizations

- Prioritize orchestration as the framework for aligning IT and business workflows to enable cohesive, adaptive processes
- Invest in observability and AI as foundational capabilities to optimize workflows, adapt to dynamic environments, and democratize automation across diverse user groups
- Empower decentralized teams with self-service tools and clear governance to scale automation effectively

For Vendors

- Embed observability and AI into orchestration platforms to enhance decision-making and resilience
- Simplify tool ecosystems to reduce complexity and improve adoption
- Support hybrid and multi-cloud environments with seamless integration and orchestration capabilities

WLA is at a pivotal juncture, transitioning from a production-oriented utility to a strategic enabler of business transformation. By leveraging orchestration, observability, and AI, organizations can achieve greater agility, scalability, and operational excellence. As automation continues to evolve, WLA will remain a cornerstone of enterprise IT strategies, driving innovation and competitive advantage.



Introduction

Workload automation is a cornerstone of IT operations for most large enterprises, ensuring the seamless execution of critical business workflows and supporting the continuity of operations. Its widespread adoption reflects its essential role in managing high transaction volumes, complex workflows, and diverse use cases. WLA is not just vital to the ongoing production of these organizations, but is also becoming a critical enabler of their digital transformation journeys.

As digital transformation accelerates, WLA's role is expanding in scope and importance. It is moving beyond traditional batch processing and IT-centric workloads to support broader automation initiatives, including real-time orchestration of business processes. This shift is driving innovation, enabling operational agility, and connecting IT and business teams through automation. Moreover, the rise of citizen developers, empowered by low-code/no-code tools, is broadening WLA's user base and use cases, positioning it as a central orchestrator for automation across the enterprise.

The integration of generative AI further enhances WLA's potential, allowing organizations to automate not just workloads, but entire business ecosystems. AI-driven capabilities are improving decision-making, streamlining workflow creation, and dynamically optimizing resources, accelerating the alignment between IT capabilities and business needs.

This report, based on survey data from 421 respondents across various industries and regions, examines the current state of workload automation, its challenges, and its future trajectory. It highlights WLA's dual role as both

a foundational technology for enterprise production and a driver of digital transformation, exploring how its adoption, use cases, and technologies are reshaping enterprise automation.

Through this study, we aim to:

1. Highlight the high adoption and operational importance of WLA across industries.
2. Measure the progress of digital transformation and the evolving role of WLA in supporting it.
3. Assess the impact of generative AI on automation strategies and operational efficiency.
4. Explore the challenges and opportunities in adopting orchestration to manage complex IT and business workflows.
5. Evaluate future trends shaping the landscape of workload automation and orchestration.

The findings presented in this report are designed to provide actionable insights for IT leaders, automation practitioners, and technology vendors as they strategize for the future of automation.



Expanding Scope and Stabilization of WLA Usage

Workload automation continues to play a pivotal role in IT operations, driving efficiency and enabling businesses to manage increasingly complex workloads. The survey reveals that 81% of respondents reported an increase in monthly WLA jobs over the past 12 months, although this growth is beginning to slowly stabilize as organizations mature in their use of automation and orchestration.

WLA's application now extends far beyond traditional batch processing, with event-driven workflows (8.5%) and workflow orchestration (8.5%) gaining prominence. The growth is driven by expanding reach across more traditional use cases, as well as growth across the newer use cases.

**Changes to Monthly Jobs Run in Production Over the Past Year
2023 vs. 2024**

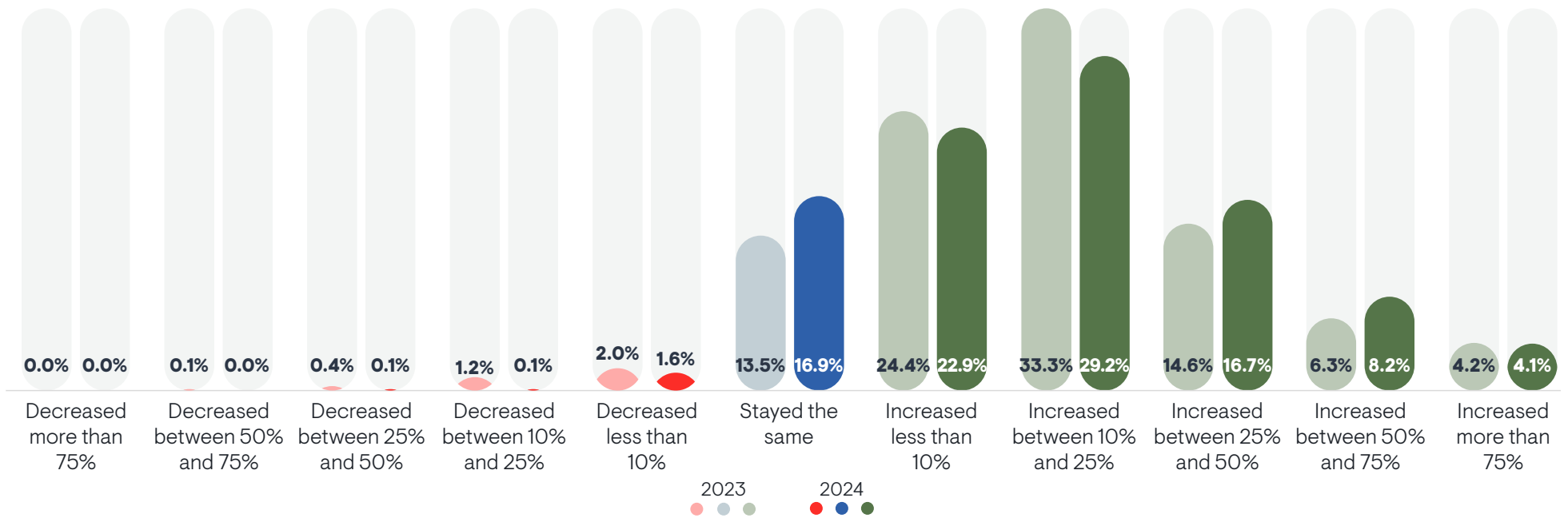


Figure 1

Sample Size = 421

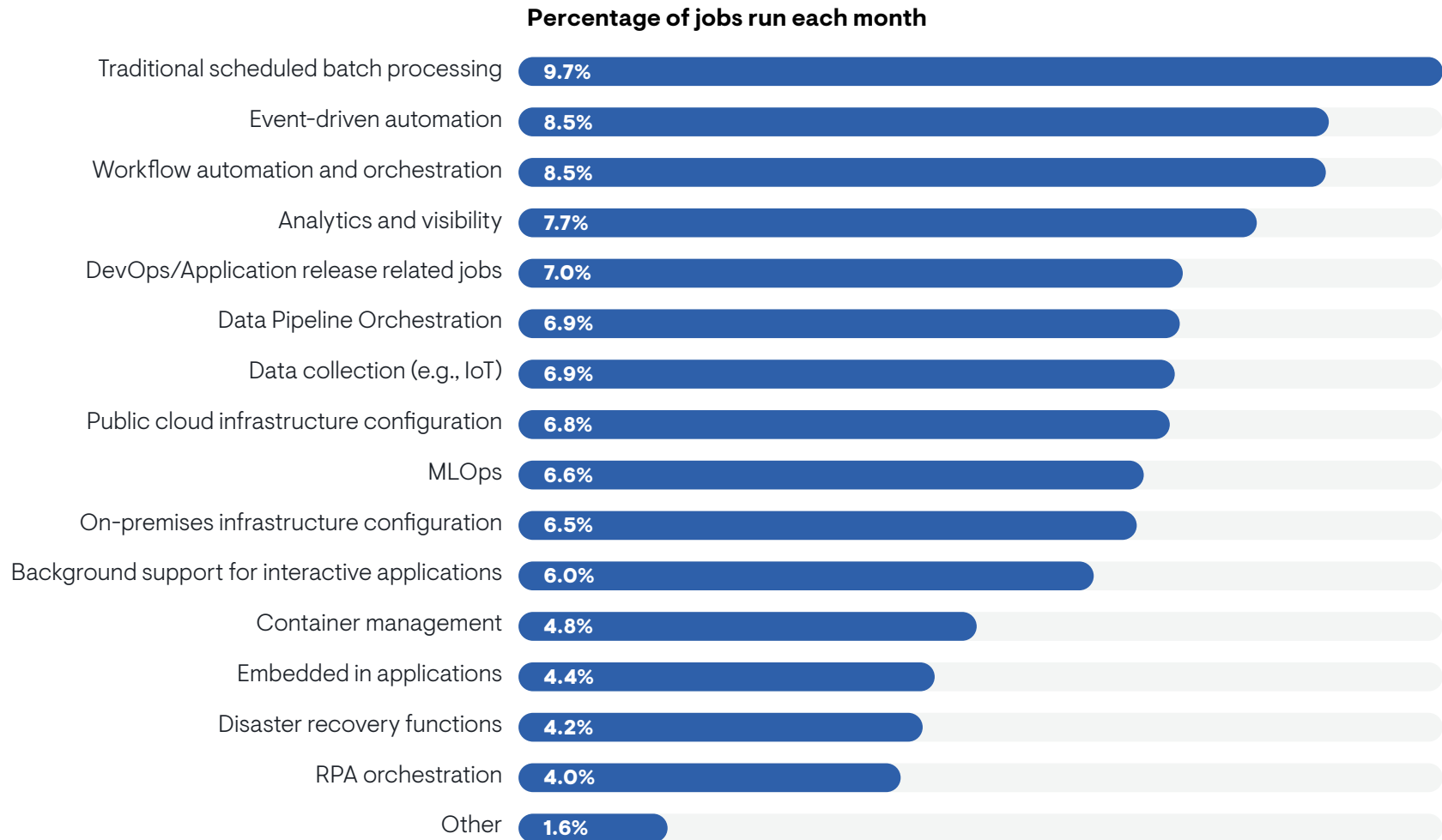


Figure 2

Cloud Adoption is Driving WLA Evolution

Cloud environments are integral to workload automation strategies. Approximately 30% of WLA jobs are now run in the public cloud, with an additional 14% in hybrid cloud configurations. This reflects a shift away from exclusively on-premises environments as enterprises leverage the scalability and flexibility of cloud platforms.

The top cloud-related use cases for WLA include:

- Cloud infrastructure automation (85%)
- Simplifying cloud migrations (81%)

These findings indicate that cloud adoption is a key driver of workload automation modernization.

In addition to workloads being executed in the cloud, SaaS-hosted WLA environments are gaining traction, offering organizations streamlined deployment, reduced infrastructure overhead, and faster time to value. The growing adoption of SaaS models is particularly appealing for businesses seeking to modernize their automation platforms while minimizing complexity.

These findings highlight that cloud adoption is not only reshaping how workloads are managed, but also driving the modernization of workload automation platforms, positioning WLA as a critical enabler of cloud-first strategies.

Enterprises continue moving on-premises work to the cloud – PaaS and SaaS rising fastest
Where do you host your workload automation solution? 2020 to 2024

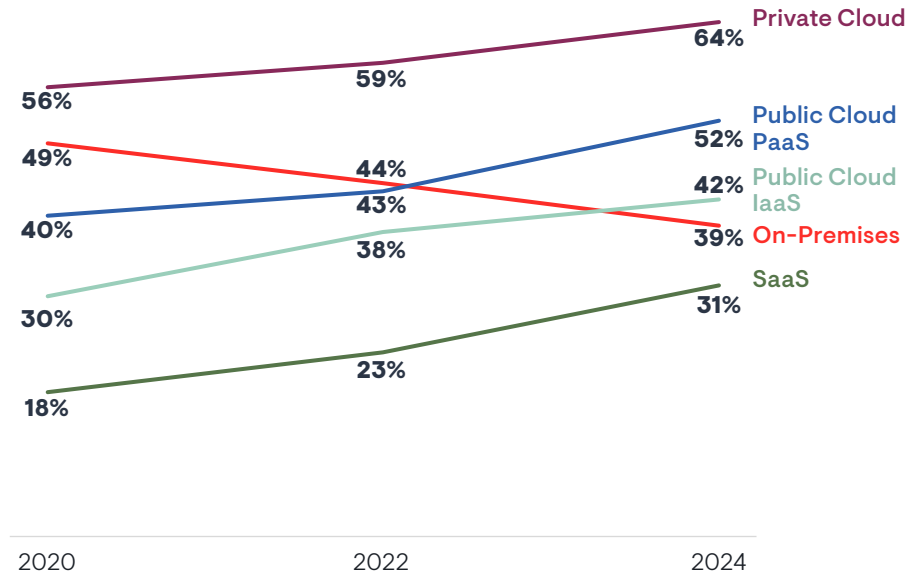


Figure 3

Sample Size = 421

Effectiveness of WLA Across Workflows

Survey participants rated WLA highly effective across most workflows, with over 70% having high satisfaction in areas such as IT operations and file transfers. However, certain workflows, including disaster recovery, AI/ML

orchestration, and RPA orchestration, lag behind, with high satisfaction below 70%. This highlights opportunities for improvement in integrating WLA with advanced technologies and complex workflows.

Effectiveness of WLA software to orchestrate, monitor, and troubleshoot workflows

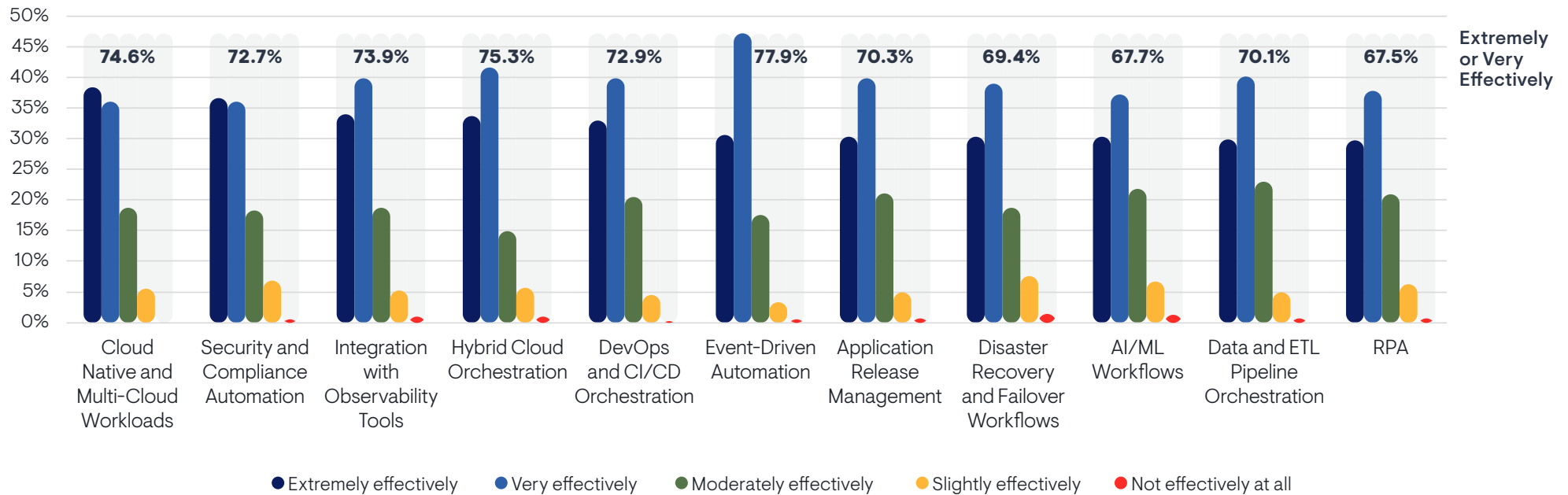


Figure 4

Sample Size = 421

Expanding User Base

A broad range of stakeholders across IT and business functions increasingly use modern WLA tools, reflecting their growing relevance and accessibility. Traditionally, WLA solutions were primarily the domain of IT Directors (61%), IT Managers (57%), and IT operations staff (52%), who remain the top users today. These roles historically drove the implementation and management of WLA systems to support critical IT workloads.

However, over the past several years, the user base for WLA has been steadily expanding beyond traditional IT roles. The inclusion of non-traditional users, such as business executives (21%), data scientists (19%), and citizen developers (11%) highlights a growing trend of democratization. This expansion enables non-technical roles to contribute to automation initiatives, leveraging WLA tools for broader business use cases and driving innovation across departments. The continuous growth in non-traditional users underscores the evolving role of WLA as an enterprise-wide orchestration platform.

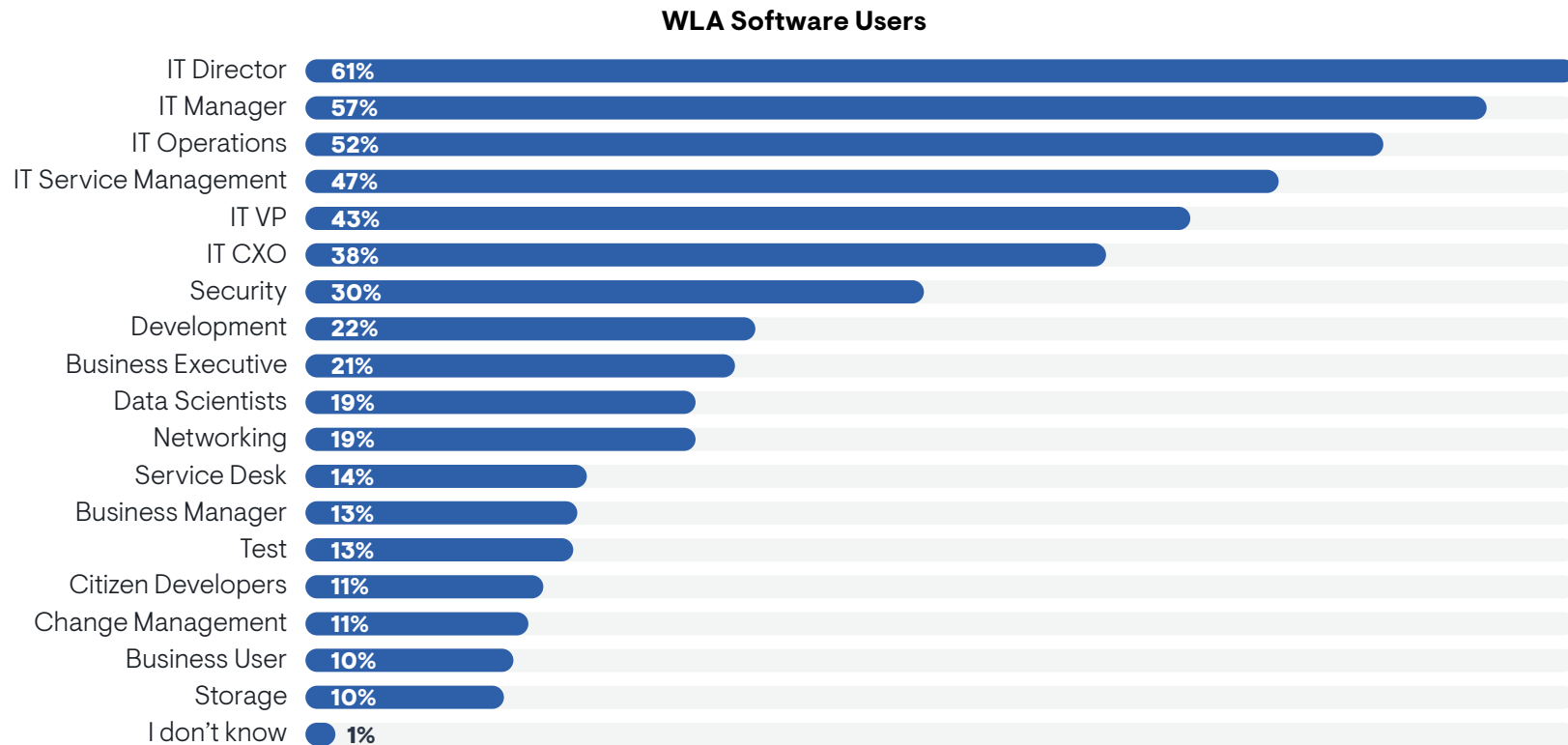
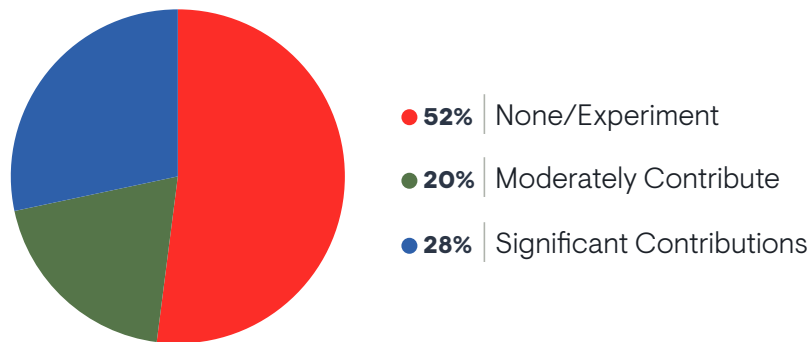


Figure 5

Sample Size = 421

As WLA tools evolved, many introduced capabilities for users to define their own automations, commonly referred to as citizen developers. This shift further strengthened the connection to business users, making automation accessible to non-technical stakeholders. In 28% of organizations, citizen developers are making significant contributions to automation workflows, signaling a democratization of WLA. While still early in adoption, this trend highlights the evolving accessibility of automation tools, enabling non-technical users to create, orchestrate, and optimize workflows.

Citizen Developers' Role in Building Automation



However, many bristle at the idea of citizen developers due to concerns about the lack of control over what they might create. While it is possible to teach non-developers the basics of syntax and allow them to define the “happy path” of what they want an automation to achieve, these definitions often lack the robustness software engineers and experienced operations staff bring. Non-technical contributors often overlook key aspects, such as exception handling for when workflows deviate from the happy path, security best practices, naming standards, audit logging, change management, and other guardrails.

This explains the slow and cautious rollout of citizen developer initiatives. Organizations must strike a balance between empowering business-focused users to define and benefit from automation faster and ensuring that automations adhere to controlled, monitored, and secure practices—particularly for key production processes. This balance is critical to achieving both agility and operational integrity as WLA continues to democratize across the enterprise.

Figure 6

Sample Size = 421



Challenges in Implementing and Scaling WLA

Workload automation remains critical for enterprise operations, yet its implementation and scaling come with significant challenges. These obstacles span technical, operational, and organizational dimensions, preventing organizations from fully leveraging its potential.

Top 10 challenges organizations face in implementing or scaling WLA

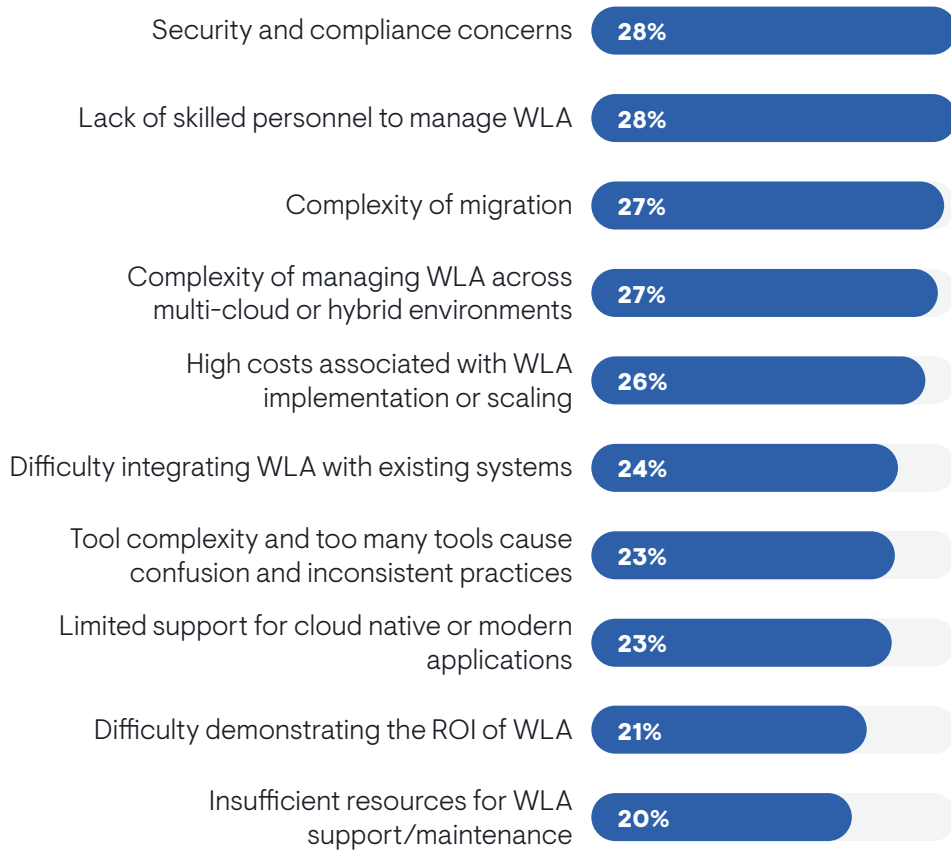


Figure 7

Sample Size = 421

Top 10 factors preventing organizations from fully leveraging WLA capabilities

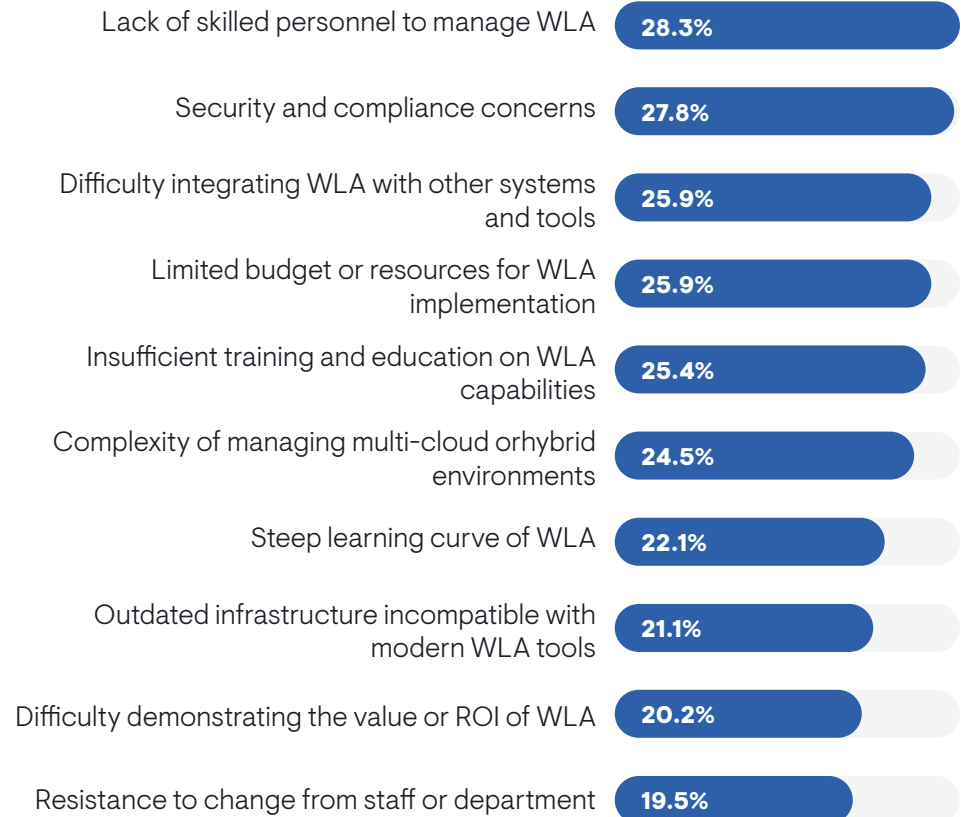
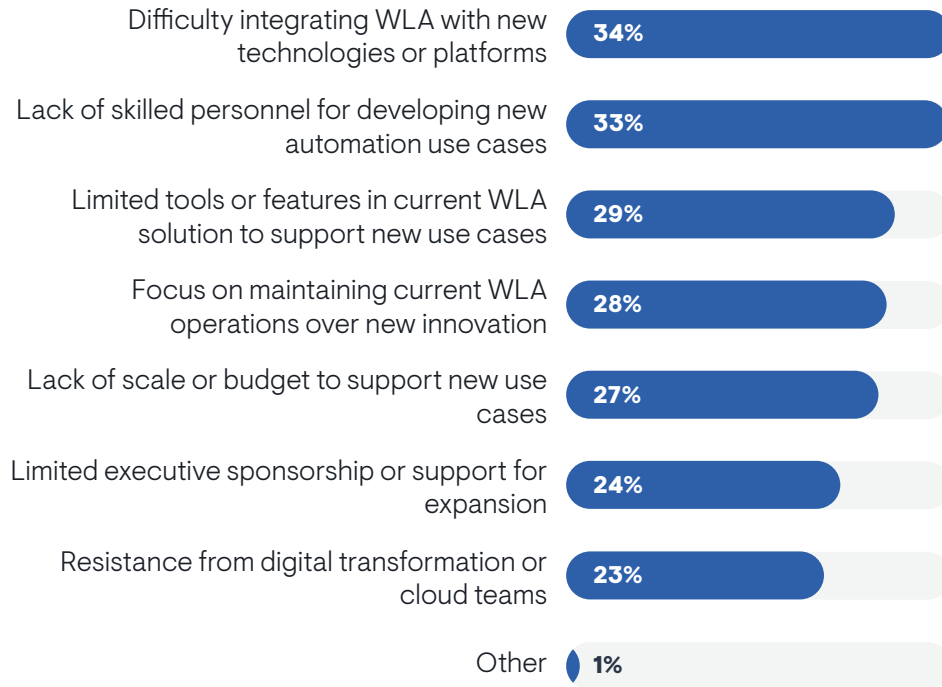


Figure 8

Sample Size = 421

Factors preventing organizations from leveraging WLA for new use cases



Key Challenges Identified in the Survey

Security and Compliance Concerns

As automation expands into hybrid and multi-cloud environments, ensuring secure operations and meeting compliance requirements remain top challenges for organizations. This issue is particularly acute in highly regulated industries, such as finance and health care.

Lack of Skilled Personnel

Skill shortages are a persistent impediment to adopting and managing advanced WLA systems. As WLA integrates AI, orchestration, and real-time capabilities, the demand for specialized expertise increases. Without proper upskilling, organizations struggle to fully utilize these tools.

Complexity in Migration and Multi-Cloud/Hybrid Management

Managing workloads across diverse platforms and environments is another critical barrier. This complexity often delays automation initiatives and increases operational overhead.

High Costs of Implementation and Scaling

Budgetary constraints prevent organizations from investing in the tools and resources needed to modernize WLA platforms and expand their use cases effectively.

Tool Complexity and Integration Challenges

Managing multiple tools and integrating WLA with existing systems or emerging technologies, such as Kubernetes and containerized platforms, continues to challenge organizations.

Team Structures: Centralized vs. Decentralized Models

Organizational structure plays a key role in automation effectiveness. Decentralized teams often face challenges such as inconsistent practices and reduced visibility, while centralized teams may lack the agility needed to meet dynamic business demands.

Overcoming these challenges requires organizations to prioritize foundational issues, such as security and compliance, while addressing the growing skills gap through training and upskilling. Simplifying tool ecosystems and improving integration capabilities can unlock greater potential for advanced automation, particularly in hybrid and multi-cloud environments. Finally, balancing centralized and decentralized team structures will be critical to maintaining agility while standardizing automation practices across the enterprise.

Figure 9

Sample Size = 421



Automation and Orchestration in Digital Transformation

As enterprises accelerate their digital transformation initiatives, automation and orchestration have emerged as critical enablers of success. Workload automation is no longer confined to batch processing; it evolved into a versatile tool for managing complex workflows across diverse environments, including multi-cloud and hybrid infrastructures. Increasingly, digital transformation depends on the adaptability of WLA to meet the rising demands of orchestration, observability, and cloud adoption.

Evolving Digital Transformation Stages

The survey reveals a clear maturation of digital transformation efforts among enterprises. Compared to 2023, the percentage of organizations reporting “mature” digital transformation initiatives grew by 10%, with 43% now underway and 27% in the mature stage. This growth underscores the increasing reliance on robust orchestration and automation to achieve strategic objectives. Enterprises further along in their digital journeys show a greater alignment between automation and transformation efforts, reflecting the critical role WLA plays in driving progress.

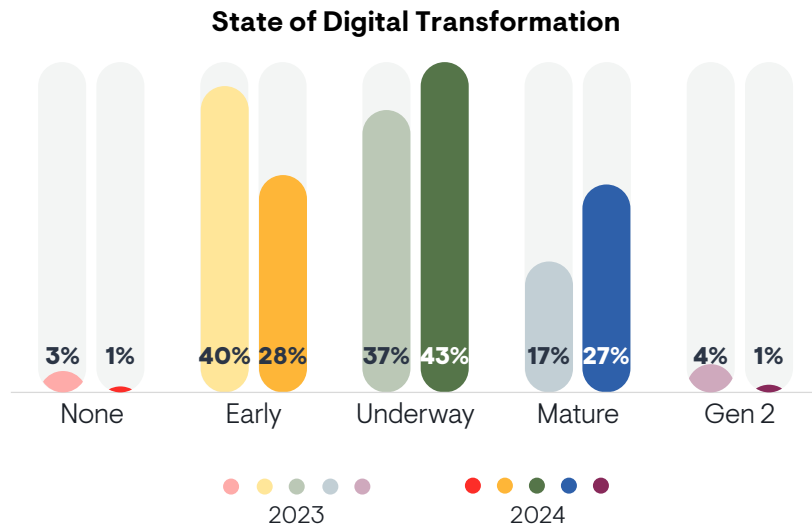


Figure 10

Increased Expectations for WLA and Orchestration

Digital transformation has steadily increased the expectations placed on WLA solutions. In 2020, 77% of respondents agreed that digital transformation demanded more from WLA. This figure rose to 87% in 2024, emphasizing the growing need for orchestration capabilities to manage interconnected workflows across platforms, applications, and clouds. WLA’s role shifted from simply scheduling tasks to orchestrating complex digital processes at scale.

Digital transformation is requiring more from our scheduling/workload automation solution (strongly agree/agree)

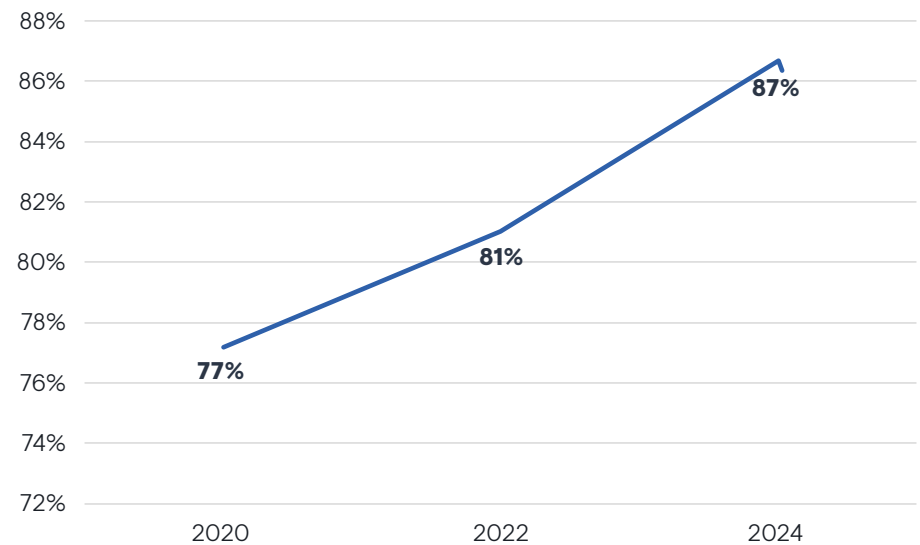


Figure 11

Sample Size = 421

Critical Roles of WLA in Digital Workflows

WLA is becoming indispensable for connecting and managing critical digital workflows. Between 2022 and 2024, WLA's role in release management, file transfers, and connecting digital transformation initiatives expanded significantly.

- **Release Management:** 44% of respondents now use WLA for automating release processes, up from 28%
- **File Transfers:** 43% rely on WLA for automating secure and reliable file transfers
- **Connecting Digital Processes:** WLA's orchestration capabilities are increasingly used to bridge diverse systems, ensuring seamless digital transformation

These use cases illustrate how WLA adapts to meet the needs of modern enterprises, addressing the complexity of managing hybrid and multi-cloud infrastructures.

Role of WLA solutions in the digital transformation journey 2024 vs. 2022

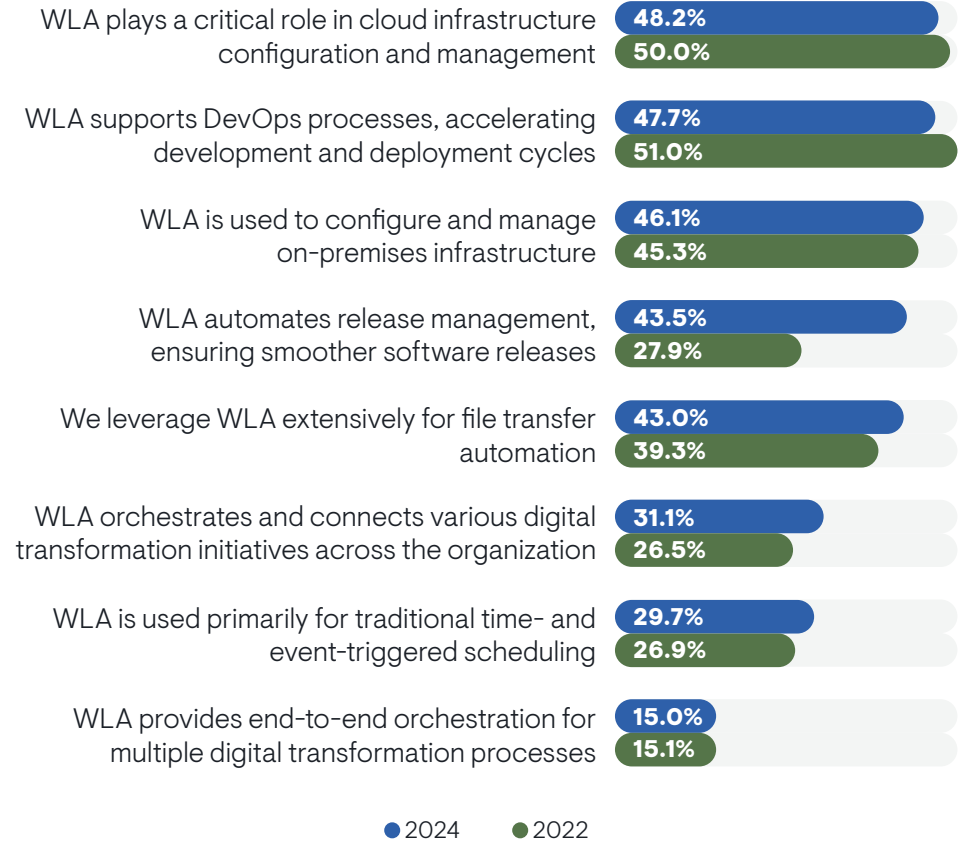


Figure 12

Sample Size = 421

Aligning Automation and Digital Transformation

Organizations farther along in their digital journeys show a stronger connection between automation and digital transformation. Enterprises that integrate automation deeply into their transformation strategies report higher levels of digital maturity. For these organizations, WLA serves as both a driver and enabler of transformation, linking operational processes to strategic objectives and supporting agility, scalability, and efficiency.

Key Takeaways

The drive for digital transformation has reshaped the role of WLA, increasing the need for orchestration, observability, and scalability. WLA evolved to support complex workflows across hybrid and multi-cloud environments, making it a cornerstone of digital transformation strategies. As organizations progress in their digital journeys, the integration of automation and orchestration remains pivotal for achieving agility, operational excellence, and long-term success.

Automation Efforts vs. Stage of Digitalization

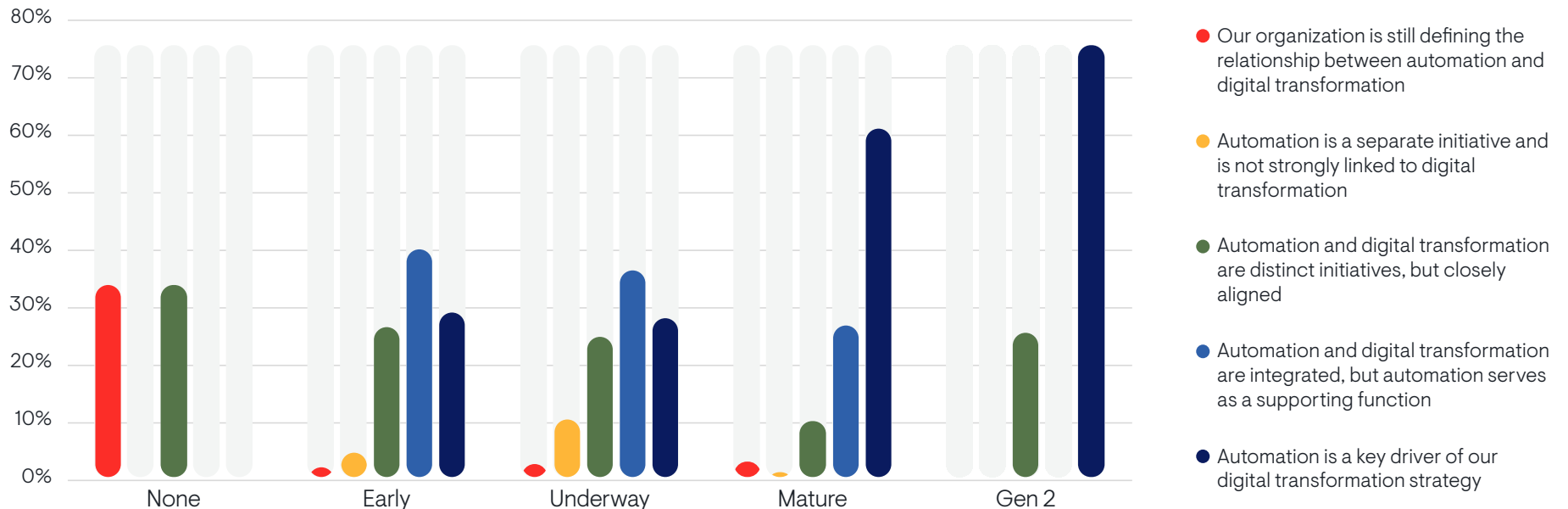


Figure 13

Sample Size = 421



Role of Automation Centers of Excellence (CoEs)

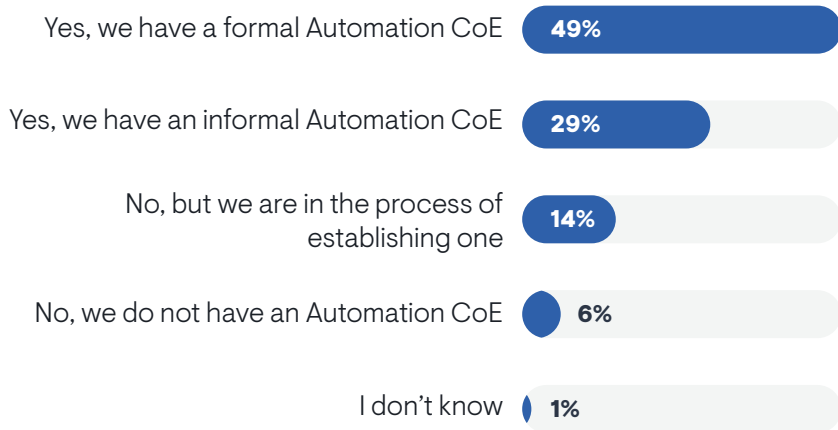
Automation Centers of Excellence (CoEs) are integral to modern enterprise automation strategies, acting as the nexus for governance, innovation, and scalability. With 78% of organizations either having an established CoE or in the process of creating one, these centers play a pivotal role in aligning automation initiatives with broader business goals. As automation evolves to encompass more complex use cases, CoEs have adapted to support growing demands across IT and business functions.

Prevalence and Structure of CoEs

Almost half of the surveyed organizations (49%) report having a formal Automation CoE, while another 29% utilize informal structures. These CoEs often take a proactive role, with 51% building automation workflows for internal customers and 27% providing consultancy while internal teams develop their workflows. This structured approach ensures standardization, consistency, and adherence to best practices across automation initiatives.

Additionally, 85% of CoEs have expanded their scope by creating subgroups or specialized working teams to manage different types of automation, such as RPA, WLA, and IT automation. This trend underscores the increasing complexity and diversity of automation strategies in modern enterprises.

Does your organization have an Automation Center of Excellence (CoE)?



What is the model of your organization's Automation Center of Excellence (CoE)?

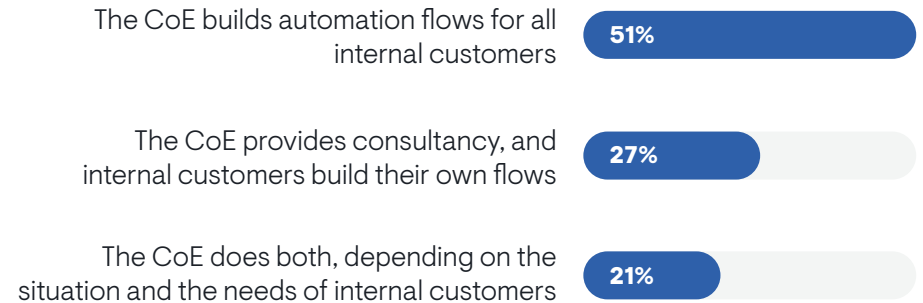


Figure 14

Sample Size = 421

Sample Size = 358

Driving Automation and Digital Transformation

CoEs are critical drivers of digital transformation, with 95% of respondents emphasizing their importance in enabling application modernization and enterprise agility. These centers play a multi-faceted role in:

- Aligning automation efforts with business objectives
- Developing reusable automation assets for cross-departmental use
- Orchestrating workflows across hybrid and multi-cloud environments
- Evangelizing automation and fostering innovation within IT and business units

CoEs are particularly instrumental in scaling workload automation and application orchestration. Over half (58%) of CoEs are highly involved in these initiatives, showcasing their central role in connecting legacy systems to modern platforms and streamlining workflows.

Shifting Focus Toward IT Automation and Orchestration

As automation technologies mature, CoEs increasingly prioritize IT automation and orchestration to address complex, dynamic environments. Approximately 62% of CoEs focus on IT automation, while 55% are deeply involved in WLA and orchestration. This reflects a growing emphasis on integrating AI-driven insights, cloud native solutions, and cross-functional workflows to meet the demands of modern enterprises.

Organizations with active CoEs report higher success rates in scaling automation and integrating advanced orchestration capabilities, highlighting the value of these centers in achieving operational excellence.

Automation Center of Excellence (CoE) Focus Areas

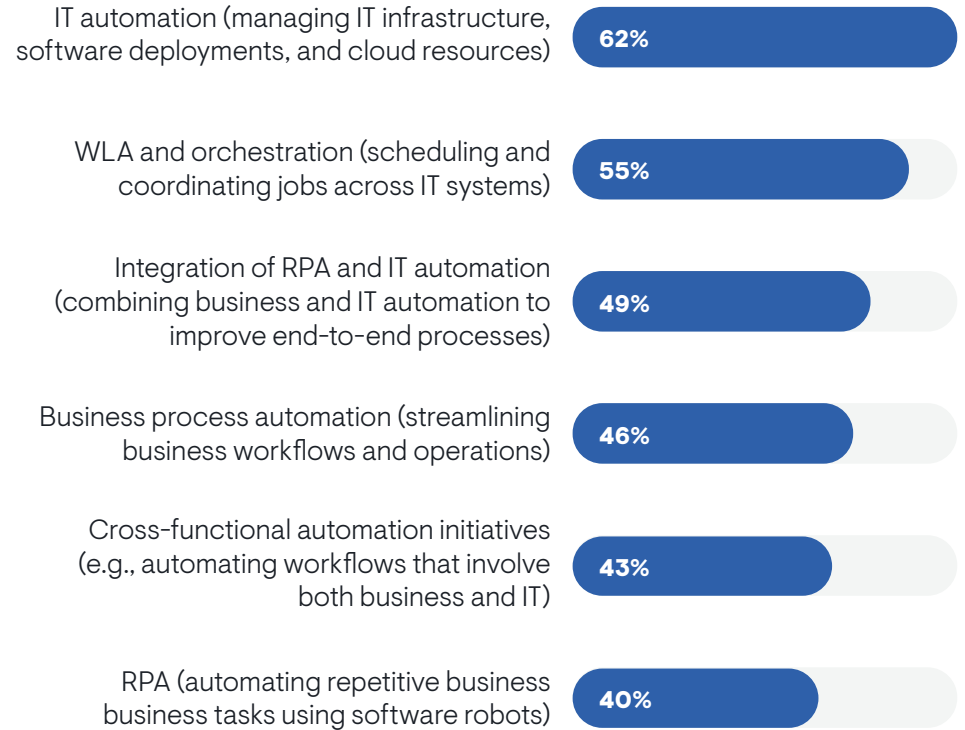


Figure 15

Sample Size = 358

Evolving Role with Subgroups and Expansion

The expanding scope of automation led to significant growth in the size and responsibilities of CoEs.

- 84% of organizations report that their CoE has either moderately or significantly expanded in size and scope in recent years.
- 46% have formed subgroups to specialize in different domains, such as RPA, WLA, and IT automation.

This evolution ensures that CoEs can adapt to emerging technologies and support diverse automation needs, from cloud migrations to AI-enabled decision-making.

How has the size or scope of your organization's Automation CoE changed over the past 12 months?

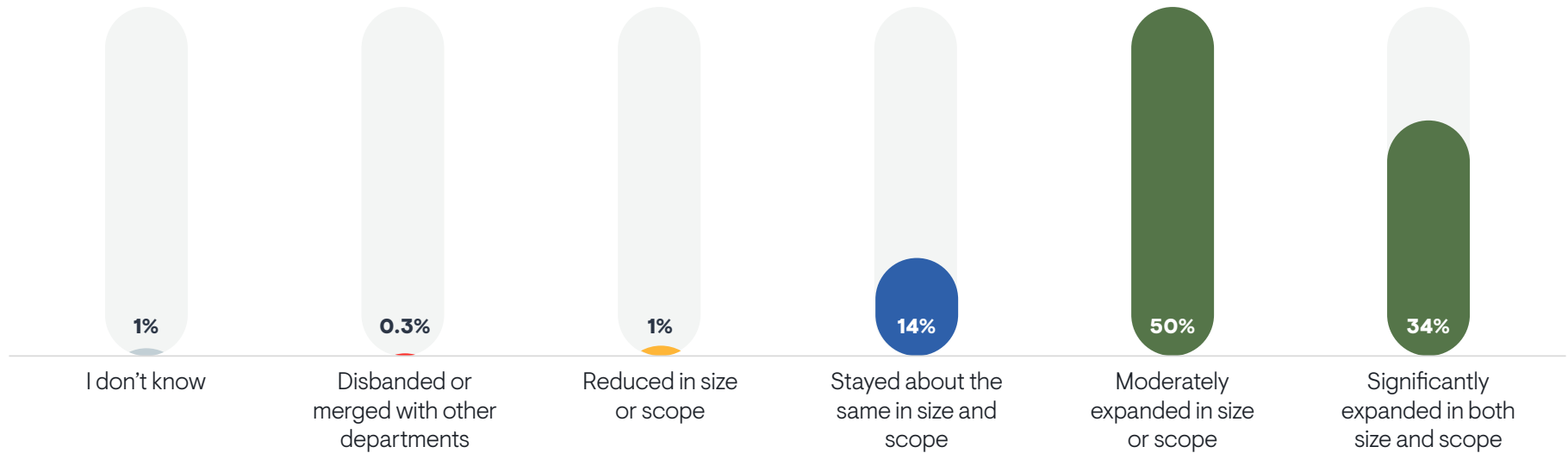


Figure 16

Sample Size = 358

Has your organization’s Automation CoE created subgroups or splintered into smaller teams to manage different types of automation?

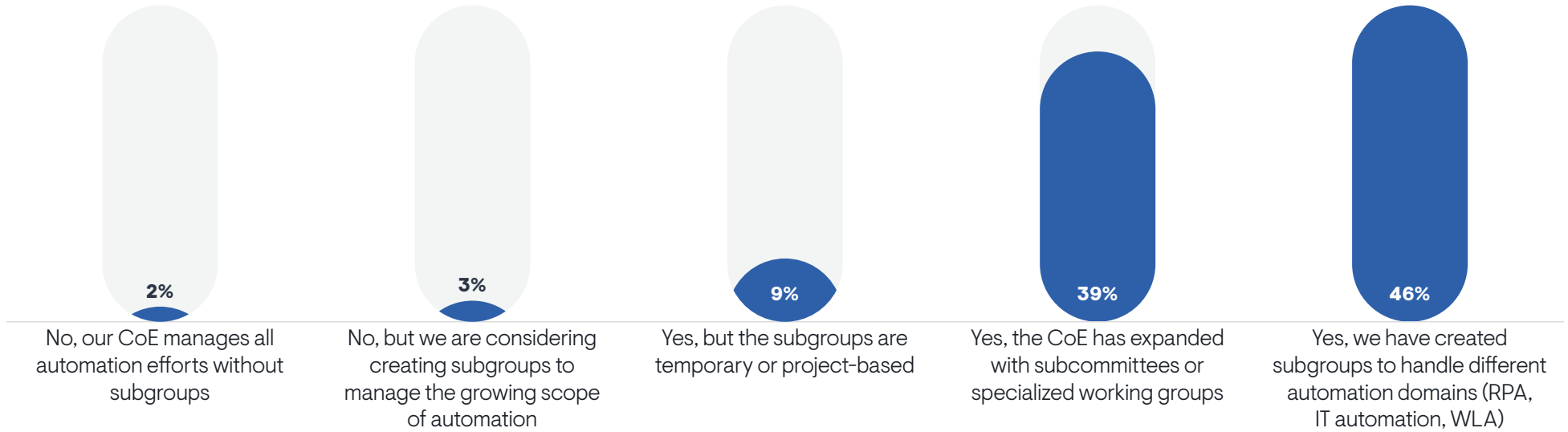


Figure 17

Sample Size = 358

Balancing Centralized Governance with Decentralized Innovation

While Automation Centers of Excellence (CoEs) are central to enterprise automation strategies, their rapid growth and increasing complexity reveal the limitations of a fully centralized approach. As CoEs expand their scope and form subgroups, it becomes clear that they cannot be solely responsible for all automation definition and development. The sheer volume and diversity of automation needs require a more balanced approach—one in which CoEs establish objectives, provide tools, and enforce naming standards, change control, and governance, but in which decentralized resources play an active role in driving automation forward.

To meet this challenge, organizations must empower decentralized teams with the necessary resources, training, and guidance to create automations aligned

with CoE-defined frameworks. Part of the solution lies in adopting AI-driven tools and enabling citizen developers, who can accelerate automation initiatives while working within the guardrails established by CoEs. This hybrid model—combining centralized governance with decentralized execution—ensures organizations can scale their automation efforts effectively and meet the growing demands of digital transformation.

The role of CoEs, therefore, is not to do everything, but to enable and guide distributed automation efforts across the enterprise. This approach will be essential as automation becomes more pervasive and the need for agility and scalability continues to grow.



AI and WLA: A Game-Changer

Artificial intelligence (AI) is reshaping the workload automation landscape, enabling organizations to move beyond traditional process automation to intelligent orchestration and decision-making. From AI-driven insights that enhance decision-making to generative AI’s ability to automate workflow creation, optimize job execution, and reduce manual intervention, the integration of AI into WLA is transforming how enterprises manage complexity, drive efficiency, and scale automation.

Adoption of AI-Driven Orchestration and Decision-Making Tools

AI is expected to become a cornerstone of modern WLA, with 91% of survey respondents identifying AI-enhanced orchestration as extremely or very important. These capabilities are anticipated to play a critical role in managing complex workflows and ensuring seamless operations across diverse IT environments. Furthermore, 83% of respondents highlight the value of AI-driven tools in identifying issues, analyzing root causes, and automating corrective actions, which could enable faster incident resolution, improve system reliability, and optimize resource allocation—ultimately reducing operational overhead.

However, AI adoption in WLA remains in its early stages, with only 18% of organizations currently leveraging AI to significantly impact their automation strategies. The good news is that this is expected to change rapidly: 70% of organizations plan to adopt AI-driven capabilities within the next 12 months. This acceleration reflects growing confidence in AI’s potential to handle the increasing complexity of automation environments and drive digital transformation. As AI adoption scales, organizations will need to address challenges around trust, governance, and integration to fully capitalize on its benefits in workload automation.

The low starting point and rapid growth highlight the dual challenge and opportunity AI presents in WLA. Organizations that embrace AI now will be better positioned to scale their automation efforts effectively and remain competitive as the IT landscape evolves.

Expected timeframe for generative AI to significantly impact WLA strategy

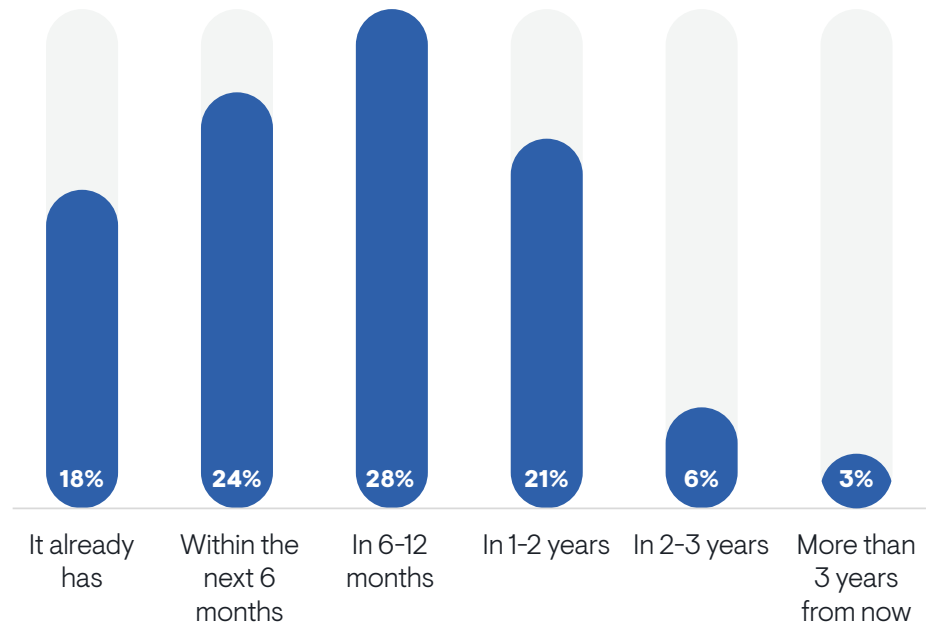


Figure 18

Sample Size = 421

Leveraging AI for Enhanced Workload Automation

AI-driven capabilities are increasingly integrated into workload automation strategies, with over half of organizations using predictive analytics to optimize scheduling (53%) and enhance anomaly detection and incident response (51%). AI insights are also instrumental in identifying bottlenecks, with 51% of

respondents highlighting this capability. These insights are driving significant improvements in orchestration and decision-making by providing actionable data in real time.

AI-driven insights used to improve orchestration and decision-making

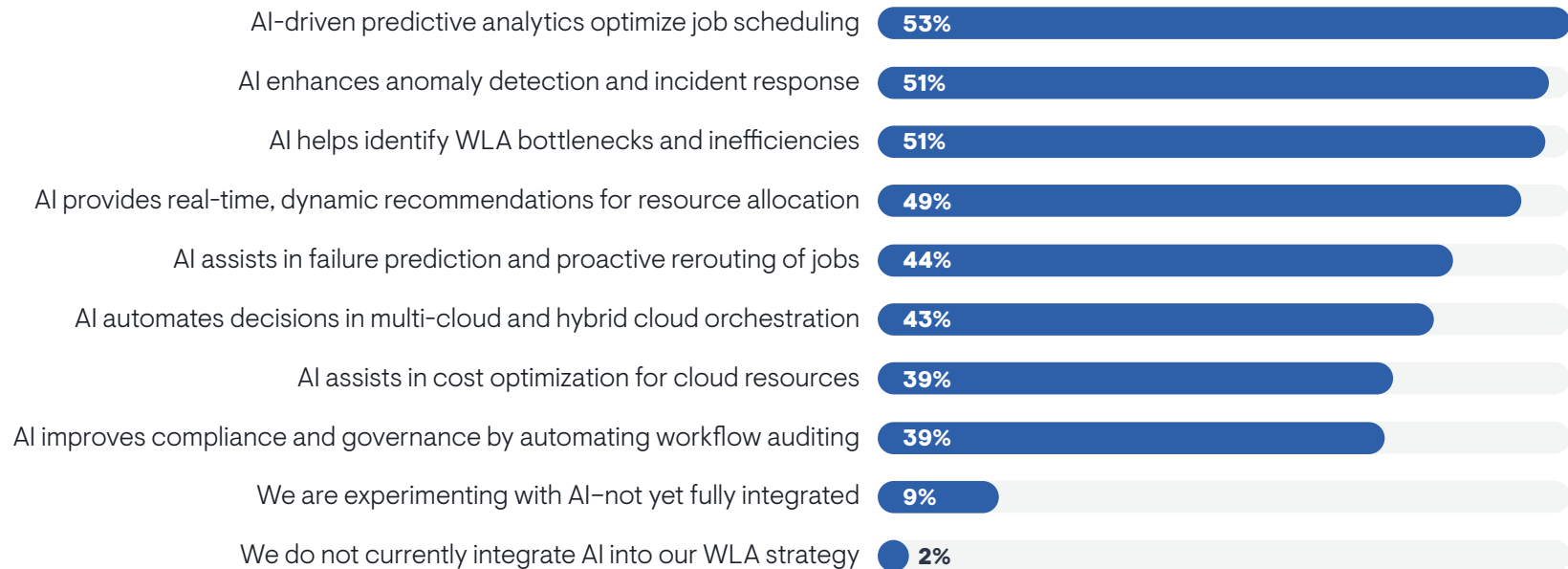


Figure 19

Sample Size = 421

Organizations report strong satisfaction with AI capabilities in their WLA platforms. A notable 71% of respondents indicate full or significant support for generative AI-based workflow recommendations, followed closely by intelligent remediation suggestions (67%), dynamic workload resource reallocation (67%), predictive analytics (68%), and automated incident response (68%). While these numbers reflect a robust adoption of AI features, they also highlight areas for continued enhancement to ensure even broader utility and satisfaction.

The survey data suggests a growing opportunity to deepen AI integration across multiple WLA functionalities. As organizations expand their use of AI beyond traditional machine learning to incorporate more sophisticated predictive and prescriptive capabilities, there is potential to revolutionize workload management. This includes improving compliance, governance, and multi-cloud orchestration alongside real-time resource allocation and failure prediction.

To what extent does your workload automation platform support the following AI-driven capabilities?

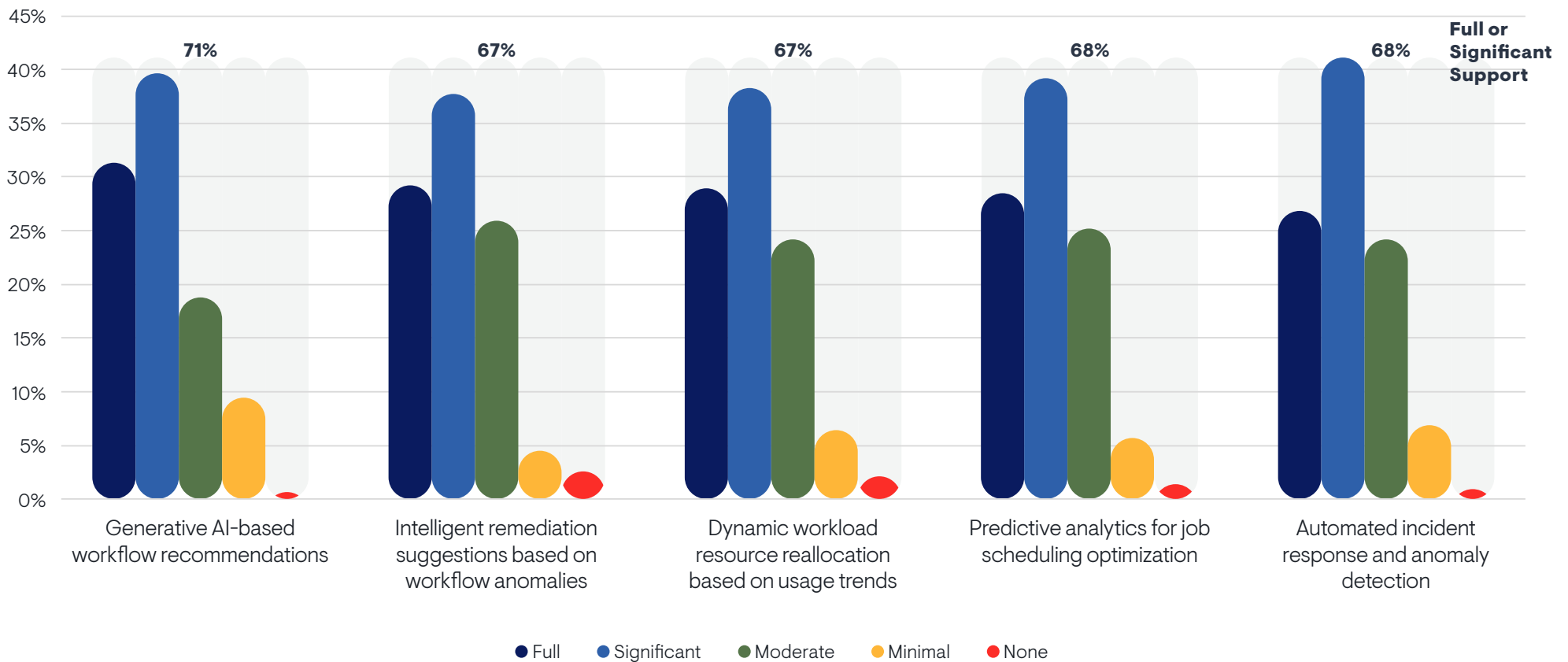


Figure 20

Sample Size = 421

Empowering Citizen Developers with AI for Workflow Standardization and Optimization

AI is poised to significantly impact the automation landscape by enabling citizen developers to define workflows and create automation use cases with minimal technical expertise. Organizations expect AI-driven tools to embed intelligent recommendations and enforce standardization, ensuring that automation initiatives are both consistent and scalable. These expectations highlight AI's potential to accelerate the adoption of automation and broaden the range of employees contributing to automation efforts.

Survey data reveals that 48% of respondents anticipate AI will enhance collaboration between citizen developers and IT operations through AI-driven insights. Similarly, 48% expect AI to automate repetitive tasks, freeing up time for more strategic work. These findings suggest that AI is seen as a catalyst for improving operational efficiency while allowing teams to focus on higher-value initiatives.

Organizations are optimistic about AI's ability to support workflow improvement and problem-solving. According to the survey, 45% of respondents believe AI will improve troubleshooting and accelerate the resolution of operational issues, while 43% expect AI to help identify optimization opportunities within existing workflows. These expectations underscore the belief that AI can drive continuous improvement across automation strategies, even in complex environments.

As AI-enhanced tools become more accessible and intuitive, organizations anticipate that citizen developers will play an increasingly prominent role in driving automation initiatives. By bridging the gap between technical and non-technical users, these tools are expected to democratize automation and expand its adoption.

The integration of AI into WLA, particularly through generative AI for workflow creation and agentic AI for decision-making, holds significant promise for improving agility, scalability, and operational effectiveness. While the transformative potential of AI is clear, these expectations emphasize that its impact will depend on successful adoption and integration. Empowering citizen

developers with AI-driven tools remains a key strategy for achieving these outcomes, enabling organizations to align their automation initiatives with broader business objectives while fostering innovation and collaboration.

How do you see generative AI improving the effectiveness of citizen developers and IT operations in your organization?

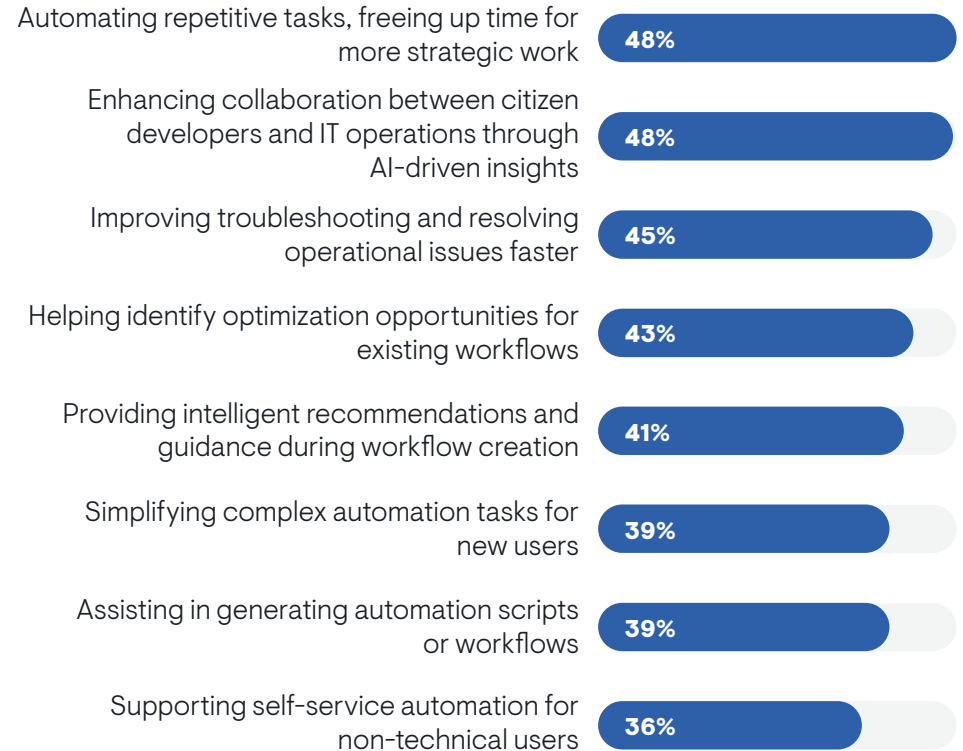


Figure 21

Sample Size = 421



Executive Perspectives on WLA and AI

Executives play a pivotal role in shaping the strategic direction of automation and artificial intelligence initiatives. Their attitudes and priorities significantly influence the adoption, integration, and evolution of workload automation and AI technologies. This section explores insights into executive perspectives, highlighting their views on automation’s importance and the role of WLA in achieving business objectives.

Insights into Executive Attitudes Toward Automation and AI

Business leaders view automation and AI as essential components of enterprise strategy. The survey reveals that 90% of executives consider automation extremely or very important for achieving their organization’s goals, and 86% of respondents reported that business executives are highly involved in driving automation initiatives. AI is also seen as a critical driver for advancing automation, with 87% of respondents stating that business leaders view AI as essential for improving operational outcomes.

This strong endorsement reflects a growing recognition of the transformative potential of these technologies. Executives are particularly focused on using AI to enhance decision-making, optimize processes, and improve service delivery. Their active involvement ensures that automation initiatives are aligned with broader business priorities.

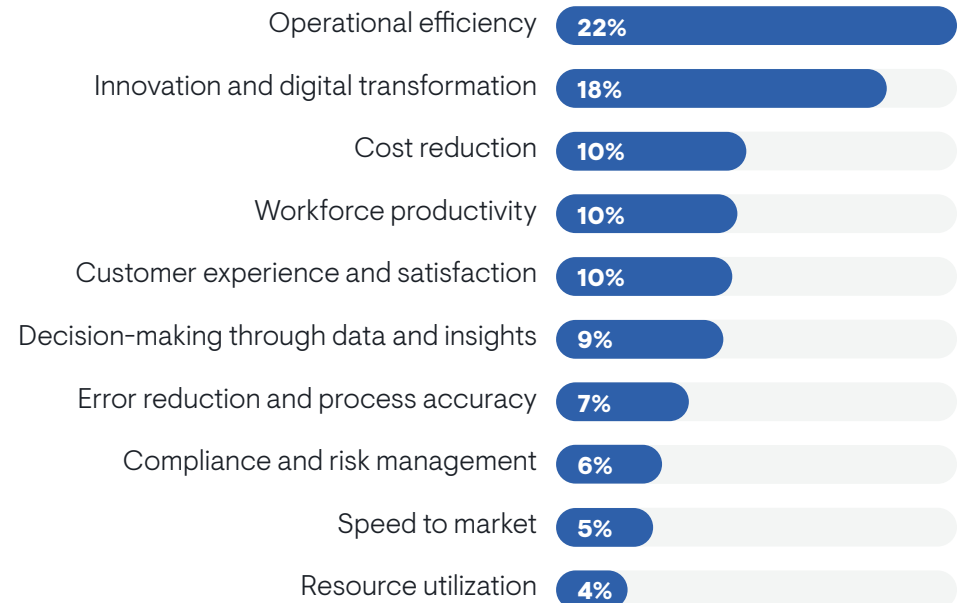
Strategic Importance of WLA for Achieving Business Objectives

Workload automation evolved from being an operational necessity to a strategic enabler of business success. Executives increasingly rely on WLA to drive efficiency, scalability, and innovation. The ability to coordinate workloads across diverse environments, streamline workflows, and support complex orchestration makes WLA a key component of digital transformation efforts.

WLA’s integration with AI further enhances its value, enabling predictive analytics, proactive incident resolution, and dynamic resource optimization. This combination allows organizations to respond more effectively to market demands, reduce operational risks, and support strategic initiatives, like cloud adoption and DevOps integration.

The majority of respondents highlight WLA’s role in aligning IT operations with business objectives, and these respondents noted its importance in supporting digital transformation and modernization goals.

Which of the following areas is your primary focus for improvement through automation in the next 12 months?



The perspectives of business leaders underscore the growing importance of WLA and AI as strategic tools, ensuring that automation initiatives align with organizational objectives and deliver measurable value.

Figure 22

Sample Size = 421



EMA Perspective

As workload automation continues to evolve, it remains a cornerstone of enterprise IT strategies. Over the past decade, WLA transitioned from a task-centric utility into a strategic enabler of digital transformation. The most recent stage in this evolution is orchestration—the art and science of arranging, managing, and coordinating processes, applications, and workflows across diverse environments. Orchestration transcends traditional automation by weaving individual automated tasks into comprehensive workflows that span legacy systems, cloud native infrastructures, and human-centered processes.

Historical Perspective: A Decade of Transformation

WLA's current capabilities are the result of a decade-long transformation shaped by key technological and market trends. Initially focused on batch processing and task scheduling, WLA evolved to address new demands that cloud computing, DevOps, and data-centric processes drove. By 2015, WLA vendors began integrating support for hybrid cloud architectures and Kubernetes, enabling organizations to manage dynamic workloads. This shift, reflected in EMA's research, positioned WLA as a unifying layer for automation across complex, distributed environments.

Key macrotrends, such as containerization, multi-cloud adoption, and data pipeline orchestration, further expanded WLA's role, making orchestration a strategic imperative. Today, WLA is central to enterprise initiatives that blend IT and business automation, supporting workflows across hybrid IT, data-driven processes, and even human-centric tasks.

Key Elements Defining WLA and Orchestration

The following foundational elements shape the role and future of WLA:

Comprehensive Coordination Across IT and Business Domains

Orchestration enables organizations to manage IT-driven processes end to end, bridging gaps between legacy systems, cloud environments, and human workflows. The integration of robotic process automation within orchestration frameworks has extended its reach to include business processes. This alignment between IT operations and business workflows ensures unified, impactful outcomes.

Historical advancements, such as container orchestration and API-driven integration, have laid the groundwork for today's orchestration frameworks that unify automation efforts across silos.

Empowering Human Processes Alongside IT Automation

Orchestration complements human decision-making by integrating human workflows into broader automation strategies. Features such as human-in-the-loop processes allow exceptions, escalations, and approvals to be handled seamlessly, fostering collaboration and improving the user experience. This synergy between human and machine-driven workflows is critical for achieving true business transformation.

Enhancing Visibility and Control Across Environments

In today's hybrid IT landscapes, orchestration delivers the visibility and control needed to manage workloads across on-premises infrastructure, public and private clouds, and containerized environments. The integration of observability into orchestration workflows provides real-time insights into system performance, allowing organizations to proactively address issues, optimize resources, and ensure seamless execution across dynamic, multi-cloud ecosystems.

Observability and AI: The Future of Orchestration

The future of orchestration depends on two key enablers: observability and AI. These technologies elevate orchestration beyond static workflows into adaptive, intelligent systems capable of self-healing, dynamic scaling, and predictive optimization.

- **Observability:** By integrating monitoring and analytics into orchestration frameworks, observability ensures workflows perform as intended even in complex environments. It allows organizations to track performance, identify issues early, and optimize processes proactively, enabling higher levels of reliability and resilience.
- **AI:** Generative and agentic AI capabilities enable intelligent decision-making, predictive analytics, and dynamic resource allocation. AI-driven workflows can handle exceptions autonomously, optimize scheduling, and scale resources to meet real-time demands. These capabilities democratize orchestration by empowering citizen developers and enabling self-service automation.

Strategic Recommendations for Organizations and Vendors

For Organizations

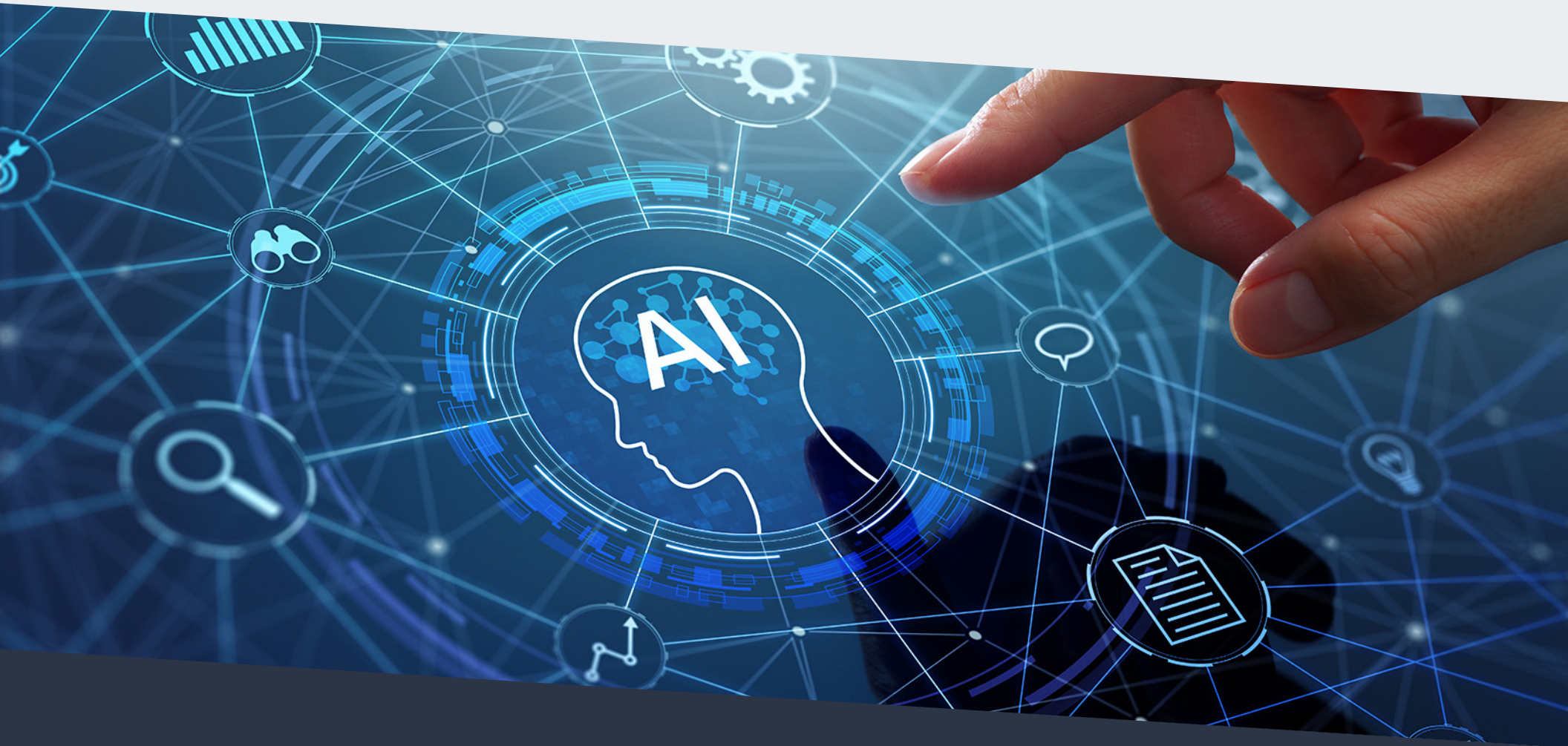
- Embrace orchestration as the unifying framework for automation, aligning IT and business workflows to create cohesive and adaptive processes
- Invest in observability and AI as foundational capabilities to monitor, optimize, and adapt workflows dynamically
- Empower decentralized teams with self-service tools that simplify automation while maintaining centralized governance

For Vendors

- Embed observability and AI into orchestration tools to enable actionable insights, proactive issue resolution, and intelligent decision-making
- Simplify tool ecosystems with user-friendly interfaces and robust integrations to support hybrid and multi-cloud environments
- Expand orchestration capabilities to include containerized workloads, Kubernetes, and emerging AI use cases, such as MLOps

Conclusion

WLA has reached a pivotal point in its evolution, where orchestration, observability, and AI are transforming it from a technical capability into a strategic business enabler. By connecting IT and business processes, integrating human workflows, and leveraging real-time insights, WLA is poised to drive innovation, efficiency, and competitive advantage in the era of digital transformation.





About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading IT research and consulting firm dedicated to delivering actionable insights across the evolving technology landscape. Through independent research, market analysis, and vendor evaluations, we empower organizations to make well-informed technology decisions. Our team of analysts combines practical experience with a deep understanding of industry best practices and emerging vendor solutions to help clients achieve their strategic objectives. Learn more about EMA research, analysis, and consulting services at www.enterprisemanagement.com or follow EMA on [X](#) or [LinkedIn](#).

This report, in whole or in part, may not be duplicated, reproduced, stored in a retrieval system or retransmitted without prior written permission of Enterprise Management Associates, Inc. All opinions and estimates herein constitute our judgement as of this date and are subject to change without notice. Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies. "EMA" and "Enterprise Management Associates" are trademarks of Enterprise Management Associates, Inc. in the United States and other countries.

©2025 Enterprise Management Associates, Inc. All Rights Reserved. EMA™, ENTERPRISE MANAGEMENT ASSOCIATES®, and the mobius symbol are registered trademarks or common law trademarks of Enterprise Management Associates, Inc.