# outsystems

The Speed of Change:
How Fast Are You?

The pandemic crisis and the impact of lockdown have been a massive shock to the global economy and to our daily lives. While a "new normal" is developing, the continuation of disruption seems a certainty for some time to come.

Ingenuity and adaptability will be the critical factors that decide the fate of organizations. Change is happening to every kind of organization at unprecedented speed. This spring, we surveyed 2,200 IT professionals and senior IT leaders to find out how fast their organizations can respond to change, and we asked them to share what made them more (or less!) ready for change.

This report offers insights into which organizations are leading the race in speed and adaptability as we enter a new era of digital urgency.
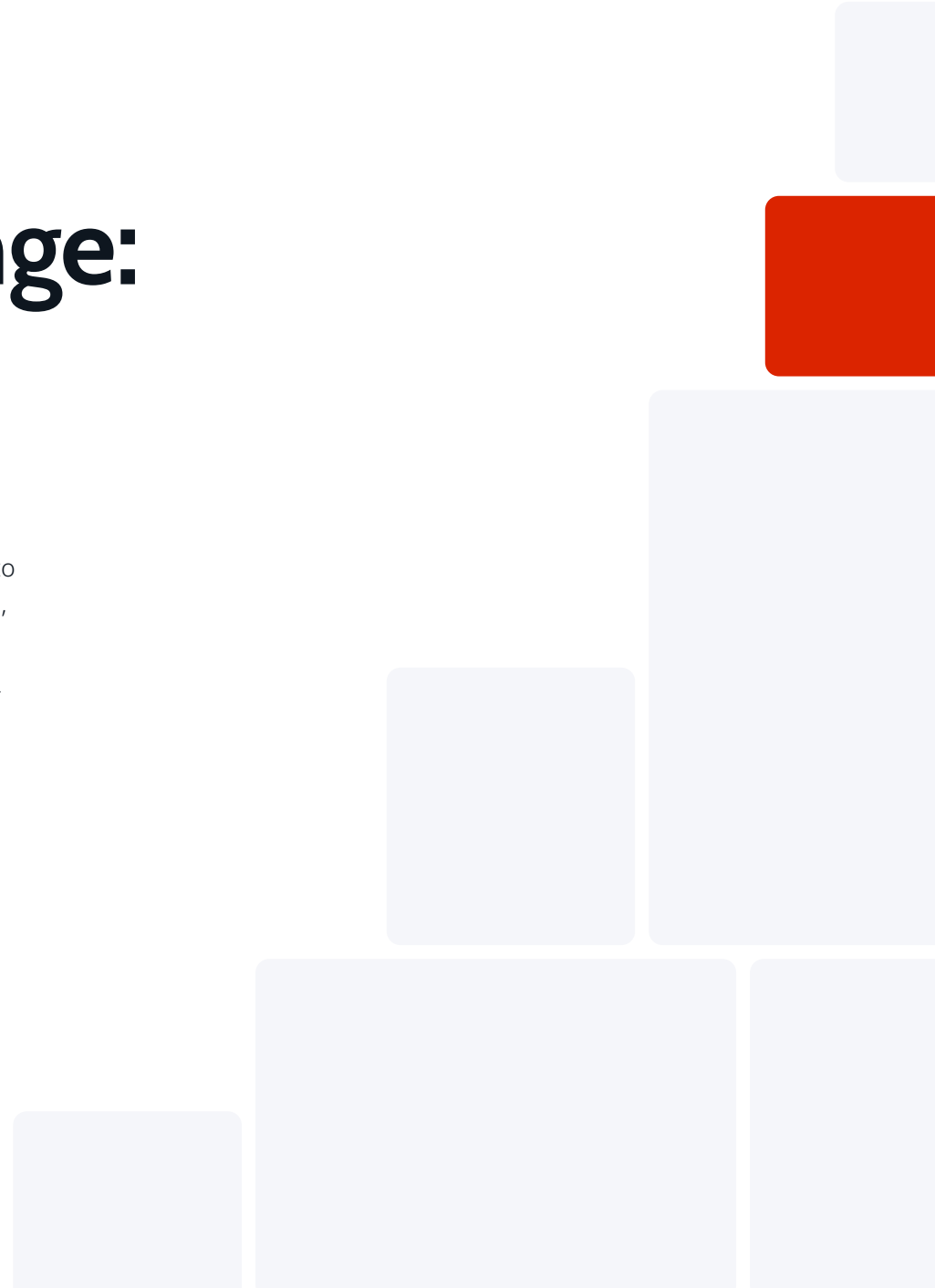
Looking in the Mirror: Self Assessment

The starting point for the survey data is self-assessment, using a matrix derived from change management expert Prosci's "Organizational Agility Assessment."[1] The questions ask respondents to indicate how their organizations adapt to change, how confident they are in their flexibility, and how they feel about their approach relative to that of their competitors. The results show only a small part of the community is confident in their organization's ability to move quickly.

Agility is baked into our organization's DNA

| 35% | 35% | 19% | 11% |

We regularly out-change our competitors/industry peers

| 21% | 44% | 26% | 9% |

We continually and systematically research/anticipate change

| 32% | 44% | 18% | 6% |

We execute planned changes well

| 27% | 48% | 19% | 6% |

We cope well with unplanned change

| 24% | 47% | 22% | 7% |

0   20   40   60   80   100

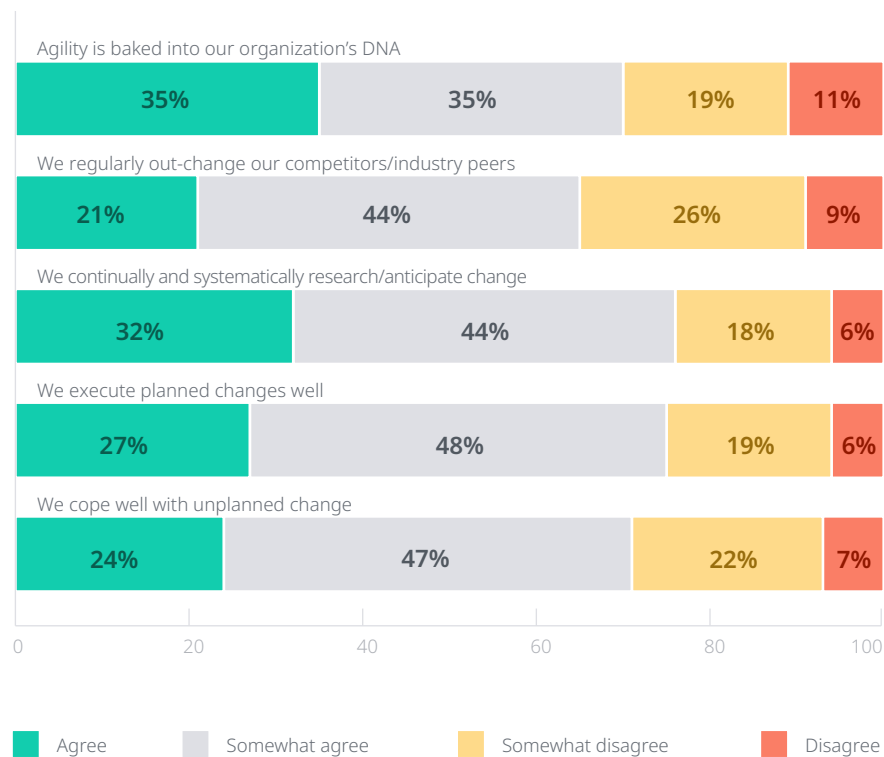■ Agree   ■ Somewhat agree   ■ Somewhat disagree   ■ Disagree

Fig. 1: Organizational Agility Assessment

One finding is clear: just 21% of senior IT leaders and professionals believe that they are more capable than their competitors when it comes to change.

In an era when COVID-19 is disrupting everything, unplanned change seems particularly unwelcome, with less than a quarter of the respondents feeling confident that they are ready to deal with unplanned change.

While there are various ways to organize for faster and more flexible application delivery, we asked respondents to assess their level of adoption of Agile methodologies in their IT organizations as a way to assess their commitment to change. We gave respondents 5-levels of maturity to choose from:

1 **Initial:** We lack consistency and need training to get everyone aligned.

2 **Just Started:** Processes not fully defined. Basic level of Agile adoption.

3 **Defined:** Our whole team is using Agile. We consistently deliver sprint after sprint.

4 **Measured:** We're measuring code quality and other key measures.

5 **Optimizing:** We practice sustainable, continuous improvement based on KPIs.

The results showed that fewer than 25% of companies had made it past the step of defining their approach, and more than 50% were just getting started. In other words, while the vanguard has declared Agile history and moved on, the vast majority of IT departments are still thinking about how to reformulate themselves for faster delivery using an outdated methodology.
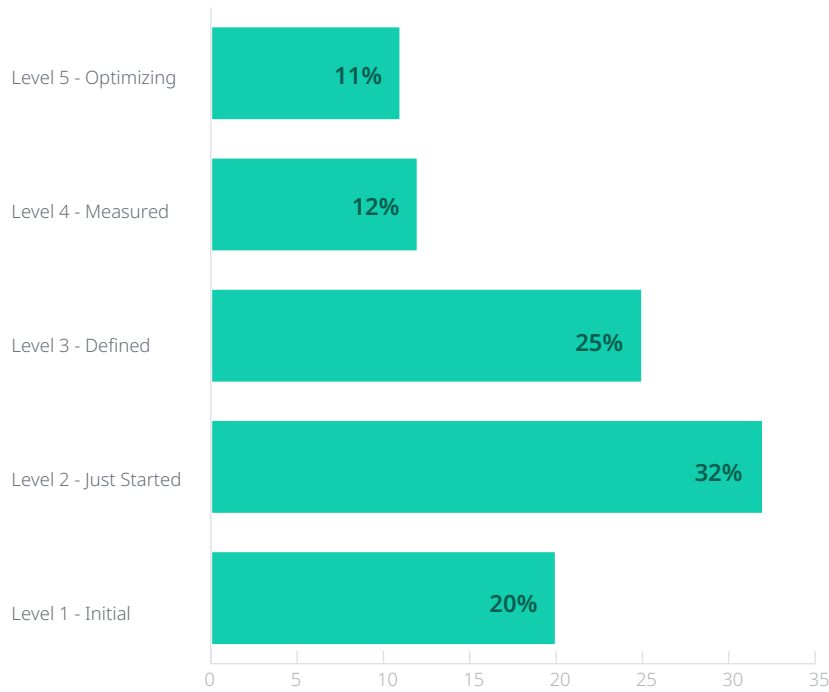
[1]Prosci Agility Attributes Assessment

Fig. 2: Agile Maturity Levels

Fig. 3: Application Development Time

How Long Does It Really Take?

Everyone has been in a meeting where some C-level exec asks, "Why does it take so long?" So, we asked respondents to tell us the average amount of time it took their organization to deliver a new web or mobile application. The answers show a mismatch between delivery timelines and global events. The data suggests that 65-75% of the current projects in flight were started before the COVID-19 lockdowns took effect across the US, so hopefully people had the foresight to start the right projects.
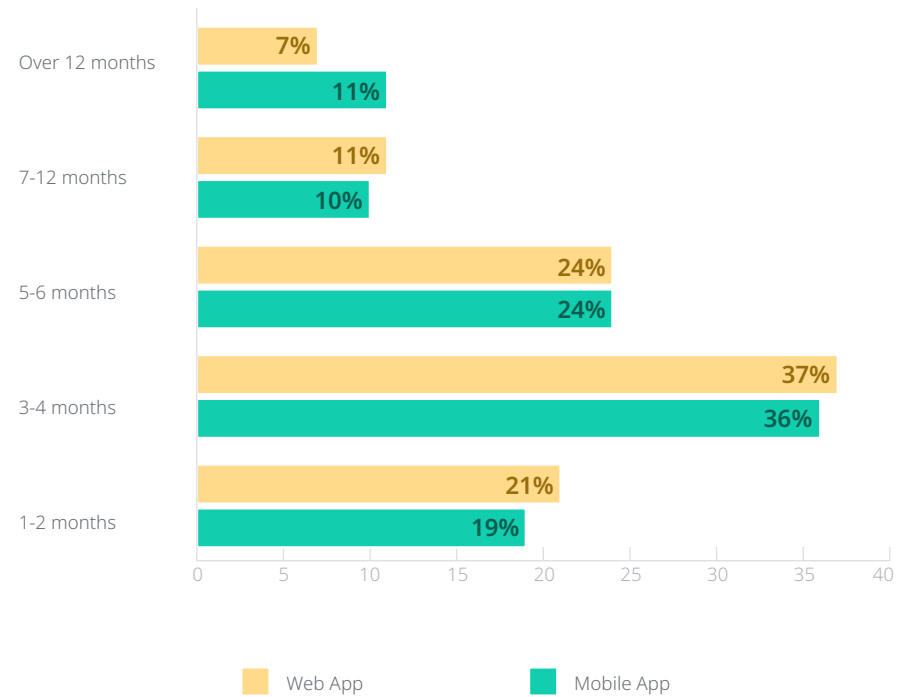
An application delivery time of between 3-6 months seems like a lifetime in the COVID-19 era and yet, that is what the majority indicated. Every IT organization needs to take a hard look at how to reduce development time to address how rapidly things are changing and how urgent key problems have become.

So who are the companies that are in that small minority — the ones who started and finished a software project in the last month? And how do they approach software development that allows them to be so darn fast? Based on their answers to the first three questions, we split them into "leaders" and "laggards."

Leaders and Laggards Compared

Leaders are confident in their ability to respond to change. They are deep in their adoption of tactics like Agile, and they deliver software projects quickly. They also deploy software updates and releases daily or multiple times per week. There are notable differences between the leaders and the laggards that you can learn from to improve your team's speed and responsiveness to change.

Approaches and Technology for Increased Delivery Speed

Tables 1 and 2 show the approaches and technologies that leaders and laggards had recently invested in for speeding up application delivery.

Investment in Technologies to Speed Up App Dev	Laggards	Leaders	Difference
New programming languages or frameworks	15%	29%	14%
Containers + Microservices	15%	29%	14%
Low-code + MXD Platforms	30%	44%	14%
Digital Process Automation/ RPA	24%	29%	5%
BPM platform	7%	11%	4%
Cloud	58%	61%	3%

Table 2: Investment in Technologies to Speed Up App Dev

Investment in Approaches to Speed Up App Dev	Laggards	Leaders	Difference
Design Thinking/Design Sprint	13%	50%	37%
Customer Journey Mapping	11%	37%	26%
Agile	32%	56%	24%
DevOps or SecDevOps	22%	45%	23%
Lean UX	6%	13%	7%
None of these	29%	10%	-19%
Outsourcing some development	47%	21%	-26%

Table 1: Investment in Approaches to Speed Up App Dev

Leaders invest significantly more in approaches that focus on getting closer to customers and experience, including adopting design thinking and design sprints, and customer journey mapping. The leaders are twice as likely to invest in DevOps, containers, microservices, low-code, and new programming languages or frameworks.

Laggards do show an interest in Agile methodologies, and their investment in RPA is close to that of leaders, but the gaps in the other dimensions create a significant delta in performance and the differences play out along three dimensions.

Application Development Innovation and Backlogs

The first dimension where leaders separated from the pack is the amount of time they spend on building new applications rather than maintaining or replacing old ones. Laggards report that feature fixes, "keep the lights on" repair work, and various forms of technical debt dominate their time.

Most laggards indicate their backlog is about the same, and almost a third have a backlog of applications that is getting worse. Agility leaders were more successful at shortening their backlogs.
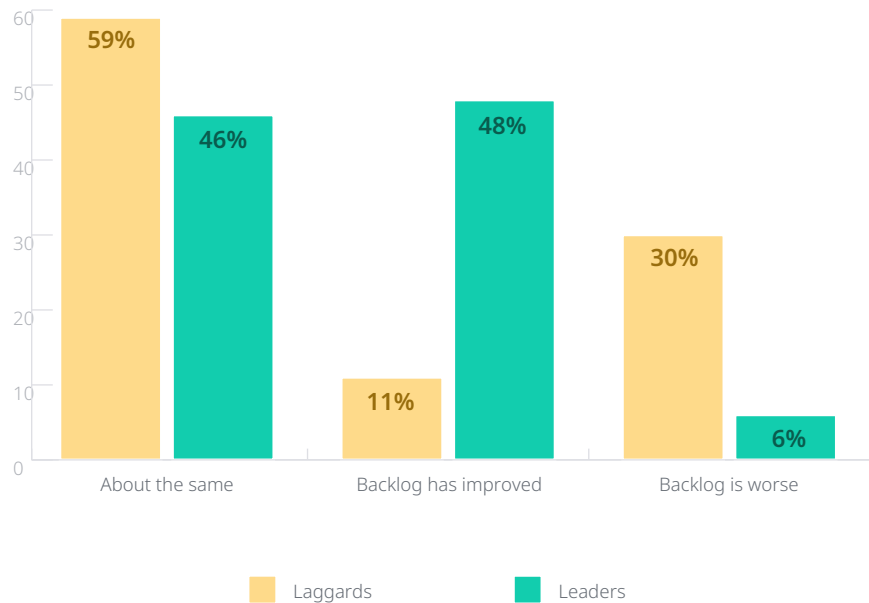
App Dev Speed and Cadence

When asked whether the typical speed of application delivery at their organization had become faster or slower in the past year, leaders are nearly three times more likely than laggards to say it is somewhat faster or much faster than a year ago.
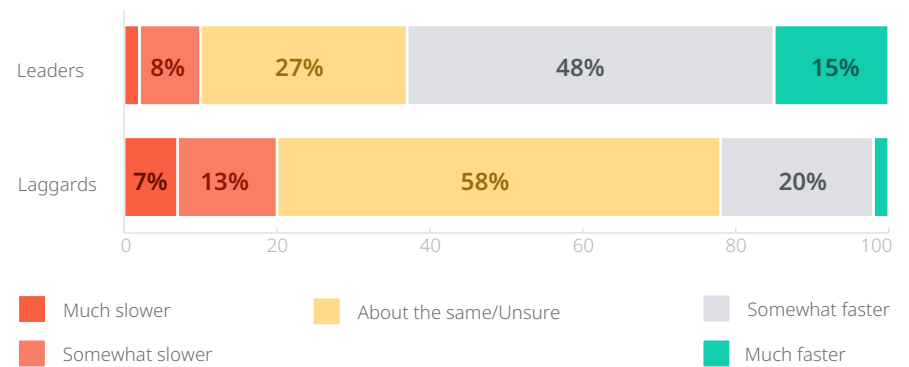

Fig. 4: Have App Dev Backlogs Improved in Past Year?

Fig. 5: Has App Dev Speed Improved in the Past Year?

Why are the innovation and backlog differences so stark? The processes for maintaining existing and legacy software are significant. They take focus and skill, and they take a big bite from the IT budget that could otherwise be spent on innovation. Any backlog of new apps suffers. Leaders have methods, tools, and modern architecture that handle changes and updates quickly. They can easily make inroads on their backlogs and develop new applications.

The focus of leaders on new tools and methodologies to improve speed enables them to become more proficient in their agility investments and strive for continuous improvement, and they can develop even faster.

Laggards spend so much time maintaining software and lack tools, skills, and processes, that it is more difficult for them to accelerate. Tech debt is a burden that impacts innovation - once you start falling behind, it's difficult to catch back up unless they change the status quo. Some laggards have been able to make things work and are developing faster than a year ago, but for how long?

App Development Talent and Skills

Laggards and leaders are both affected by the skills shortages and talent gaps that hinder rapid adoption of the modern IT architectures needed for agility. However, 21% more of the laggards describe hiring "full-stack developers" as difficult or very difficult.
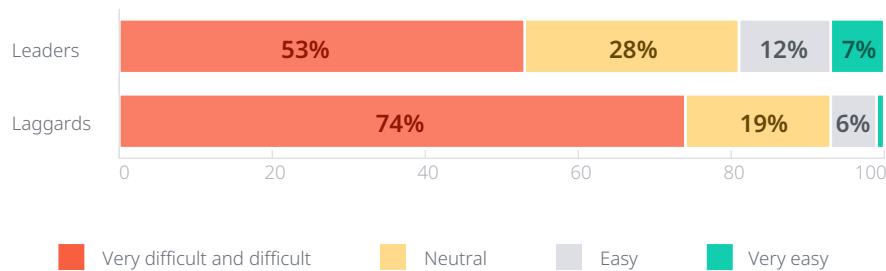

Fig 6: The Challenge of Hiring Full-stack Developers

Leaders have less of a challenge hiring full-stack developers because of the approaches and tools they use and because of the quality of the work they get to do. Rather than working on keeping legacy systems alive, they get to work on new projects. When word gets out quickly and easily in the developer community, it becomes easier for leaders to hire.

Leader or Laggard: Which Are You?

You can think about the dimensions here and determine if you are a leader or a laggard. Consider what is expected of you in the year or so ahead. How fast can you deliver applications and solutions? How do you compare to your competitors? What tools and methods are you using to become faster and better at what you do?

Compare those answers with what you now know are characteristics of leaders. Because leaders are a small group, most organizations fall outside that range. The good news is that there are things you can do to become a leader.

How to Catch Up With the Leaders

In this new era, digital-first and cloud-first transformation have become even more urgent. So, what can boost your speed and agility? To answer that question, we can look at what respondents said were the top four challenges of developing new web and mobile applications. In Fig. 7, you can see that laggards and leaders share the top two.
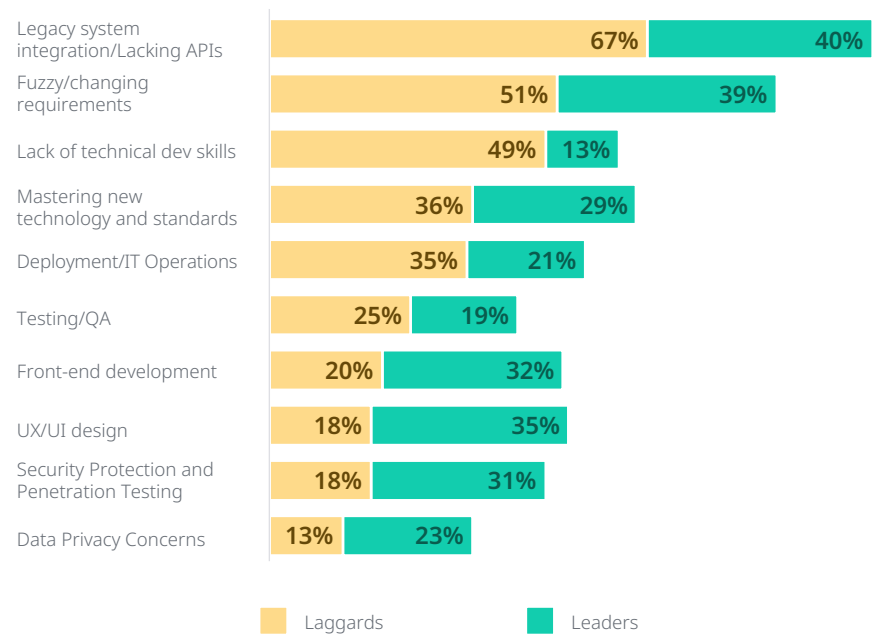

Fig 7: Top Causes of Application Delivery Delays

Then it gets interesting. Almost twice as many leaders than laggards have UX/UI design as a top challenge. The other top challenge for them is front-end. Laggards were nearly four times more likely than leaders to list a lack of technical development skills as one of their top challenges. Fourth on the laggards' list is mastering new technology and standards.

The laggards' challenges reflect internal issues. They spend time worrying about finding new hires and training people on new languages and frameworks, which makes it hard to deliver apps to customers super fast. Leaders focus on customer and user experience. Their goal is to deliver value to customers as fast as possible. To make that happen, here's what to do.

Start with UX

Use customer journey mapping and design sprints to put the user at the center of your development process.

Build for change

Adopt iterative, agile development practices to accommodate uncertainty, unclear direction or changing requests.

Add new skills

Look for whatever skills your team needs next - web, mobile back-end, and modern stack.

Focus on CD

Add technology to help teams achieve continuous delivery (CD) without assembling an array of DevOps tools and skills.

Reach legacy

Find tools with built-in and DIY connectors for easy integration with any enterprise system, database, or web service.

What It All Means

Speed is the name of the game. Organizations that focus on customer needs and offer developers an easy and fast path to innovation will be able to address the pains of change. A small percentage are already there, and they continue striving to get faster and better. Others have work to do, but there are ways forward for them. Whether you're a leader or a laggard, you have options not just to get in the game, but to win it.

Next Steps

Agility leaders are concerned about customer and user experience. To become an agility leader, you should focus more on delivering value to the business and your customers. There are approaches and technology available to help you become more customer-centric. Your next step is to explore what's out there.

Want to know more? Here are three ways to continue your learning:

Digital Urgency: Agile Leaders in Action
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