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Becoming an AI-fueled organization: How to re-orchestrate operations for success



This excerpt is a chapter from Deloitte's State of AI in the Enterprise, 4th Edition report.

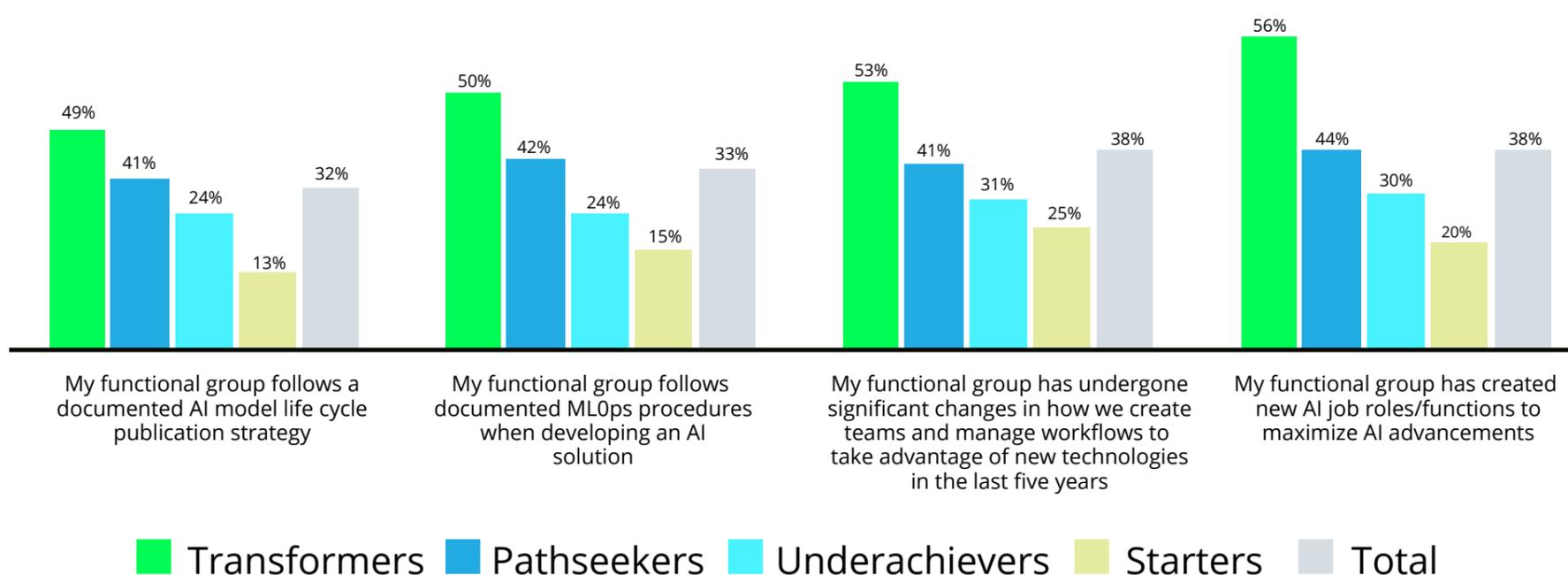
Technology cannot deliver transformative results unless organizations reimagine how work gets done. Most leaders today understand this intellectually; however, Deloitte’s State of AI in the Enterprise 4th Edition survey results show a disconnect in putting it into action: Across a variety of operational activities—both on the business side and within IT or data science teams—only about one-third of those surveyed report that they have adopted leading operational practices for AI. This includes adhering to a well-calibrated MLOps framework, documenting AI life cycle publication strategies, and updating workflows, roles, and team structures across the business.

To ensure quality AI solution development, enterprise adoption, and the most successful outcomes, organizations should rethink their operations from two key perspectives: across the business workflow, and within their IT and data science team processes.



Leading AI operations practices

Percentage of respondents who selected “completely agree” to these statements about operations



Source: The State of AI 4th Edition: data analysis.

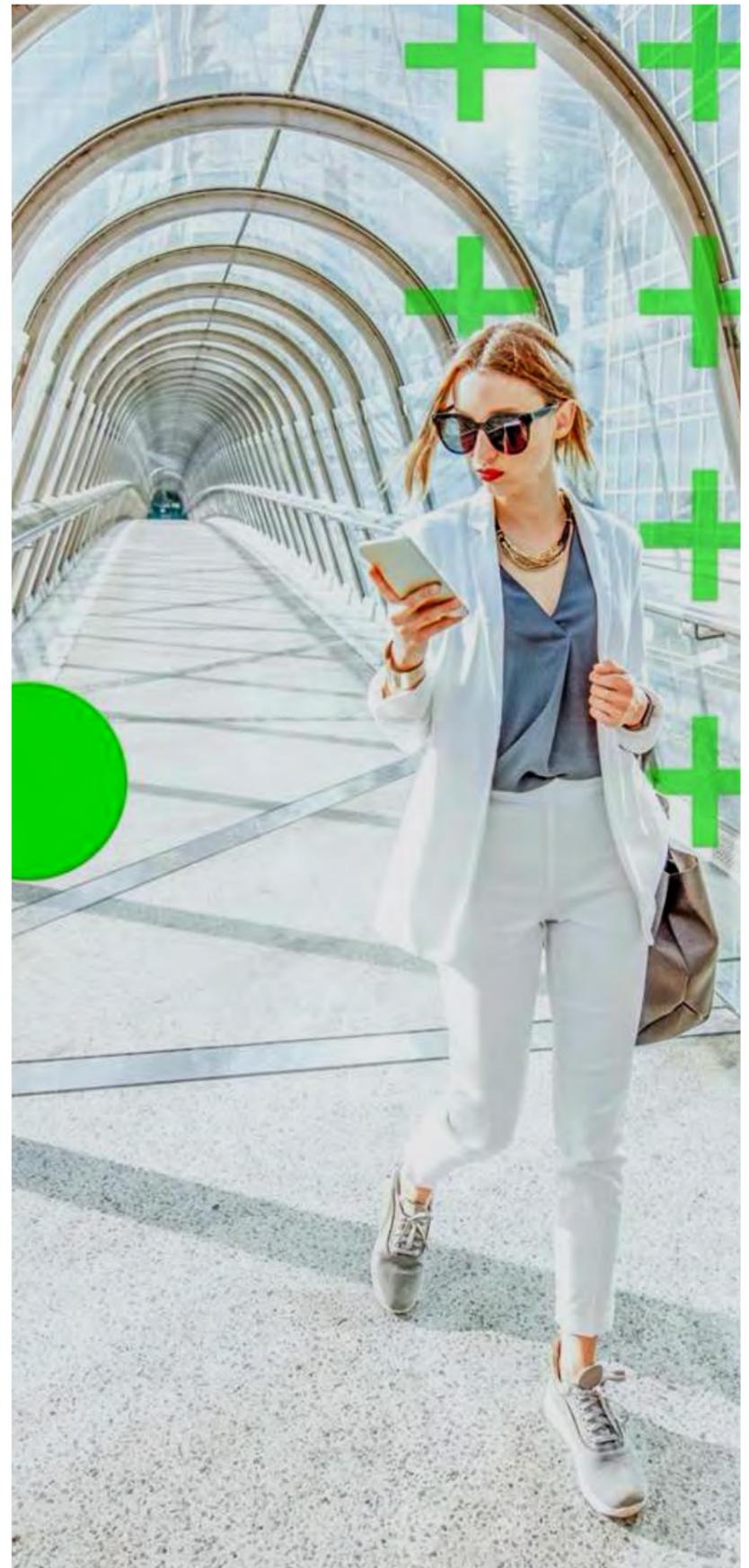
A call for leaders: Business stakeholders should take ownership of AI-fueled solutions

A successful AI solution should be conceived and designed to fit within a new workflow created to improve value delivery. To do this effectively, business stakeholders should take a lead role, but unfortunately, many misunderstand how to do this effectively. This causes them to allocate too little time to rethink the broader operational shifts needed to support successful adoption of a value-creating solution. All too often, AI and ML development teams are put in charge without a clear view into the business processes they are tasked with transforming.

When this happens, Michelle Lee, VP of Amazon Machine Learning Solutions Lab, observes, “They then experience organizational inertia, because either the use case being addressed wasn’t important enough, or there is an unwillingness to adopt a new and an unproven method.”

Rajen Sheth, VP of Google: Cloud AI and Industry Solutions, underscores that “we’ve seen a lot of AI projects where people have implemented amazing models, but they’ve never seen the light of day because the business rejects the process changes that go along with it.”

Only with an engaged partnership between the business and AI and ML development teams, can a new way of working emerge. Even when business leaders understand their role, a lack of AI fluency can inhibit their ability to collaborate effectively with the AI and ML development teams. Some organizations have found success in creating new roles to help translate between business stakeholders and model development teams. In these circumstances, an individual well-versed in both business and analytics can serve as the bridge between overarching business strategic goals and AI technical requirements.¹ Our survey demonstrates that efforts in creating new roles like this can pay off. High-achieving surveyed organizations (Transformers and Pathseekers) were significantly more likely to create new roles and functions to maximize AI advancements.



MLOps: New capabilities require new processes

In the early days of enterprise AI, initiatives took place within localized teams and were contained within business divisions. Models were frequently built on data scientists' desktops and required relatively simple and smooth processes to maintain.² Today, models are being deployed in the cloud and running mission-critical workloads. As organizations reach this scale, the level and complexity involved in perpetually developing, training, testing, deploying, monitoring, and maintaining models have caught many organizations by surprise: Only 33% of all survey respondents completely agree they have MLOps processes in place.



Not all data scientists are skilled in taking on an engineering or operational mindset to manage this at scale. This is why a strong collaboration across data scientists, engineering, application developers, and operational managers is important to align the necessary processes for AI and ML to take hold.

While developing these processes is generally the responsibility of IT and data science leadership, all stakeholders and senior leaders should be concerned that these processes and standards are in place and observed across the organization. They are key to ensuring the ongoing quality of models that are fueling critical business processes.

Data from our survey bear out just how important: Organizations that strongly agreed that MLOps processes were followed were twice as likely to achieve their goals, compared to the rest. Furthermore, these surveyed organizations were also approximately two times more likely to report feeling extremely prepared for risks associated with AI, and nearly twice as confident that they can deploy AI initiatives in an ethical, trustworthy way.

Rethinking ops: A catalyst for AI transformation

Establishing the appropriate structures, roles, and working relationships across an organization can be one of the most important steps in bringing an AI transformation to life: "If I were to give one piece of advice to a C-suite-level person looking at how to get this right in their organization, I would say, look at the organizational structure, because that can really facilitate the change," advises Phil Thomas, Executive Vice President of Customer Insights Data & Analytics at Scotiabank. "That for us was a massive accelerant in our journey—getting the organizational structure right and creating a culture of being a data-driven organization that's accepting of the use of AI."

For more AI and technology strategy recommendations:
ML Oops to MLOps | Taking AI to the Next Level

Download the complete Deloitte State of AI in the Enterprise, 4th Edition report.

About the Deloitte State of AI, 4th Edition Research

AI-fueled organizations leverage data as an asset to deploy and scale AI systematically across all types of core business processes in a human-centered way. They use the power of rapid, data-driven decision-making to enhance workforce and customer experiences to achieve competitive advantage and continuously innovate.

To learn how organizations across the globe are progressing toward this vision, we surveyed 2,875 executives from 11 top economies who have purview into AI strategies and investments within their organizations. We asked them about a wide variety of behaviors—from their overarching AI strategy and leadership, to their technology and data approaches, and how they are helping their workforce to operationalize AI. Then, to understand which behaviors lead to the greatest outcomes, we analyzed the survey responses based on how many types of AI applications a company has deployed full-scale and the number of outcomes achieved to a high degree.



Transformers

(High outcome and high deployed—28% of survey respondents): Transforming but not fully transformed, this group has identified and largely adopted leading practices associated with the strongest AI outcomes. They average 5.9 out of 10 possible full-scale deployments of different types of AI applications, and 6.8 out of 17 possible outcomes achieved to a high degree. They are the market leaders on their way to becoming AI-fueled organizations.

Pathseekers

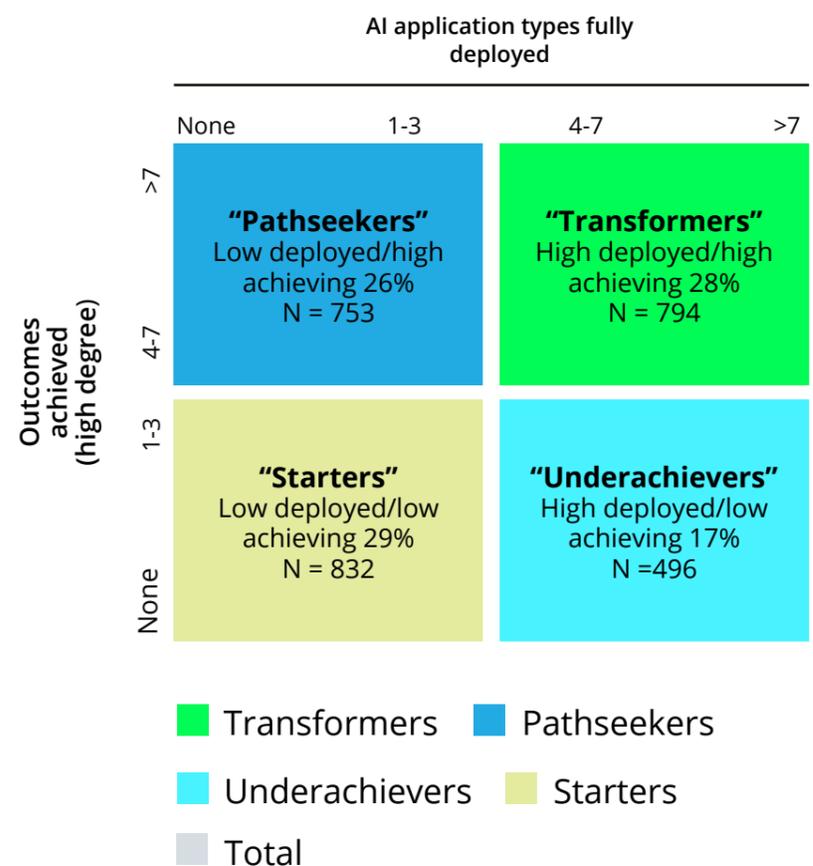
(High outcome and low deployed—26% of survey respondents): Pathseekers have adopted capabilities and behaviors that are leading to success, but on fewer initiatives. They are making moves but have not scaled to the same degree as Transformers. They average 1.9 out of 10 possible full-scale deployments of different types of AI applications, and 6.2 out of 17 possible outcomes achieved to a high degree.

Underachievers

(Low outcome and high deployed—17% of survey respondents): A significant amount of development and deployment activity characterizes this group; however, they haven't adopted enough leading practices to help them effectively achieve meaningful outcomes. They average 5.5 out of 10 possible full-scale deployments of different types of AI applications, and 1.4 out of 17 possible outcomes achieved to a high degree.

Starters

(Low outcome and low deployed—29% of survey respondents): Getting a late start in building AI capabilities seems to characterize this group. They are the least likely to demonstrate leading practice behaviors. They average 1.6 out of 10 possible full-scale deployments of different types of AI applications, and 1.0 out of 17 possible outcomes achieved to a high degree.



1 Deloitte, "An innovation strategy powered by tech," accessed September 27, 2021.

2 Rohit Tandon and Sanghamitra Pati, ML-Ops to MLOps, Deloitte, accessed September 27, 2021.



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