A low-angle, upward-looking photograph of several modern skyscrapers with glass facades, creating a sense of height and urban density. The image is partially overlaid with a blue geometric design consisting of diagonal lines and a dotted pattern.

State of **Enterprise** **Architecture** 2021



BiZZdesign

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1. Executive Summary

The ability of organizations to make better-informed business and technology decisions has never been more important or more urgent.

As our survey shows, the pandemic crisis has wreaked havoc on many industry sectors, requiring organizations to make fast and deep changes to stay afloat.

More than one in ten (12 percent) respondents describe their business as focused on survival this year, while 43 percent have survived but say further adaptation in 2021 will be crucial.

Analyst firm Forrester notes that the required changes will involve rapid digital transformation¹ – moving previously physical processes online, innovating new digital products and services, and improving the cross-channel customer experience (CX).

Agile firms will adapt faster

As Darwin taught us, adaptation is how species – and businesses – survive.

Firms that had already laid the foundations of Cloud and agility were better placed to adapt to COVID-induced disruption.

By comparison, digital laggards have floundered. They've struggled to meet the needs of newly remote employees, and been slow to cater to customers who now prefer to research, buy, and interact on digital channels.

The role of Enterprise Architecture in post-pandemic adaptation

These themes serve as the backdrop to our annual survey of Enterprise Architecture professionals (EA). Our aim was to better understand the state of EA today, and its potential to drive post-pandemic adaptation.

We set out with four critical questions in mind:

1. How mature are the EA practices in use today?
2. Are those practices making a difference to IT and business change initiatives?
3. Does EA maturity correlate with organizational agility and CX improvement?
4. What are the top priorities to improve EA's impact in organizations today?

Our research took us around the world, connecting us with more than 250 EA professionals and related stakeholders in all kinds of industries. Our insights from that research are captured in the pages that follow.

1 [Forrester: Predictions 2021: "COVID Wrote The Business Case — Our Future Is Digital"](#)

2. Key Findings

Over half of all businesses are under pressure to adapt

Thirteen percent of respondents told us their organization is fighting for survival after a difficult 2020, with a further 43 percent saying they'd managed to survive, but that further adaptation would be crucial in 2021. The ability to make the right decisions and act swiftly on them will be key to these organizations' post-COVID recovery.

43%

Organizations with mature EA programs have the agility needed to adapt

The survey reveals a high correlation between EA maturity and organizational agility. EA leaders are not only capable of aligning capabilities with business strategy, but also of doing the right things at the right time to achieve positive outcomes for the business.

Less-mature EA programs aren't yet driving positive business outcomes

Organizations with lower levels of EA maturity aren't yet reaping the full benefits of their EA program. While EA contributes to strategy and planning, it's not driving more concrete outcomes, like faster time to market or an improved CX. Since those are key determinants of business success, action is needed here.

EA must break out of its IT silo to have an impact

EA teams are good at helping IT to invest in the right tools to support business strategy. However, the responses suggest the discipline must increase its visibility and accessibility if it's to have a strong impact on business performance. Communicating its value and making it easier for stakeholders to engage with EA should be key priorities.

Mid-sized businesses risk losing out to smaller and larger competitors

While SMEs and large enterprises tended to display higher levels of EA maturity, a 'squeezed middle' of mid-sized organizations - with 501 - 10,000 employees - are lagging behind. Unless they improve the impact of their EA programs, they risk losing business and market share to nimbler competitors.

Over one-third of EA practitioners lack an EA tool that is fit for purpose

Only two-thirds of respondents agreed or somewhat agreed that they use an EA management tool that supports governed, collaborative design, adherence to industry standards and powerful analysis. However, 35 percent don't have access to a tool with these essential capabilities.

3. About the Survey

In February 2021, we surveyed more than 250 EA professionals and related stakeholders across Europe, North America, and the rest of the world.

You will find a detailed breakdown of respondent demographics in section 11, including job functions, geography, size and age of organizations, and industries.

Sixty-two percent of respondents were Enterprise Architects, of which **43 percent** said that they led the EA approach and strategy for their organization. A further 9 percent were either IT leaders, CIOs, or CTOs. The majority of other respondents were either business solution consultants, business analysts, or consultants.

In addition to describing their EA maturity, respondents answered questions concerning the business and IT benefits their organizations gained from EA. Our survey went deep on the topics of organizational agility and progress with CX improvement. And respondents shared what their current top priorities were to improve EA's impact at their organization.

In the sections that follow, we'll share our analysis of those results, with a particular focus on how organizational agility and progress with CX improvement correlate to EA maturity.

4. Enterprise Architecture Maturity Self-Assessment

We asked senior respondents to assess the EA maturity of their organizations using the self-assessment matrix shown below.

Please describe your organization's EA maturity using this matrix	Disagree (0)	Somewhat disagree (1)	Somewhat agree (3)	Agree (7)
The mission and value of our EA function are understood and valued across the organization.				
Our EA development process is well defined, understood, and executed.				
Our EA deliverables are current and relevant to support and drive change.				
We have sufficiently trained and business-knowledgeable EA practitioners.				
Our EA helps align IT investments with long-term strategy to reduce risk and deliver business value outcomes.				
We use an EA management tool that supports governed, collaborative design, adherence to industry standards, and powerful analysis.				
Stakeholders across the business can easily engage EA people, processes, deliverables, and insights via a web-based collaborative portal.				

Table 1: EA Maturity Self-Assessment Matrix

The most common accomplishment for EA teams is guiding IT to invest in the right technologies to deliver business value. The majority of EA practitioners are supported in these endeavors by a powerful EA management tool.

However, the responses suggest that EA teams need to do more if they're to have a visible impact on business performance. Ensuring EA's value is well understood across the organization and helping stakeholders to engage with EA teams and resources are areas to double-down on.

Please describe your organization’s EA maturity using this matrix

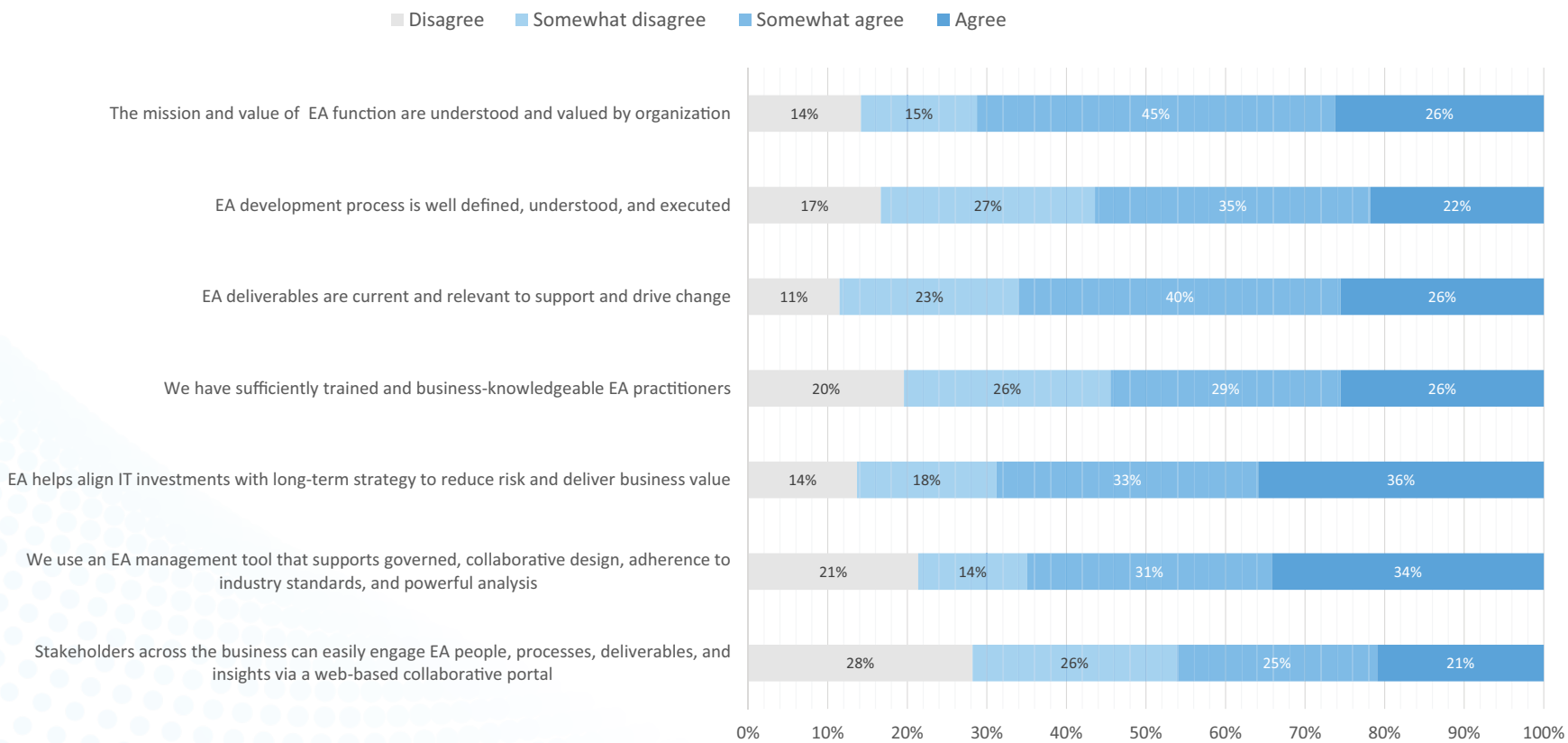


Fig. 1: EA Maturity Self-Assessment

43%

In order to simplify these data, we calculated an aggregate maturity score using the weighting numbers shown in Table 1. We found that the average EA maturity score of all respondents was **43 percent**.

In order to compare leaders with laggards and for further analyses, we sorted respondents by their aggregate EA maturity, then tagged the top quartile as leaders, and the bottom quartile as laggards.

EA Maturity – Leaders and Laggards Compared

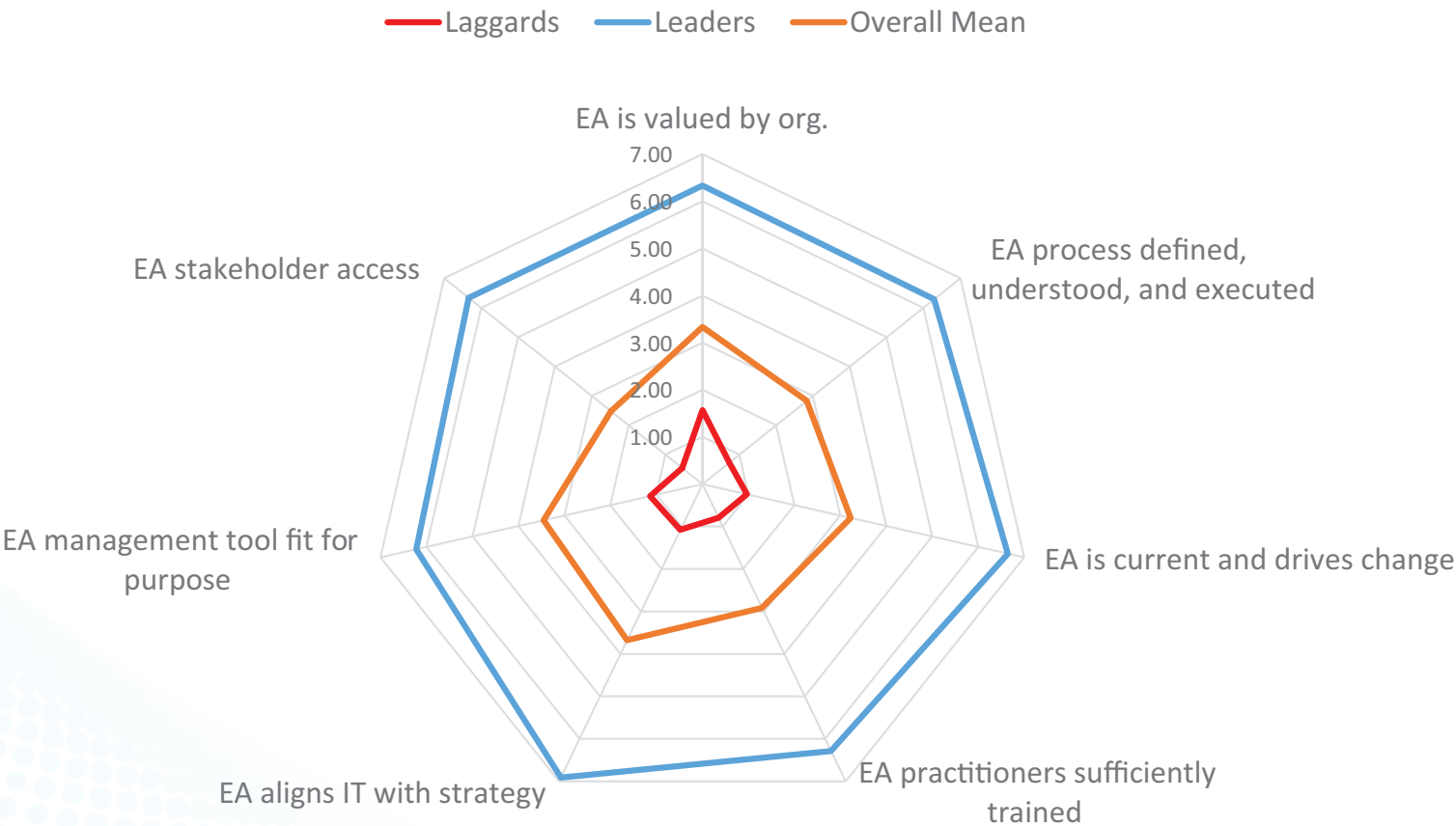


Fig. 2: EA Maturity – Leaders and Laggards Compared

Analysis of the leaders and laggards revealed some significant differences in industry representation:

- **Laggards:** The three industries displaying the lowest maturity were government, banks and financial services, and education.
- **Leaders:** The sample had proportionately more respondents from a variety of high-tech businesses, including consultants, system integrators, software, technology/computers, and telecommunications and internet.

We include further comparisons between leaders and laggards throughout the report.

EA Maturity and Use of EA Management Tools

Sixty-five percent of respondents agreed or somewhat agreed that their organization used an EA management tool that supported governed, collaborative design, adherence to industry standards, and powerful analysis. Twenty-one percent of respondents disagreed with this statement.

Does your organization use an EA management tool that supports governed, collaborative design, adherence to industry standards, and powerful analysis?

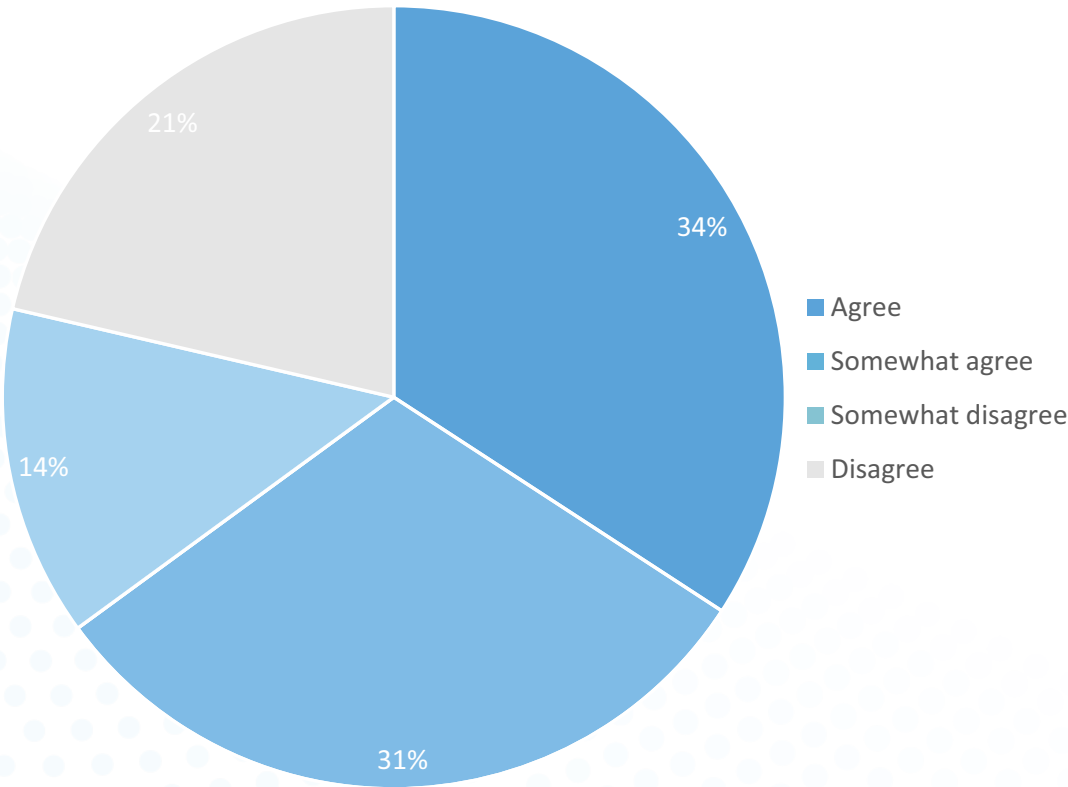


Fig. 3: Use of a Fit-for-Purpose EA Management Tool



Respondents told us what different systems and content types they had integrated with their EA management tool.

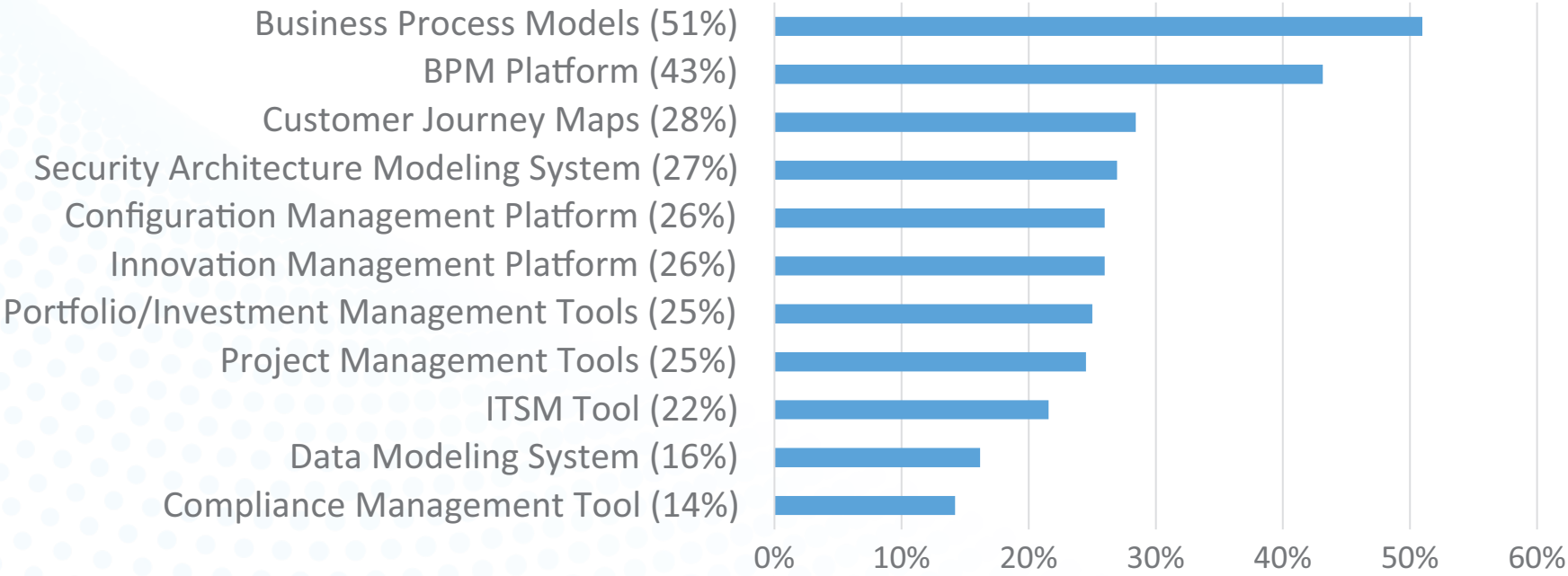


Fig. 4: Systems and Content Types Integrated with EA Management Tool



EA Maturity and Organization Size

Our analysis showed that smaller organizations reported higher average EA maturity than mid-sized organizations with between 500 and 10,000 employees. However, the largest enterprises – those with over 10,000 employees – perform higher than all but the smallest organizations.

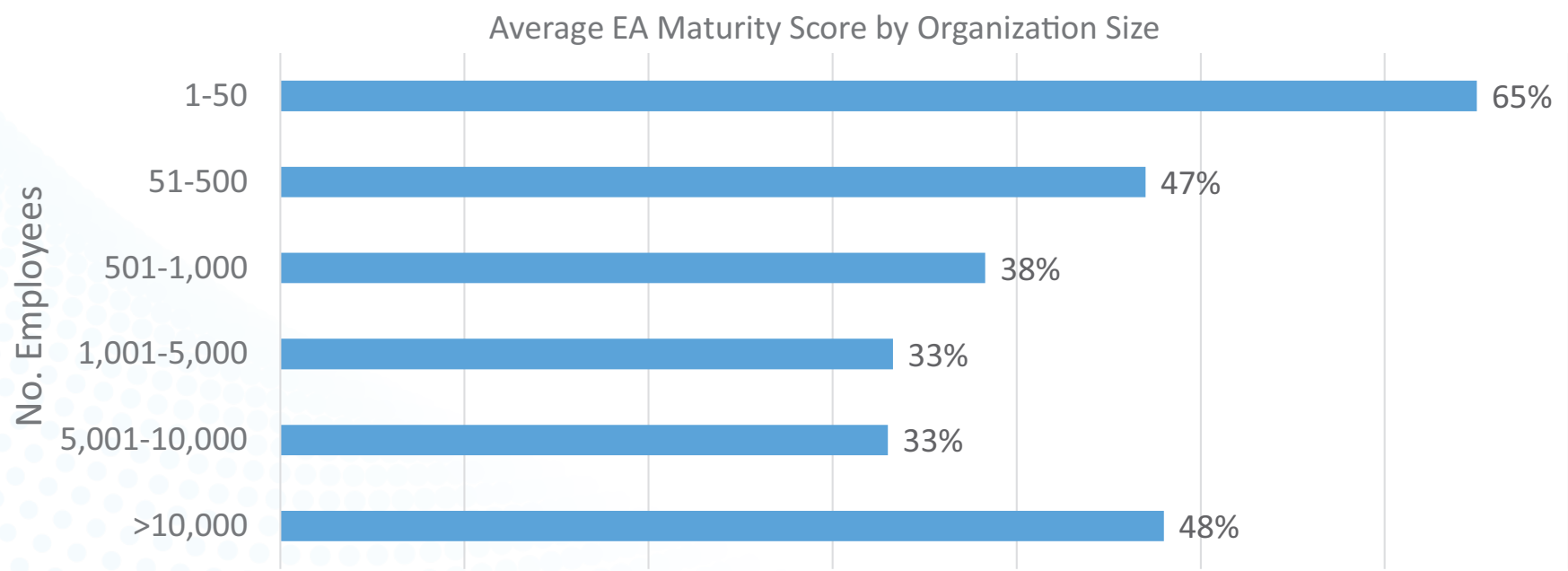


Fig. 5: Average EA Maturity Score by Organization Size

One interpretation of these findings is that mid-sized businesses represent the “squeezed middle” – large enough to have accumulated complexity, but compared to the largest enterprises, lacking the resources needed to resolve EA deficiencies.

EA Maturity and Organization Age

According to respondents, EA maturity declines with business age. Roughly 70 percent of respondents said their organization was 21 years or older.

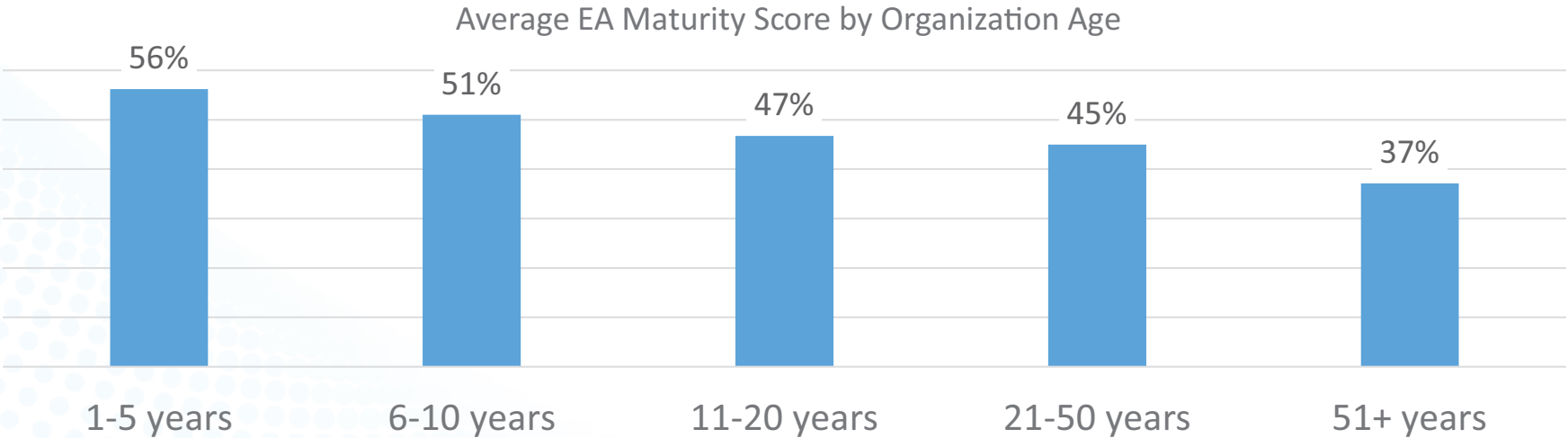


Fig. 6: Average EA Maturity Score by Organization Age

5. Enterprise Architecture Outcomes



In section 4, the EA maturity measures we explored primarily centered on the EA approach, the tools, and the perspectives of those involved. However, the value of the EA function should be measured by its outcomes rather than its practice. Our survey explored both the IT and business benefits that respondents said their EA programs were delivering.

Benefits for IT

Respondents told us what IT benefits their EA programs delivered to their organization.

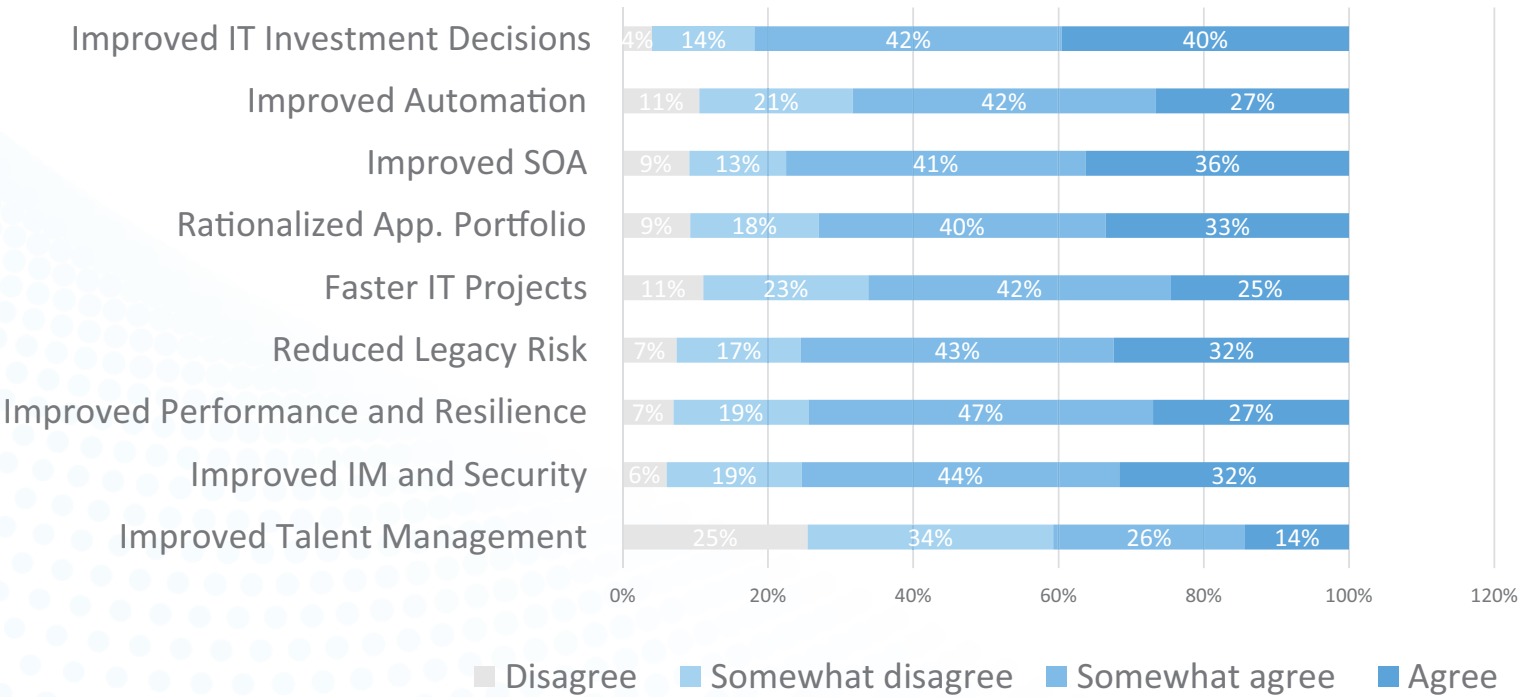


Fig. 7: IT Benefits from EA

Most respondents agreed that their EA programs have led to improved IT investment decisions; something we also saw when we asked about levels of EA maturity.

Respondents were less confident that those decisions lead to positive outcomes, such as the ability to deliver IT projects faster or to improve performance and resilience.

The use of EA to improve IT recruitment and skills acquisition seems to be niche at present, with only 14 percent agreeing that EA has delivered this benefit.

Benefits for Business

Respondents told us what business benefits their EA programs delivered to their organization.



Fig. 8: Business Benefits from EA

Alignment of capabilities to strategy ranked in first place. Respondents were less confident that EA benefited agility (3.03), CX (2.96), and faster innovation/time to market (2.90).

Bearing in mind scores between 2.5 and 5.0 indicate increasing agreement; these results are not a ringing endorsement of the business benefits delivered by respondents' EA programs.

However, when we compared EA maturity leaders to laggards, we found that leaders reported a 94 percent higher average star rating across these business benefits measures.



Fig. 9: Business Benefits from EA – Leaders and Laggards Compared

6. Agility

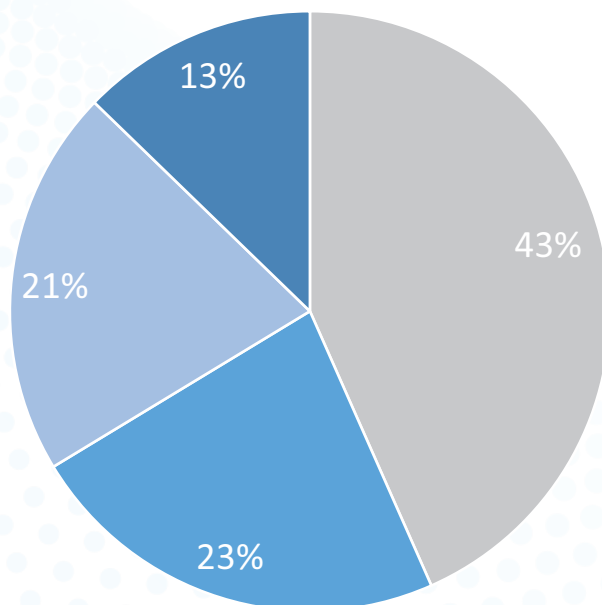


The faster organizations can recover from the turmoil of COVID-19, the better placed they'll be to thrive in 2021 and beyond.

Agility will play a key role, as the organizations who adapt faster to the new post-COVID reality will be able to outpace and outperform slower-moving competitors. Over half (56 percent) of respondents agreed that survival and adaptation will be crucial in 2021.

Business Outlook

We asked respondents which of four sentiments best described the business outlook for their organization this year.



■ **Adaptation:** We've adapted and survived in a difficult year. More adaption will be crucial in 2021. (43%)

■ **Growth:** 2020 brought us new opportunities. We're in growth mode for the year ahead. (23%)

■ **Rapid Recovery:** We've adapted better than our industry peers during a challenging year. We expect to win more market share in 2021. (21%)

■ **Survival:** 2020 was a damaging year. Now, we're focussed on survival. (13%)

Fig. 10: Business Sentiment - 2021 Outlook

Further analysis of these responses confirmed how different industries had been affected by the pandemic crisis. For example, a high proportion of respondents that reported growth or rapid recovery were in sectors such as food retail, consultancies, software, and government.

Organizational Agility

Respondents were asked to assess their organization’s agility using a self-assessment matrix derived from Prosci’s “Agility Attributes Assessment.”²

Please describe your organization's agility using this matrix.	Disagree (0)	Somewhat disagree (1)	Somewhat agree (3)	Agree (7)
Agility is baked into our organization's DNA.				
We regularly out-change our competitors and industry peers.				
We continually and systematically research and anticipate change.				
We execute planned changes well.				
We cope well with unplanned change.				

Table 2: Agility Self-Assessment Matrix

While 60 percent of respondents were confident in their organization’s ability to re-search and anticipate change, they were less sure of the ability to translate that re-search into rapid, effective action. Only around half (52 percent) said their organization can out-change industry peers.

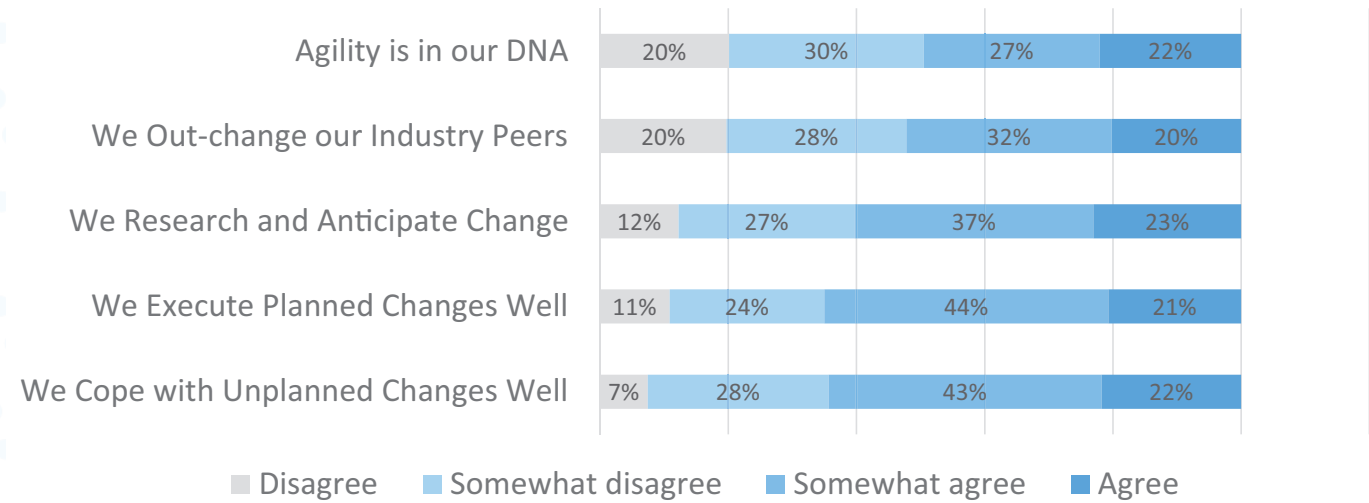


Fig. 11: Organizational Agility Assessment

2 Prosci Agility attributes Assessment – prosci.com

To get a better view of the organizations best able to adapt, we calculated an aggregate agility score using the weighting numbers shown in Table 2. We found that the average agility score of all respondents was 42 percent.

We compared the agility scores for EA maturity leaders and laggards and found that on average, leaders outscored laggards by a factor of over three:

- EA maturity leaders' average agility score: 81 percent
- EA maturity laggards' average agility score: 24 percent

Fig. 12 shows the distribution of individual agility dimension scores for EA leaders, laggards, and the overall mean for all respondents.

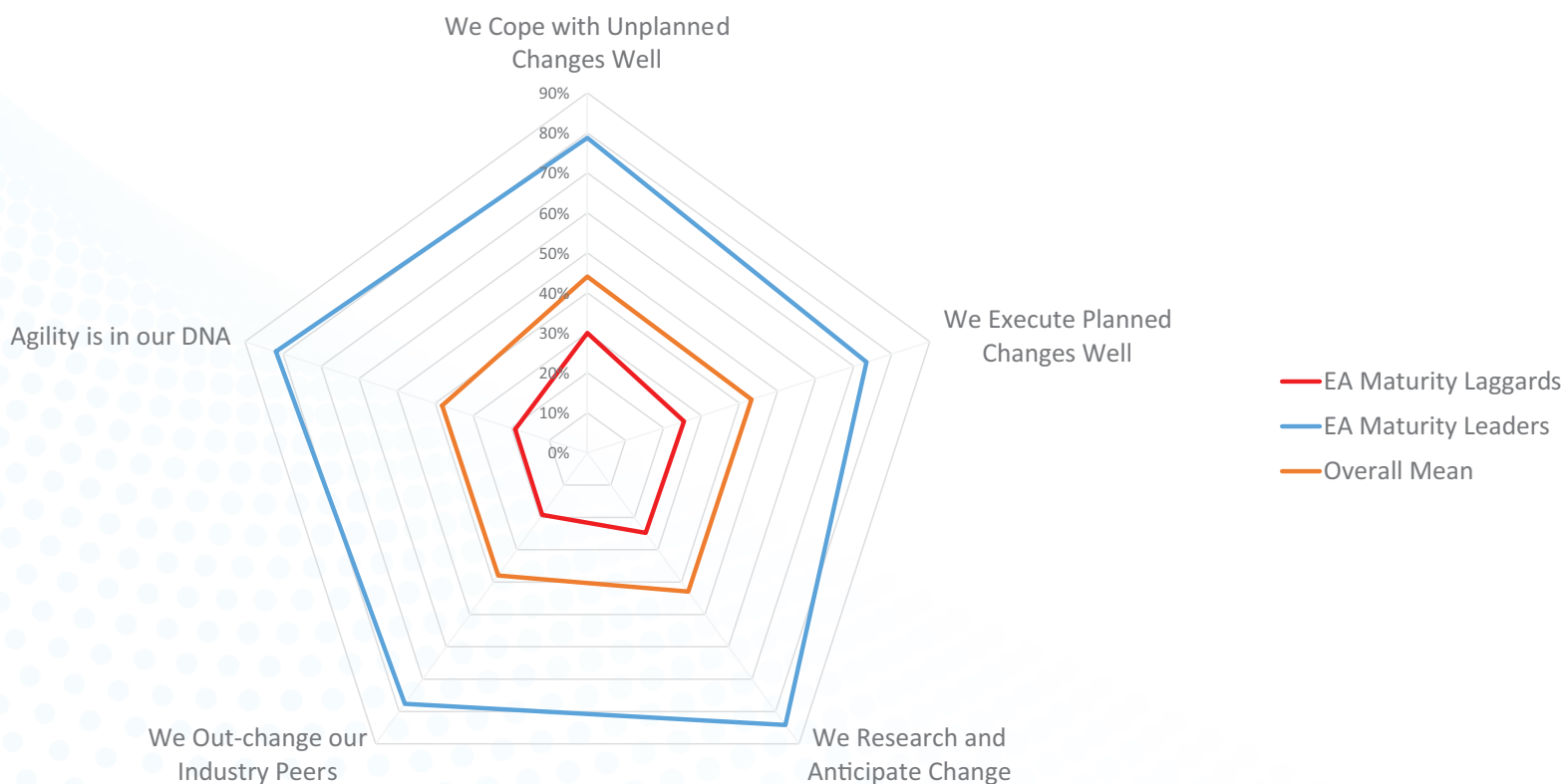


Fig. 12: Organizational Agility – EA Maturity Leaders and Laggards Compared

On average, respondents say their companies cope with unplanned changes slightly better than planned changes. This probably speaks to the heroic efforts of employees in such turbulent times. However, it might also signify that respondents believe their organizations ought to execute planned changes better and chimes with the perception of “change exhaustion” mentioned below.

Top Barriers to Agility

Respondents told us what they thought were the top three barriers to agility in their organization.

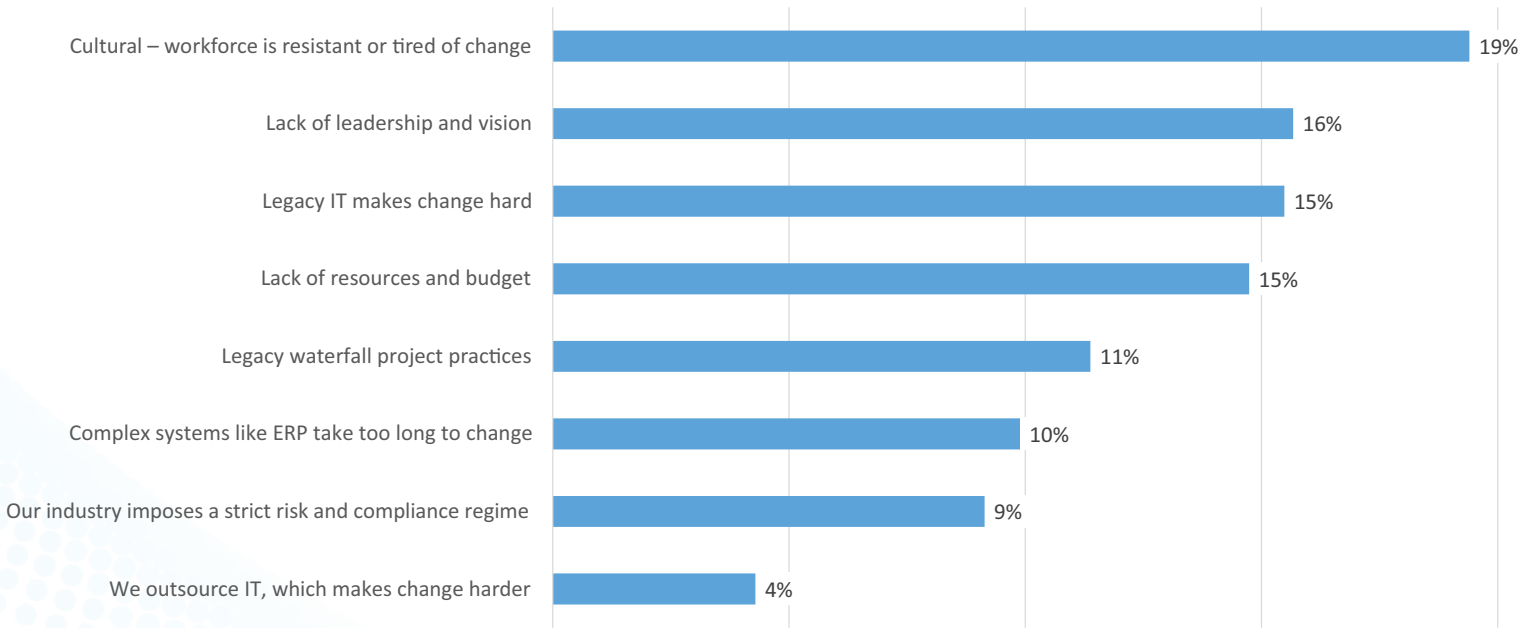


Fig. 13: Top Barriers to Agility

The Business’s Satisfaction with IT

Using a five-star scale, respondents told us whether they thought that businesspeople in their organization were satisfied with IT’s ability to support fast and successful change.



Fig. 14: The Business's Satisfaction with IT

Agile Maturity

We asked respondents to describe the maturity of agile software development in their organization using the following matrix.

Agile Maturity Assessment	
Level 1	Initial: We lack consistency and need training to get everyone aligned.
Level 2	Just Started: Processes not fully defined – a basic level of agile adoption. Development and testing are not fully in sync yet.
Level 3	Defined: Our entire team uses well-defined agile processes, and we’re consistently delivering sprint after sprint.
Level 4	Measured: We’re measuring code quality and other key measures. Our focus is on engineering maturity.
Level 5	Optimizing: Multiple teams develop on schedule and release on demand. We’ve invested in automation for continuous integration and deployment. Self-organized, continuous improvement based on KPIs.

Table 3: Five-Level Agile Maturity Assessment

As shown in Fig. 15, nearly 70 percent of respondents chose level 2 or 3 in their self-assessment. The overall average agile maturity score was 2.4.

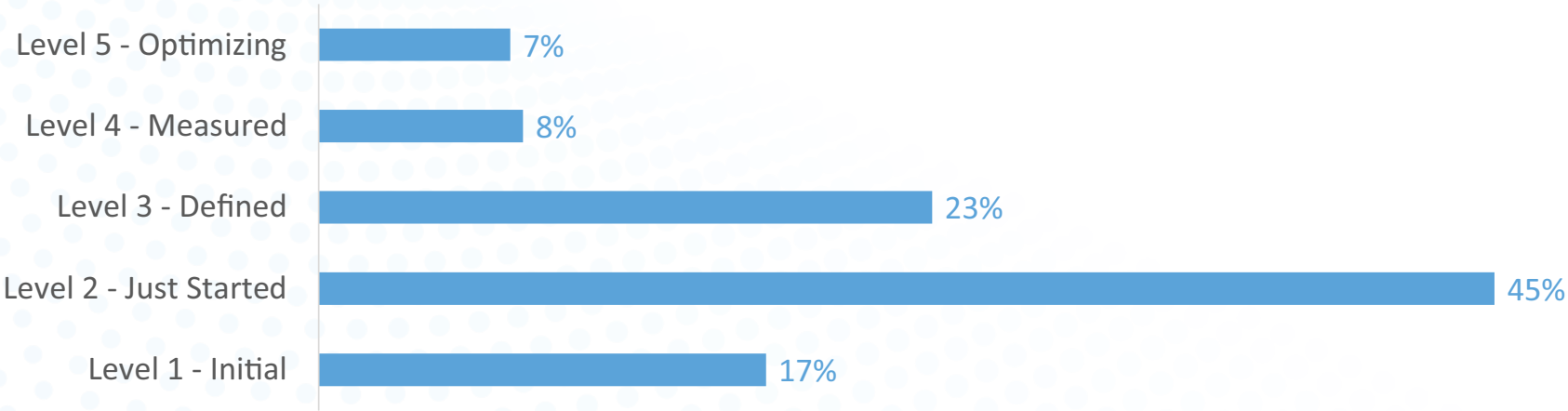


Fig. 15: Agile Maturity Levels

Innovation vs. Keeping the Lights On

We asked respondents to estimate what percentage of their IT resources were devoted to new capabilities and innovations rather than maintaining the status quo. The average response was 39 percent.

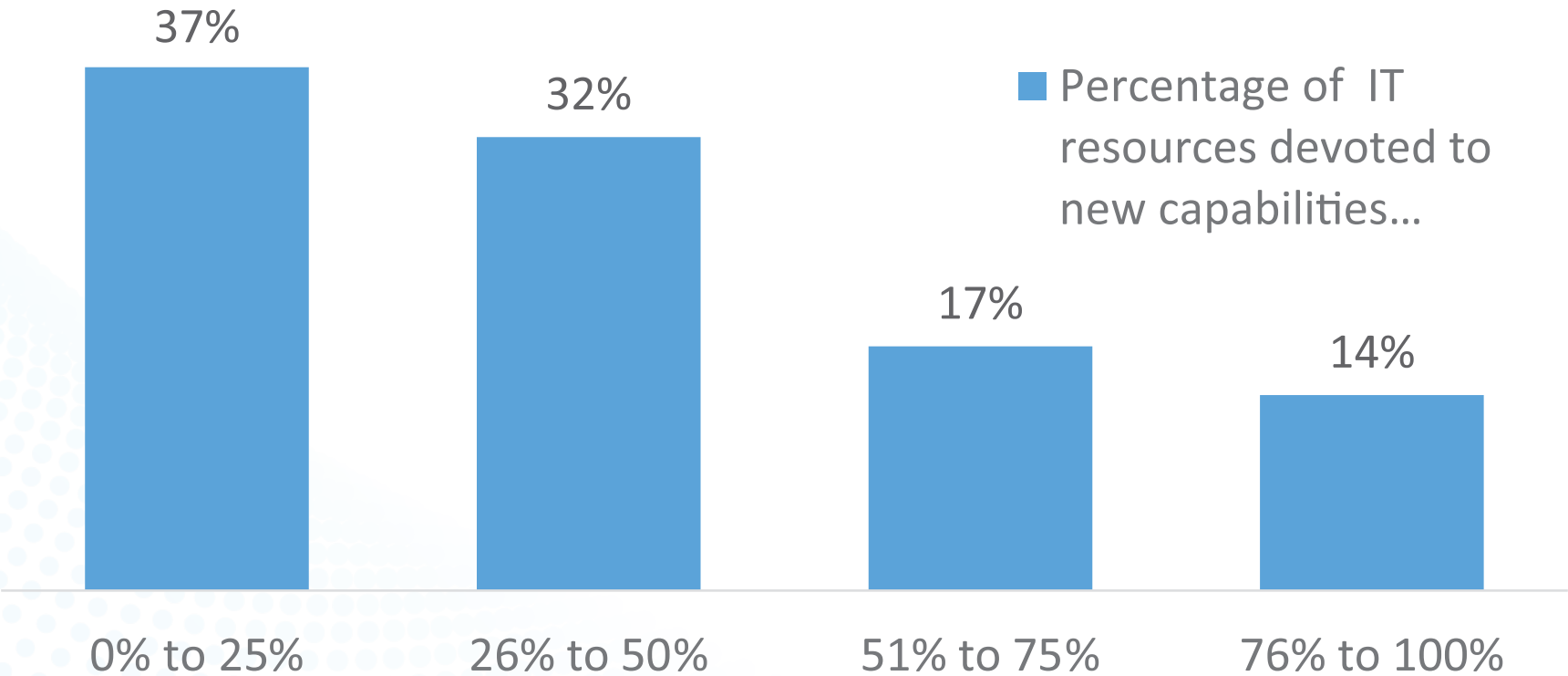


Fig. 16: Percentage of IT Resources Devoted to Innovation



Our analysis found that EA maturity (as defined in Fig. 2) has a significant bearing on organizations’ ability to devote IT resources to innovation, as shown in Fig. 17 below.

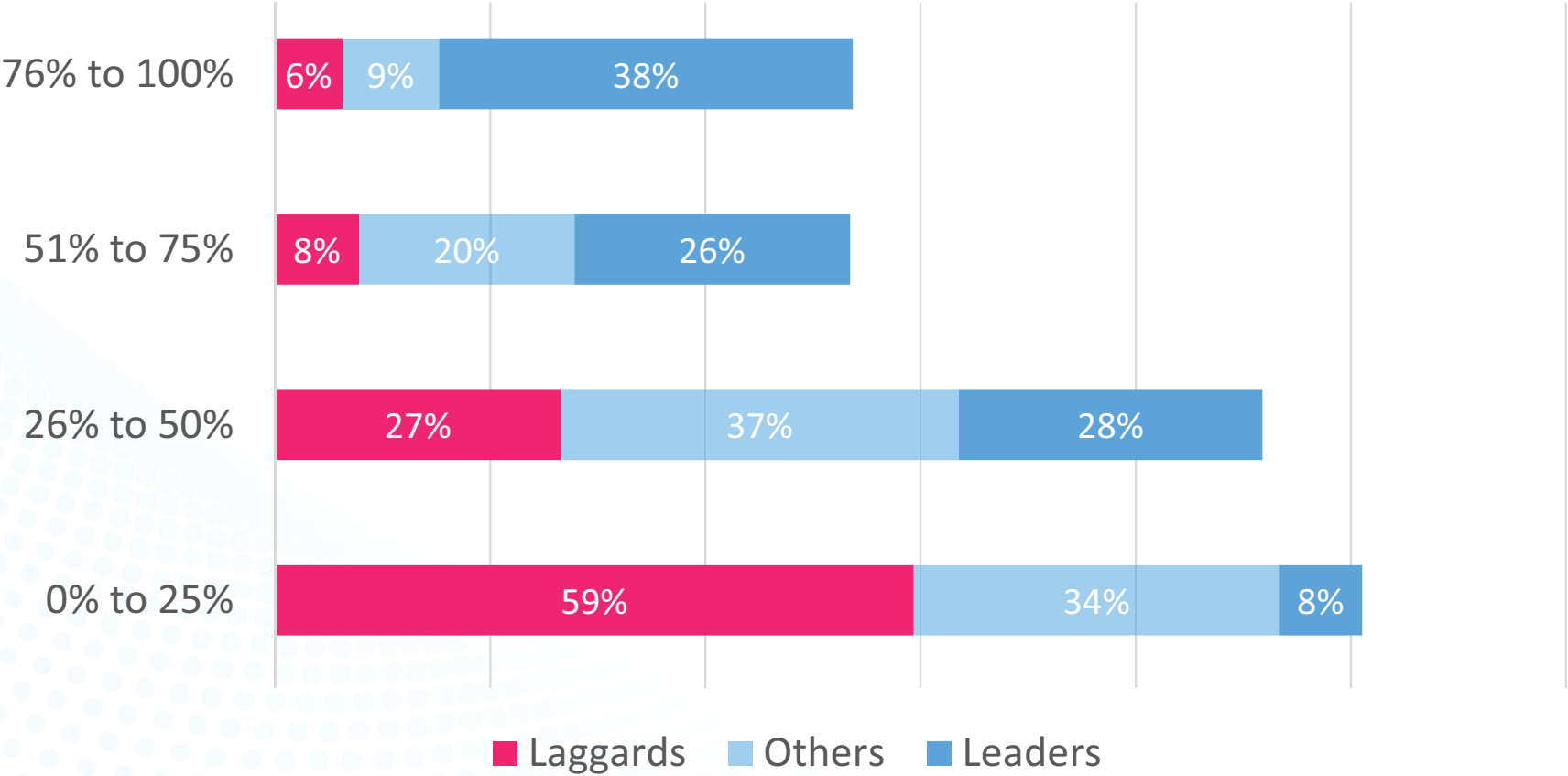


Fig. 17: Percentage of IT Resources Devoted to Innovation – EA Leaders and Laggards Compared

On average, EA maturity laggards estimate that just 28 percent of their IT resources are devoted to new capabilities and innovations. In contrast, EA maturity laggards estimate the same figure to be around 61 percent.

7. Customer Experience Perspectives

The quality of the customer experience will be one of the key determinants of business performance post-COVID (as it was before the pandemic). With customers spending more time on digital channels and less time on face-to-face meetings and visits to physical premises, organizations must ensure an exceptional cross-channel experience.

Progress with Customer Experience Improvement

Respondents described their organization’s progress with CX improvement using the following matrix.

Please describe your organization’s progress with customer experience improvement using this matrix	Disagree (0)	Somewhat disagree (1)	Somewhat agree (3)	Agree (7)
We have a single CX strategy and vision that is followed organization-wide.				
We provide the customer-facing digital channels needed to serve our customers efficiently.				
We have a “single view of the customer” that integrates data from different systems and departments.				
We have removed departmental silos and optimized processes to provide frictionless experiences to our customers.				
We continuously use customer feedback to prioritize improvements and inform long-term planning.				
We improve and launch products and services at the speed that our customers demand.				

Table 4: Agility Self-Assessment Matrix

Sixty-five percent of respondents either agreed or somewhat agreed that their organization provided the customer-facing digital channels needed to serve customers efficiently. However, two other CX maturity measures lagged by comparison:

- Just 14 percent of respondents agreed that their organization had removed departmental silos and optimized processes to provide frictionless experiences to customers.
- Just 16 percent agreed that their organization had a “single view of the customer” that integrates data from different systems and departments.

So, despite 53 percent of respondents saying that their organization has a single CX strategy and vision that is followed organization-wide, translating that vision into reality appears to have some way to go.

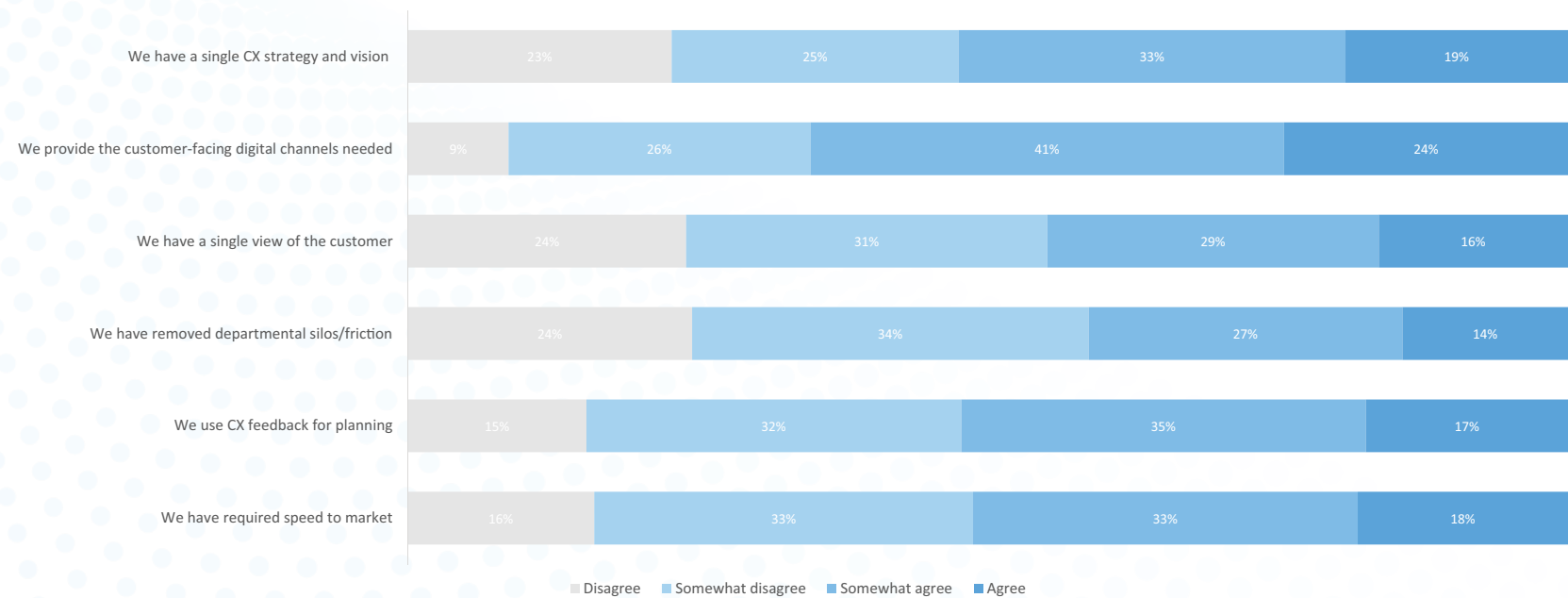


Fig. 18: Progress with CX Improvement

In order to simplify these data, we calculated an aggregate CX performance score using the weighting numbers shown in Table 4. We found that the average CX performance score of all respondents was 36 percent.

We compared the CX performance scores for EA maturity leaders and laggards, which shows a significant correlation between EA maturity and CX performance, as shown in Fig. 19.

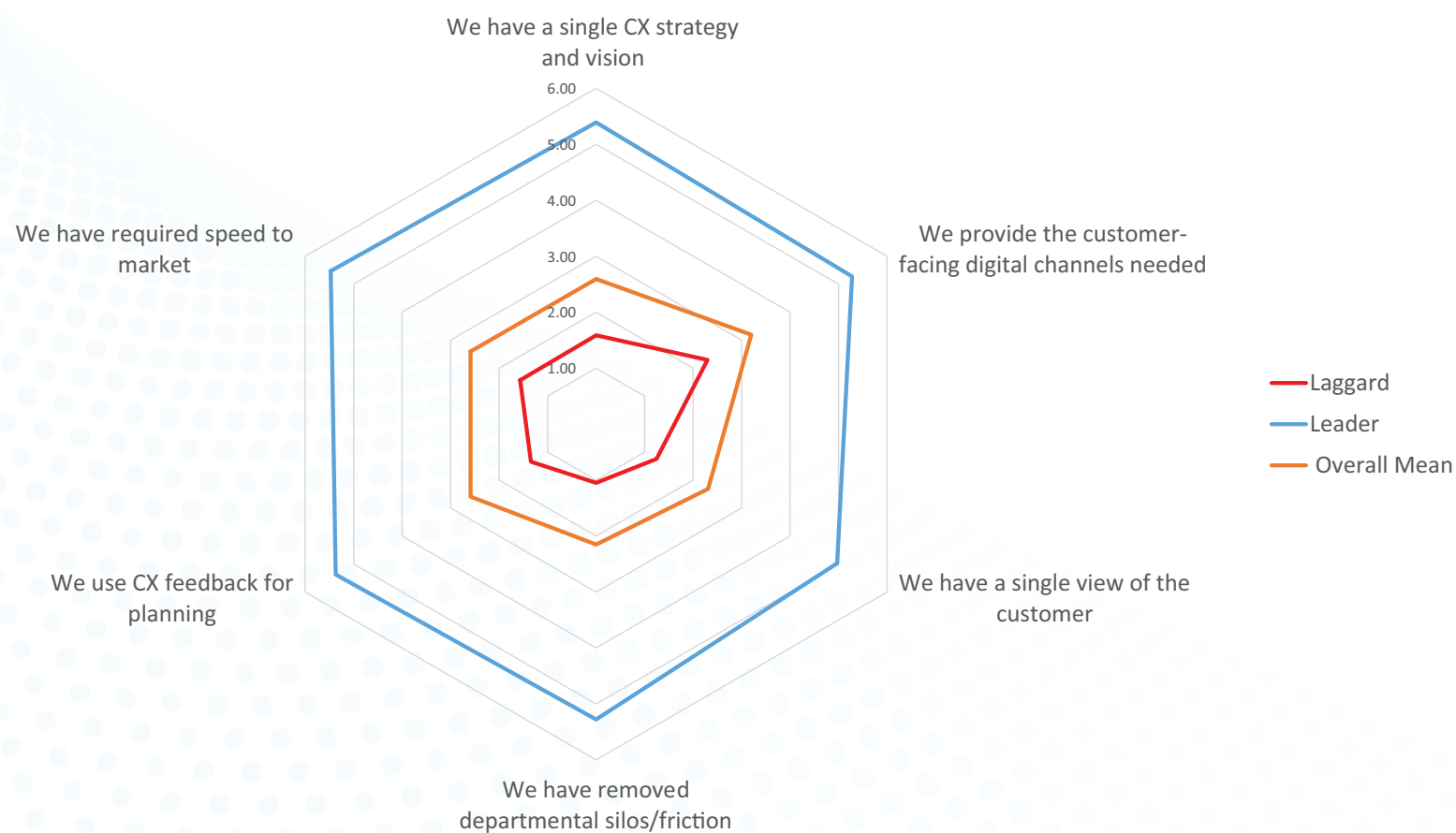


Fig. 19: CX Performance – EA Maturity Leaders and Laggards Compared

8. Top EA Priorities for 2021



We asked respondents what were the current top three priorities to improve EA's impact at their organization?

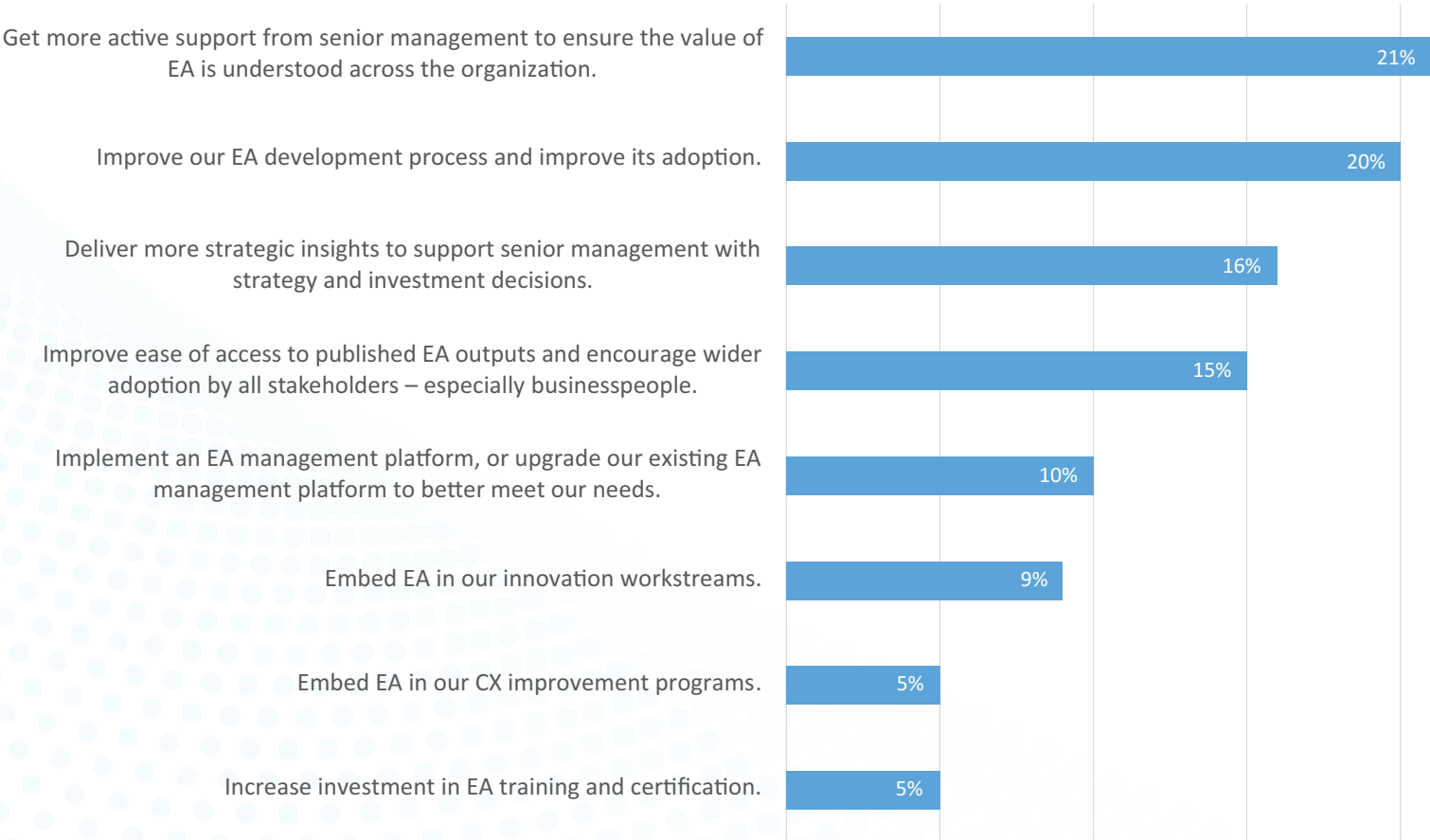


Fig. 20: Top Priorities to Improve EA Impact in 2021

We were curious to know if these priorities varied between organizations ranked as EA maturity leaders and laggards.

The top priorities for EA leaders were:

- Improve our EA development process and improve its adoption. **(24 percent)**
- Improve ease of access to published EA outputs and encourage wider adoption by all stakeholders – especially businesspeople. **(13 percent)**
- Upgrade (or implement) an EA management platform to better meet our needs. **(12 percent)**

The top three priorities for EA laggards were:

- Get more active support from senior management to ensure the value of EA is understood across the organization. **(21 percent)**
- Improve our EA development process and improve its adoption. **(20 percent)**
- Deliver more strategic insights to support senior management with strategy and investment decisions. **(16 percent)**

A stark contrast between EA maturity leaders and laggards was the apparent relevance of EA to CX improvement. Two and a half times more leaders than laggards ranked “Embedding EA in our CX improvement programs” as a top-three priority in 2021.

9. The EA Maturity Advantage



According to our survey results, organizations with higher EA maturity scores perform better than EA maturity laggards on numerous crucial organizational agility and CX measures. For example:

3.4	EA maturity leaders had 3.4 times higher average organizational agility score compared to laggards.
4.0	EA maturity leaders were 4 times more likely to say that they “out-changed” their industry peers.
2.6	EA maturity leaders claim to cope 2.6 times better when dealing with unplanned business changes.
2.9	EA maturity leaders are 2.9 times more likely to say they execute planned changes well.
1.8	EA maturity leaders report 1.8 times higher business satisfaction with IT responsiveness.
1.5	EA maturity leaders have a 1.5 times higher average self-assessment score for agile maturity.
2.2	EA maturity leaders devote 2.2 times more of their IT resources to building new capabilities and innovation.
3.6	EA maturity leaders report 3.6 times higher CX maturity score.

These performance advantages come from a long-term commitment to developing the organization's EA and change capabilities. As illustrated in Fig. 2, EA maturity leaders exceed their industry peers on all seven dimensions of the EA maturity self-assessment:

1. The mission and value of their EA function are understood and valued across their organization
2. Their EA development process is well defined, understood, and executed
3. Their EA deliverables are current and relevant to support and drive change
4. They have sufficiently trained and business-knowledgeable EA practitioners
5. Their EA helps align IT investments with long-term strategy to reduce risk and deliver business value outcomes
6. They use an EA management tool that supports governed, collaborative design, adherence to industry standards, and powerful analysis
7. Stakeholders across their businesses can easily engage EA people, processes, deliverables, and insights via a web-based collaborative portal


These capabilities share multiple interdependencies. For example:

- Attempting to make your EA deliverables current and able to support change would be tremendously hard if you had not defined the approach and invested in a fit-for-purpose EA management tool.
- Attempting to spread the mission and vision of EA across the organization would not make sense unless you had the resources, approach, and tools ironed out.
- Attempting to engage business stakeholders through a collaborative portal would not make sense if the content was outdated.

If your organization is somewhere on this journey, the chances are you'll find it helpful to assess your progress using an industry-benchmarked approach.

In the next section, we describe BiZZdesign assessment tools and a maturity model that will help you build superior change capabilities to unleash your organization's full potential.

10. Next Steps



If you want actionable insights to help you build superior organizational change capabilities, it helps to start with a structured and proven approach.

BiZZdesign provides several assessment instruments and a shared maturity model based on established industry standards. Implemented using assessment questionnaires and analyses, the results are processed into actionable tables and graphs, helping you to zoom-in to specific aspects with the most significant opportunities for improvement.

Our assessment instruments include:

- **Success Readiness Assessment:** Does your EA team have the necessary mandate, stakeholder involvement, business sponsorship, skills, available data, etc.?
- **General Maturity Assessment:** How does your organization perform on IT Governance, Enterprise Architecture, and Portfolio Management?
- **Enterprise Agility Assessment:** What are your process, system, and business agility levels?
- **Goals, Usage & Outcomes Analysis:** What are your business goals? What outcomes do you need? How does using our platform help?

For full details, read the [Assessing and Improving Your Change Capabilities](#) whitepaper, where you'll find more information on the assessment tools and the [BiZZdesign Maturity Model](#).

We leave the last word to two of our customers that use the BiZZdesign HoriZZon collaborative business design platform to empower business change across their organizations.



“

Impact is created by understanding the holistic view of processes, data, technology, and how it's working based on business value. All of our architects use BiZZdesign, so we create one version of the truth.

”

Jeroen Scheer, Leader of Digital IT Architectures and Technologies, Shell

“

We saw results very quickly, as the team focused on modeling our key services and linking them to business processes and functions, a picture began to emerge of our enterprise, revealing multitudes of opportunities to improve, consolidate or retire.

”

Kunal Das, Chief Technology Architect, South State Bank



11. Demographics



The survey was promoted to Enterprise Architects and related stakeholders via various media and social channels to ensure we surveyed a broad cross-section of organizations rather than just BiZZdesign customers.

Roles

Sixty-two percent of respondents were Enterprise Architects, of whom 43 percent said they led the EA approach and strategy for their organization. Respondents were

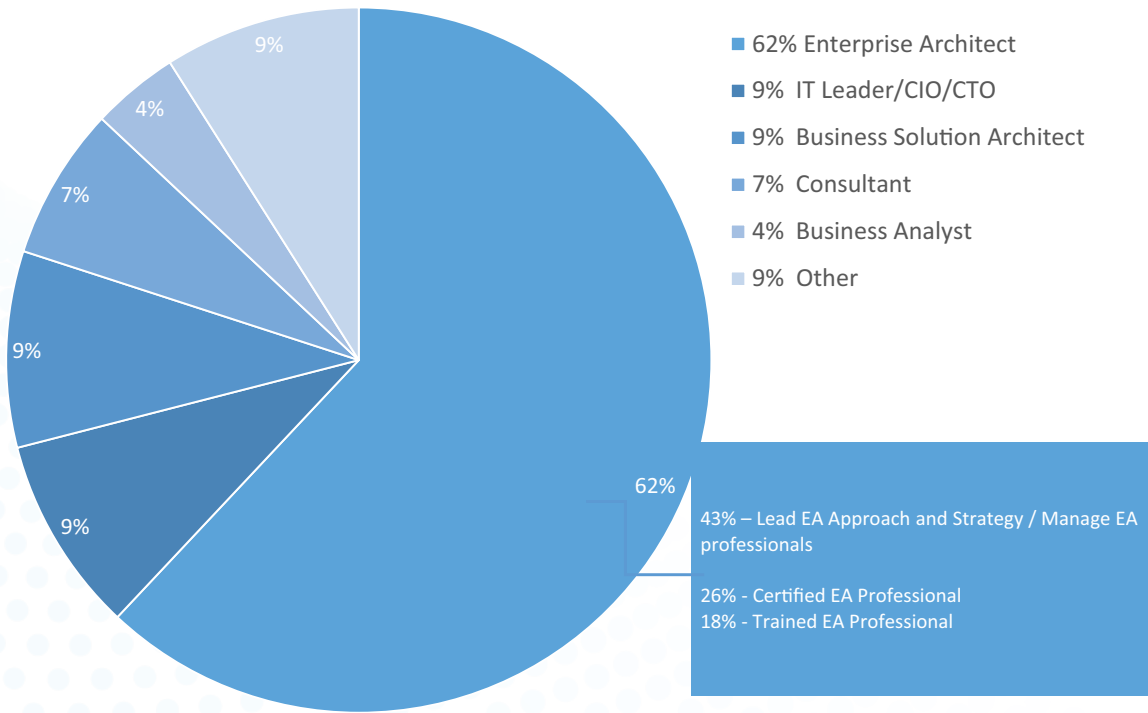


Fig. 21: Primary Job Function and EA Role

Geography

Twenty percent of responses came from North America. Roughly 78 percent of the respondents' organizations have headquarters in either Europe or North America, 12 percent in Asia and the Pacific, and the remainder spread across the rest of the world.

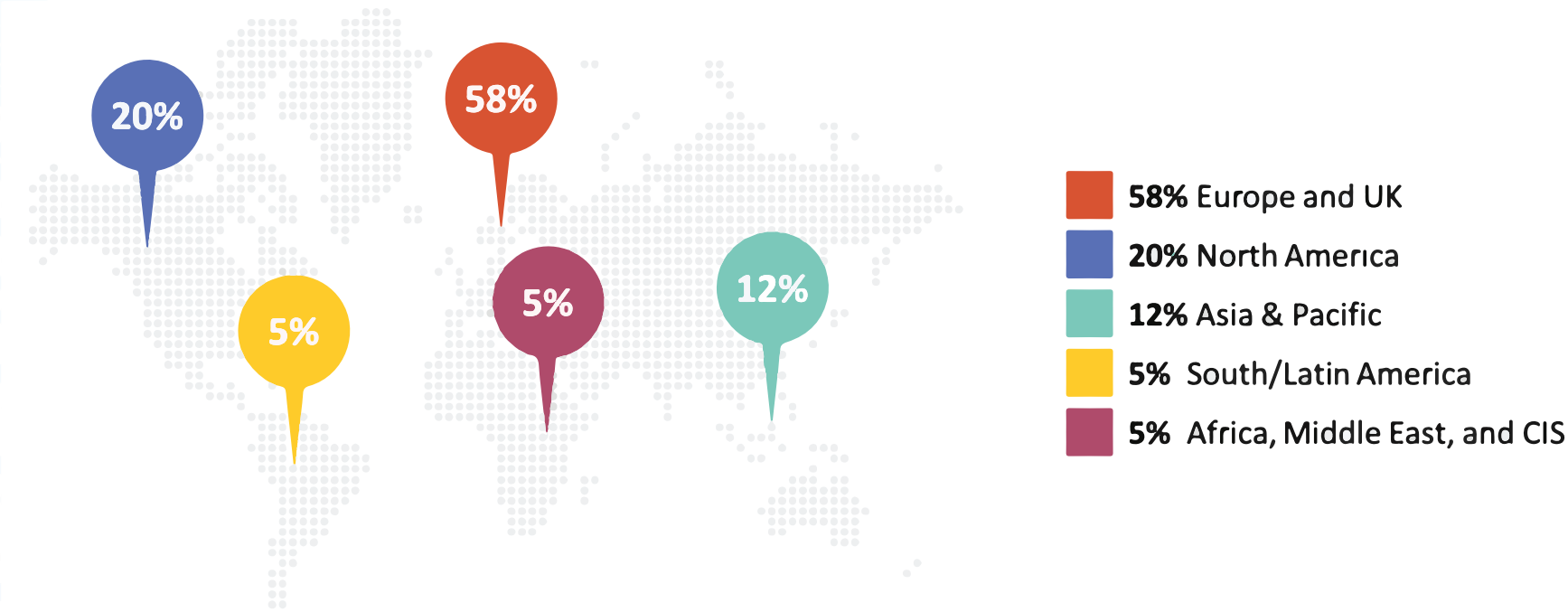


Fig. 22: Geography

Industries

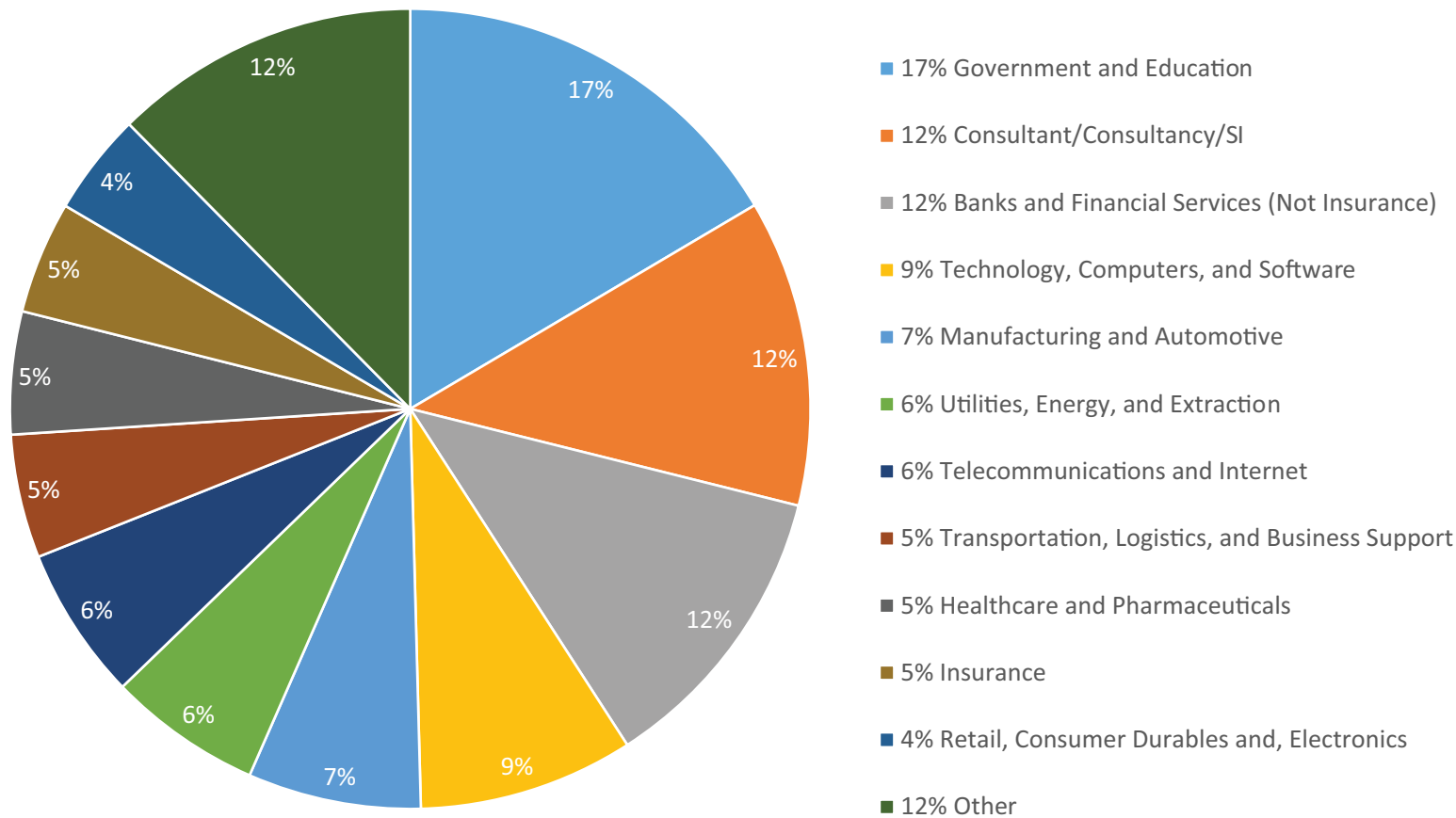


Fig. 23: Industries

Organization Size

Responses came from organizations of all sizes, as illustrated in Fig. 24.

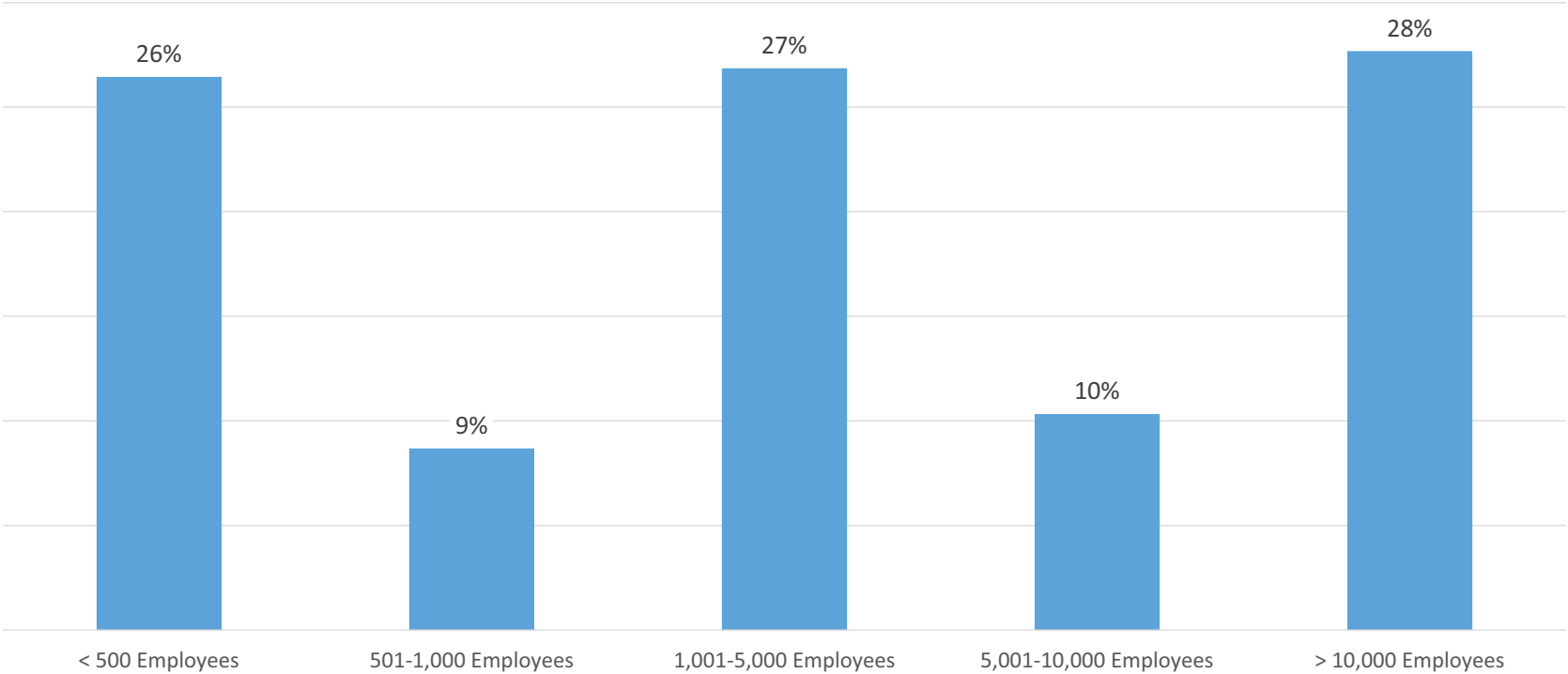


Fig. 24: Organization Size

Organization Age

Respondents came from organizations of all ages, though nearly 70 percent were older than 21 years.

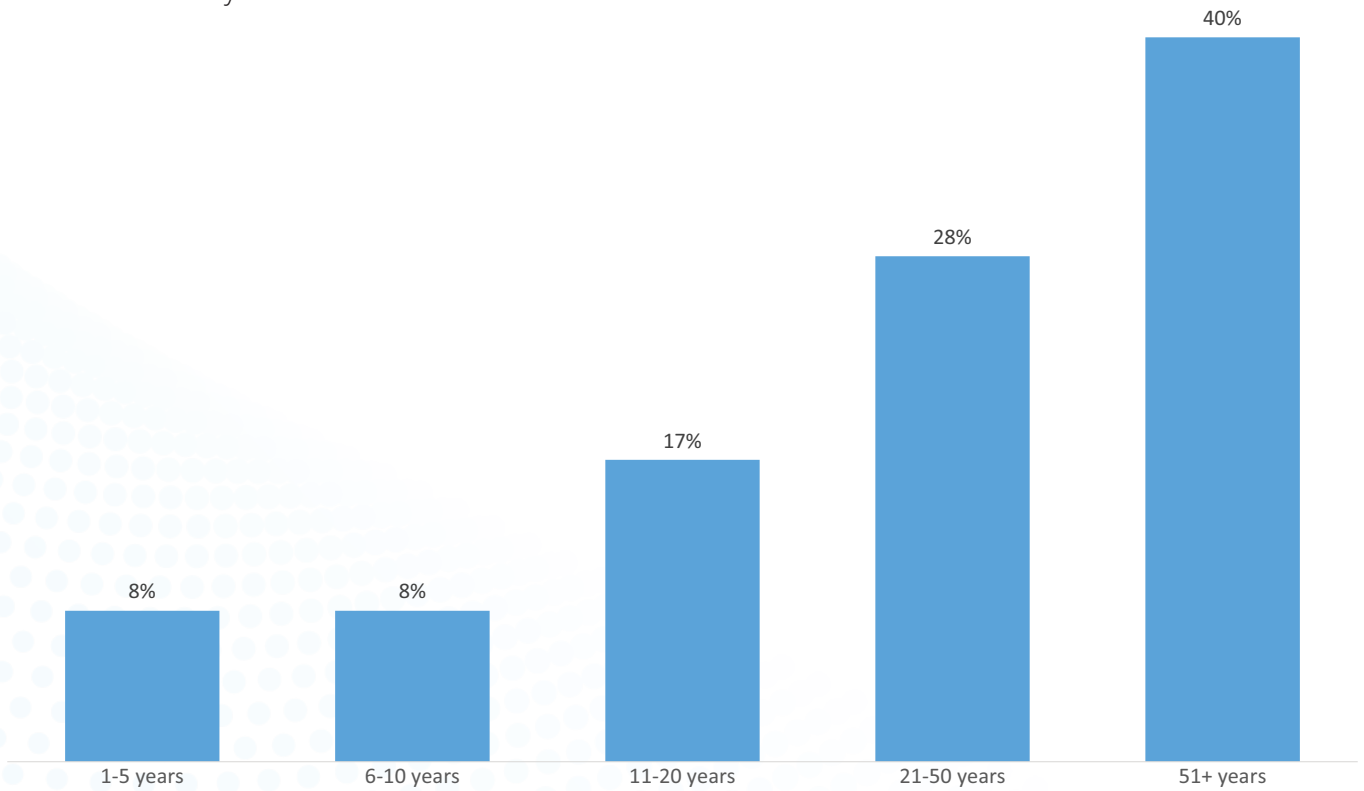


Fig. 25: Organization Age

12. About BiZZdesign

BiZZdesign offers an advanced enterprise software platform for planning, tracking, and executing business change, with a focus on improving the customer experience.

The BiZZdesign Suite is deployed in blue chip companies and government organizations worldwide, where it enables meaningful business change for customers including ING Bank, Shell, Swisscard, and Tata Steel.

Founded in 2000 as the commercial spin-off of a research and innovation institute, BiZZdesign is consistently recognized by industry analysts as a provider of best-in-class EA solutions.

Find out more about us at www.bizzdesign.com.

Thank you for reading. Whatever questions you have, we'd love to [hear from you](#).

