



MuleSoft®

Connectivity Benchmark Report

The State of Digital Transformation and APIs

May 2016



Between March 25th and March 28th, 2016, MuleSoft surveyed 802 IT decision makers (ITDMs) globally across Australia, the Netherlands, Hong Kong, Singapore, Sweden, the United Kingdom and the United States. The survey assessed how organizations of all sizes are executing on digital transformation*, IT challenges and technologies used to meet business goals.

The survey's margin of error is +/-2.85 percentage points at a 90 percent confidence interval.

*Digital transformation refers to the changes associated with the application of digital technology. Examples include a brick-and-mortar store creating an online store, a traditional utility company developing a smart home strategy, and a retail store creating a multi-channel solution to deliver an integrated customer experience.

- The survey results point to a world that is rapidly embracing digital transformation with 96% of respondents executing on digital transformation initiatives or planning to do so in the near future; but this is not without challenges that are hindering IT's ability to meet business goals fast enough. Just 18% of ITDMs are very confident that they will succeed in meeting this year's digital transformation goals. Only 5% have completed their company's digital transformation goals.
- The findings show there is a major disconnect between what is expected of IT by the business and what IT teams can actually deliver. IT challenges, such as the burden of legacy systems, prevent them from effectively supporting business priorities. These challenges are not only slowing down their ability to complete digital transformation goals this year, but they are also directly putting business revenue at risk. 66% of IT decision makers indicated that their company's revenue would be negatively impacted within 6 months due to these IT challenges.
- While most organizations are pursuing digital transformation, IT teams are focused on executing on tactical projects and incremental business process improvements (44%), rather than focusing more on transformative initiatives that deliver business value, such as driving new revenues (8%).
- The burden of legacy technologies is hampering IT's ability to deliver on transformative initiatives. While 81% of ITDMs are still investing the same or more in legacy systems like Oracle and SAP, only 14% are using these technologies to fulfill line-of-business (LOB) requests and projects quickly.
- APIs and reuse* play a critical role to increasing the pace of digital transformation. The data reveals that a majority are leveraging APIs to increase agility and enable business teams to self-serve IT.

*Reuse refers to leveraging technology, data or business processes deployed elsewhere in the organization could also be part of the solution you are building, instead of building something entirely new.

Table of contents



1. IT expectations vs. reality
2. The digital transformation paradox
3. IT challenges and business risks
4. IT toolbox for digital transformation
5. Enabling business with APIs and reuse
6. Conclusion

IT expectations vs. reality

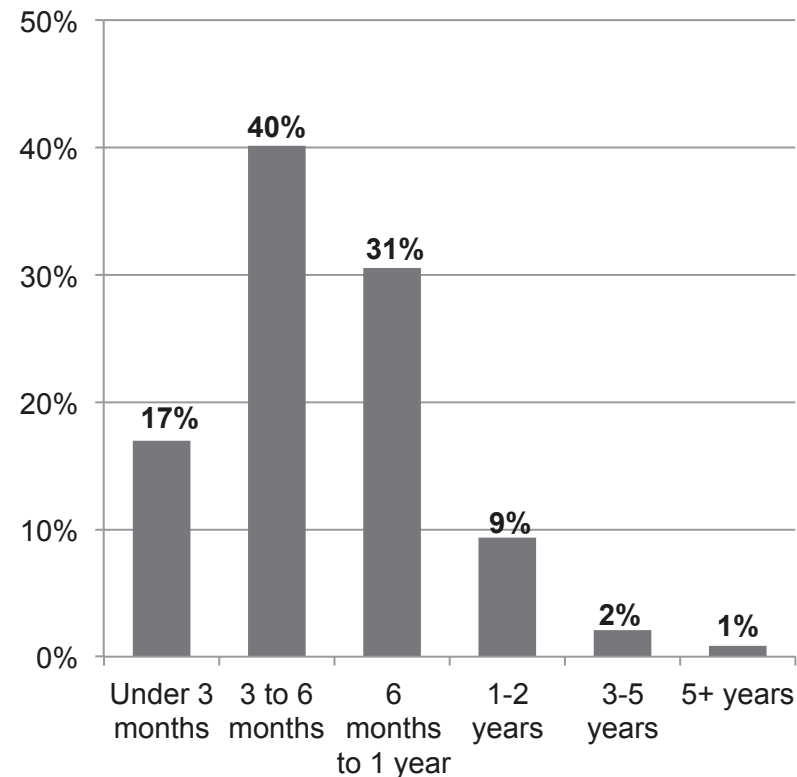


Businesses expect faster IT

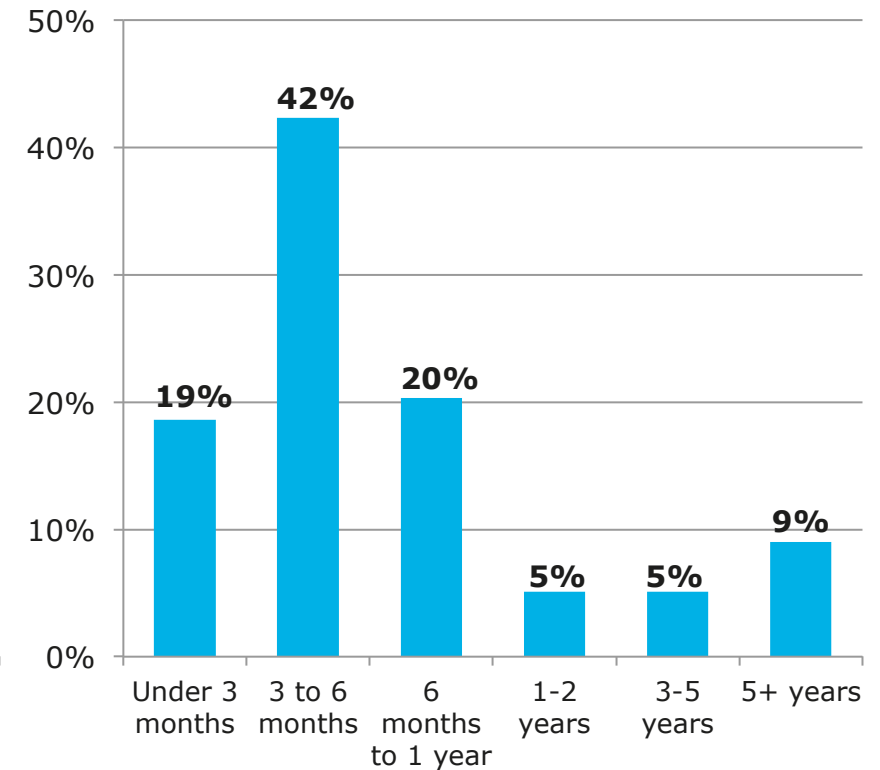
IT is under high pressure to deliver on line-of-business initiatives quickly. 57% said expected time to complete LOB projects in 2016 is 6 months or less.

Larger organizations with revenues of \$10 billion or more face greater pressure, with 61% indicating this timeline

What is your expected time to deliver on a line-of-business (LOB) project or initiative today?



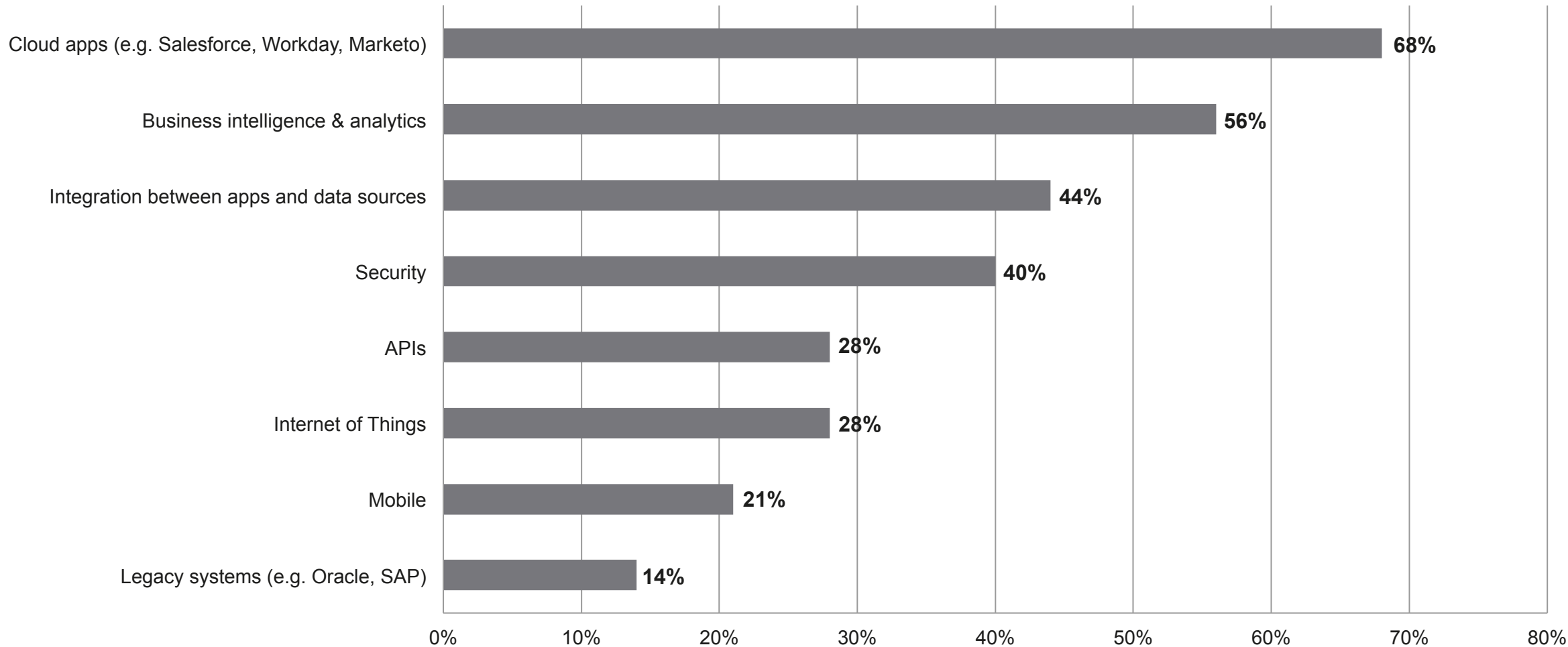
All ITDM respondents



Organizations with revenues of \$10 billion or more

Cloud, analytics and integration are the most popular technologies for business

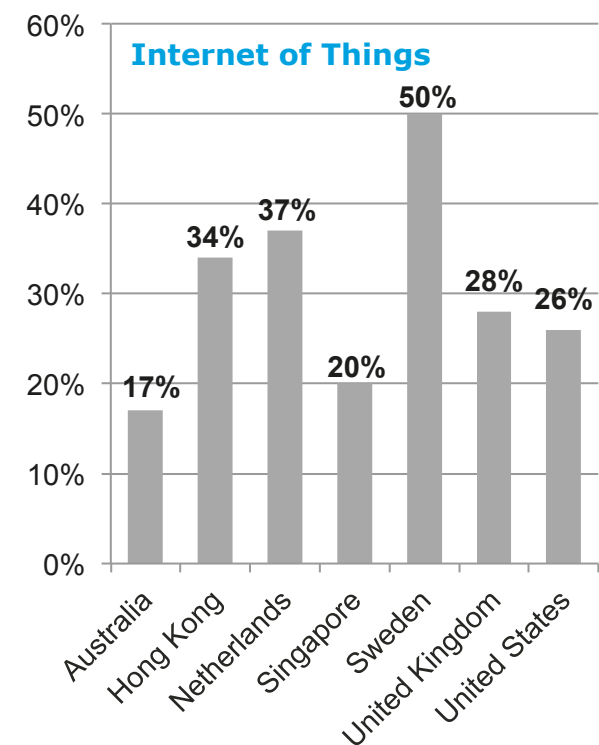
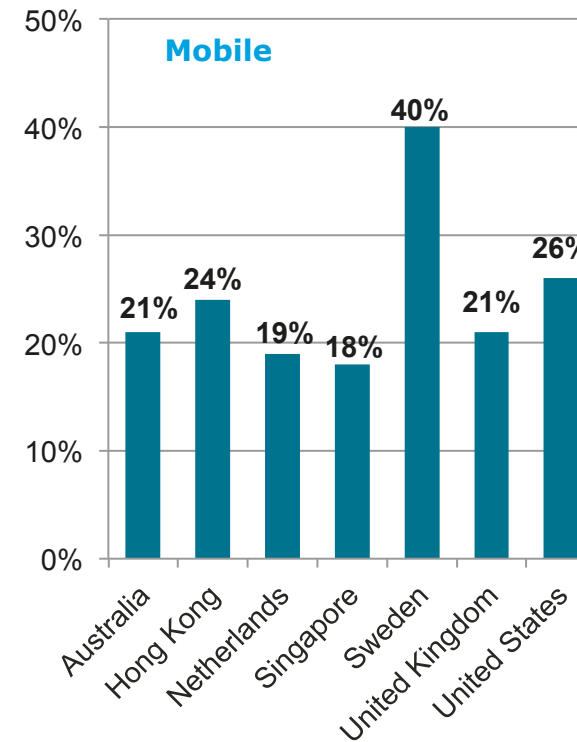
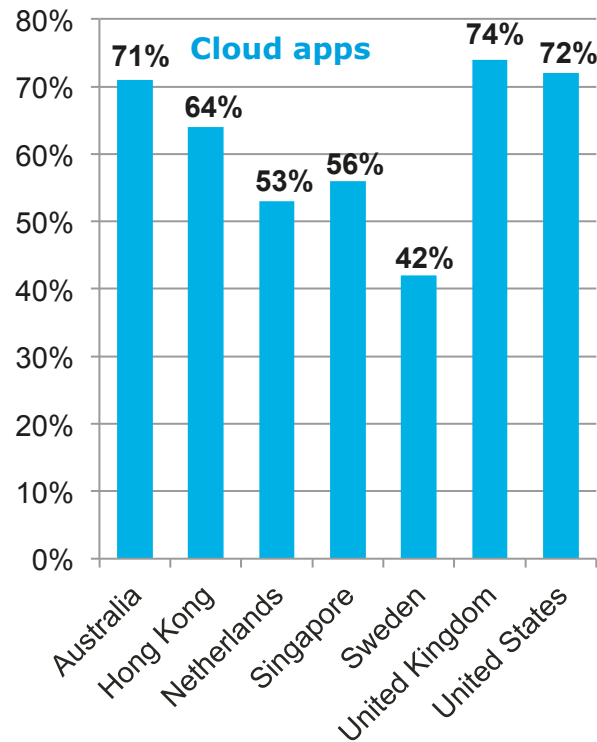
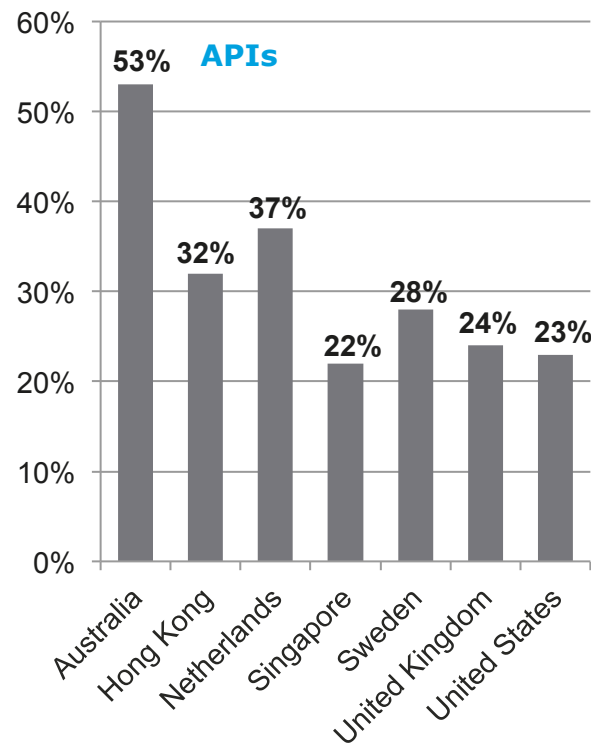
What are the top three technologies that IT professionals usually choose to fulfill LOB requests and projects?



APIs, mobile and IoT are also enabling businesses

IT teams outside of the U.S. are getting a head start on the latest technology trends to enable business. For example Australia is the top country using APIs, the U.K. is the top country using cloud apps, and Sweden is the top country using mobile and the Internet of Things (IoT).

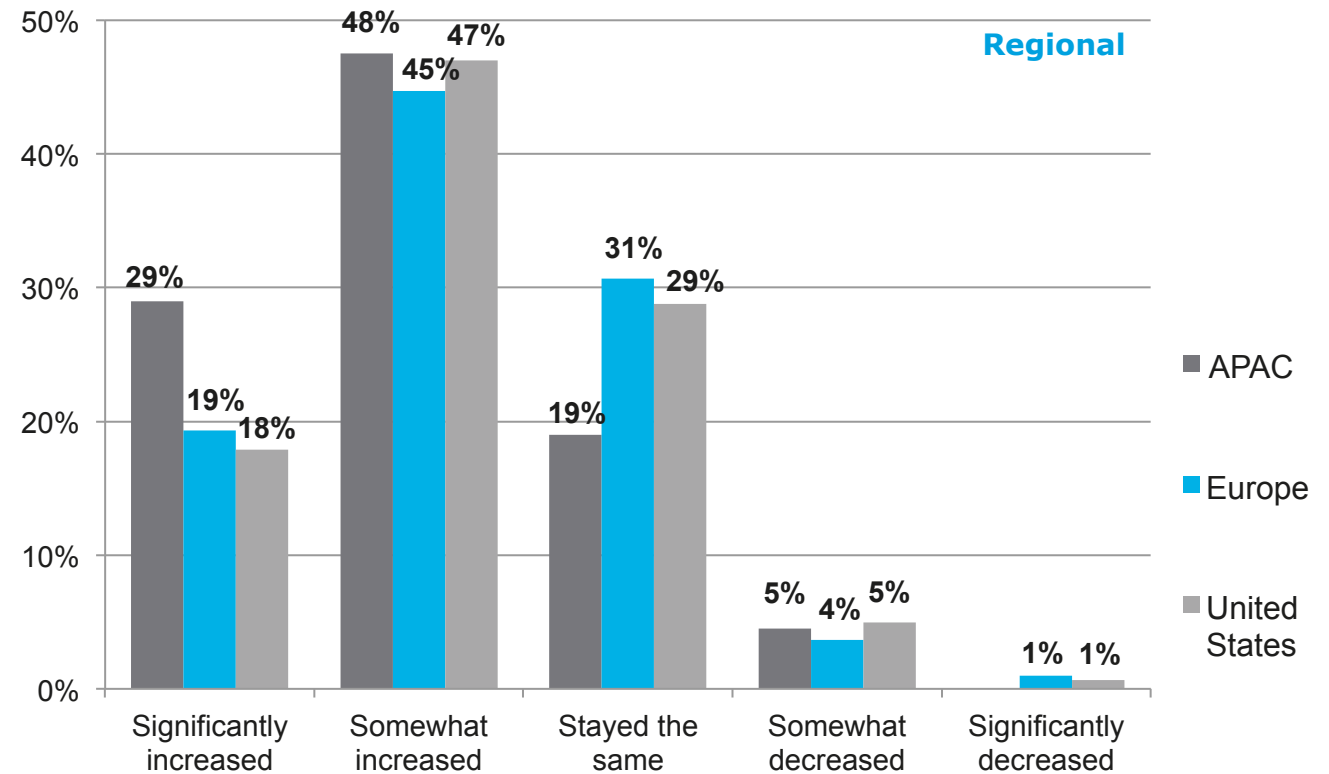
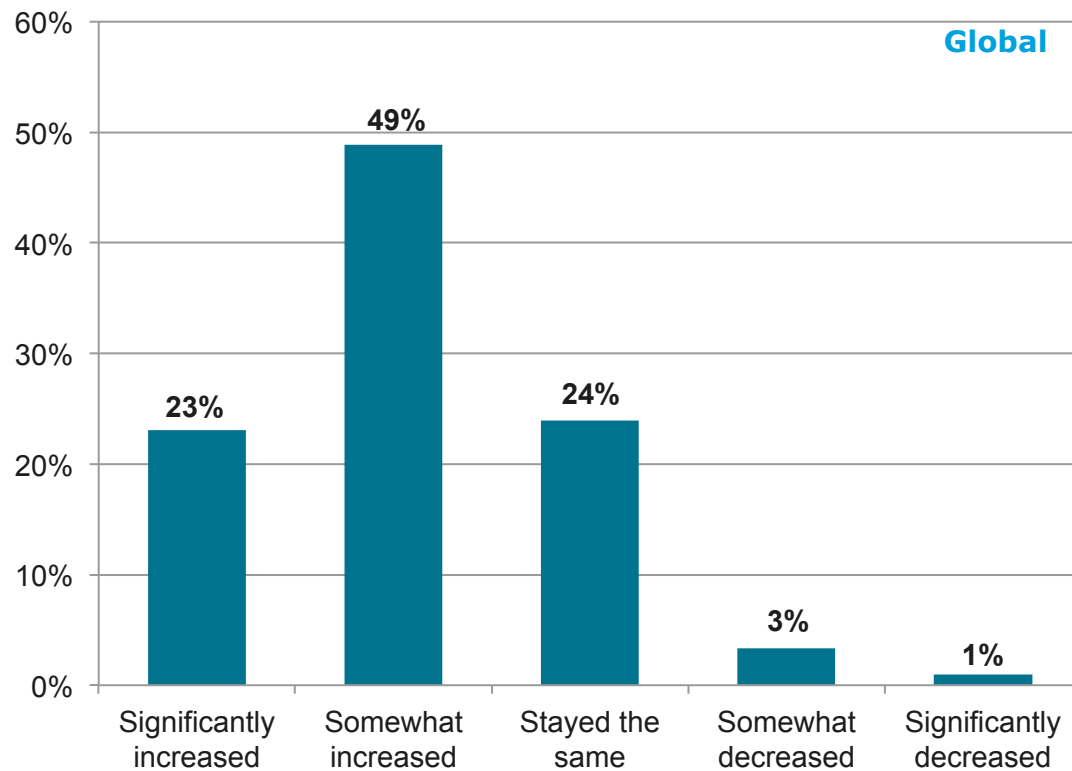
Technologies that IT professionals usually choose to fulfill LOB requests and projects:



Most IT budgets have increased in 2016

72% of respondents said that IT budget has significantly or somewhat increased in 2016 compared to 2015. More ITDMs from APAC indicated an increase in IT budget, compared to Europe and the U.S.

How has your IT budget changed in 2016 compared to 2015?



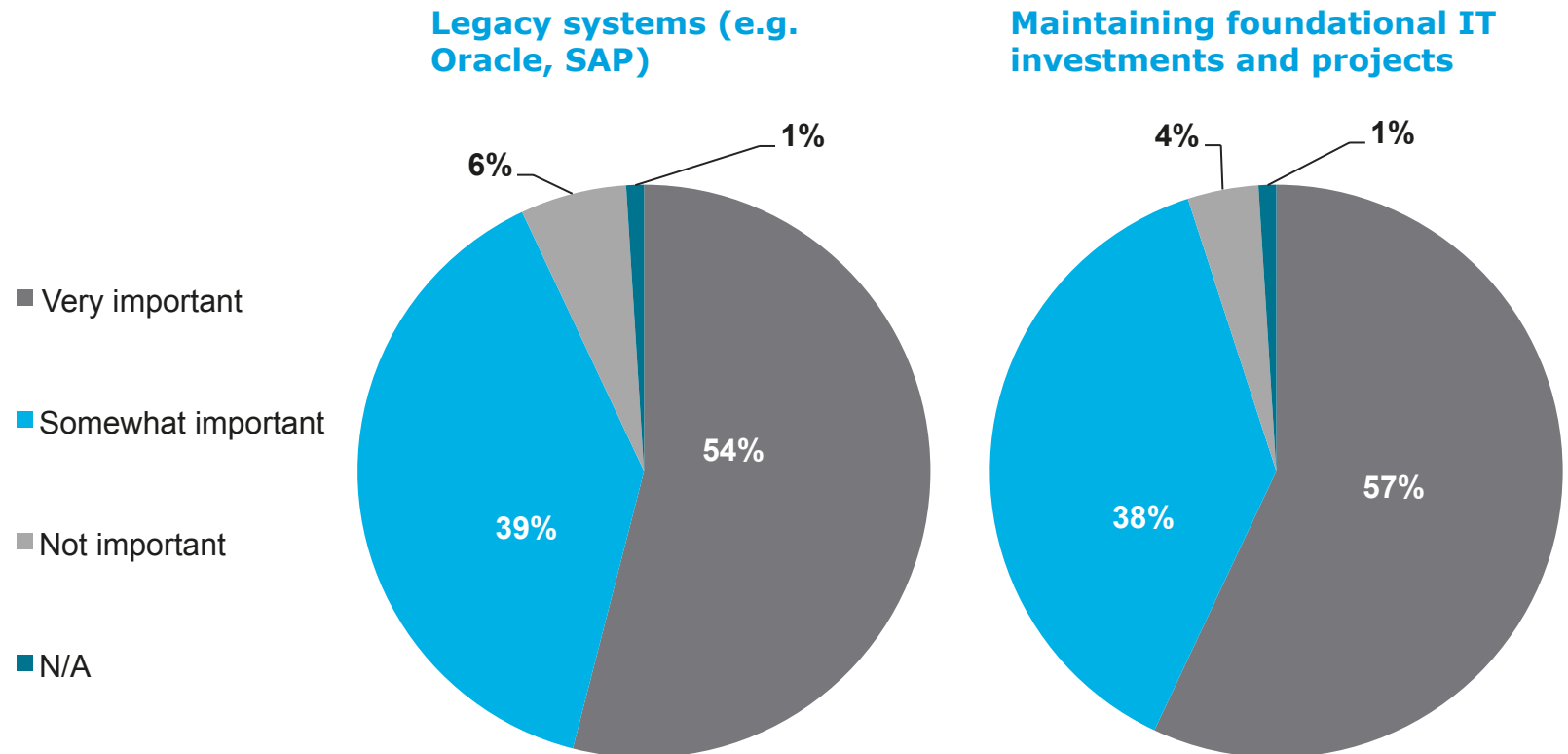
ITDMs are focused on keeping the lights on

There is a big gap between business needs and IT investments.

While legacy systems were the least popular technology used to fulfill LOB requests and projects, more ITDMs said that legacy systems and maintaining foundational investments are very important IT priorities for the next 12 months – even with an increase in budget this year.

IT teams are continuing business as usual, which seems to conflict with the business need for agility.

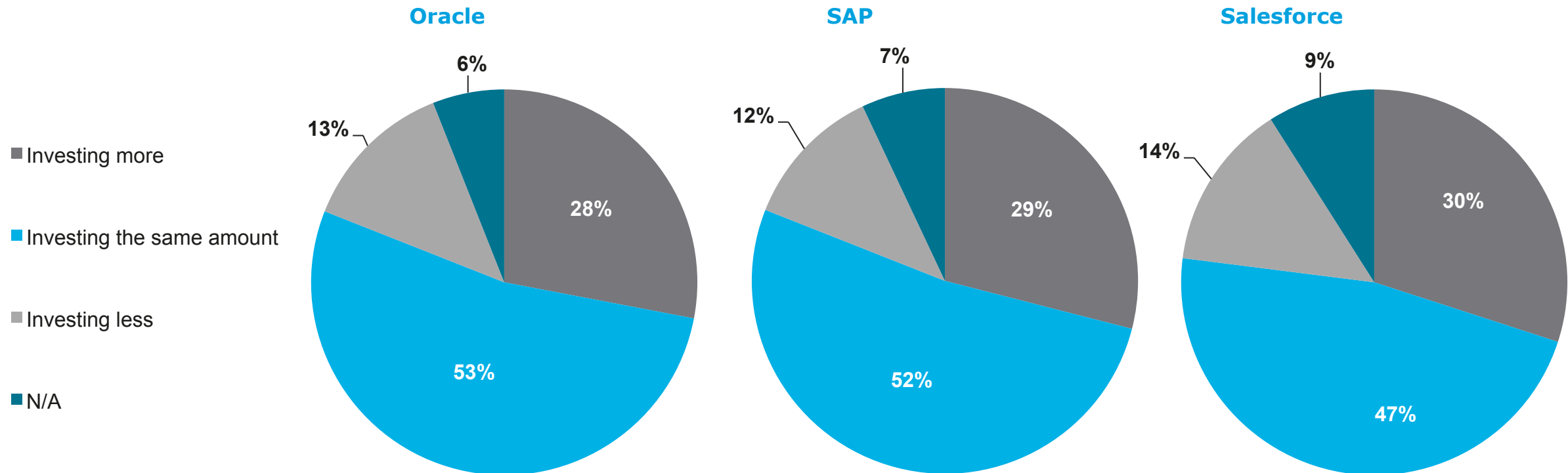
How important is each as an IT priority for the next 12 months?



Legacy system investments hamper IT innovation

While there is pressure on IT to deliver on new LOB initiatives quickly, the burden of maintaining legacy technology investments is hampering IT's ability to deliver on transformative initiatives and support business agility. 81% of ITDMs are still investing the same or more in legacy systems like Oracle and SAP (more than Salesforce), but only 14% are using these technologies to fulfill LOB requests and projects quickly.

How do you predict your organization's investment (including upgrade, innovation and maintenance spend) in the following technologies in 2016?

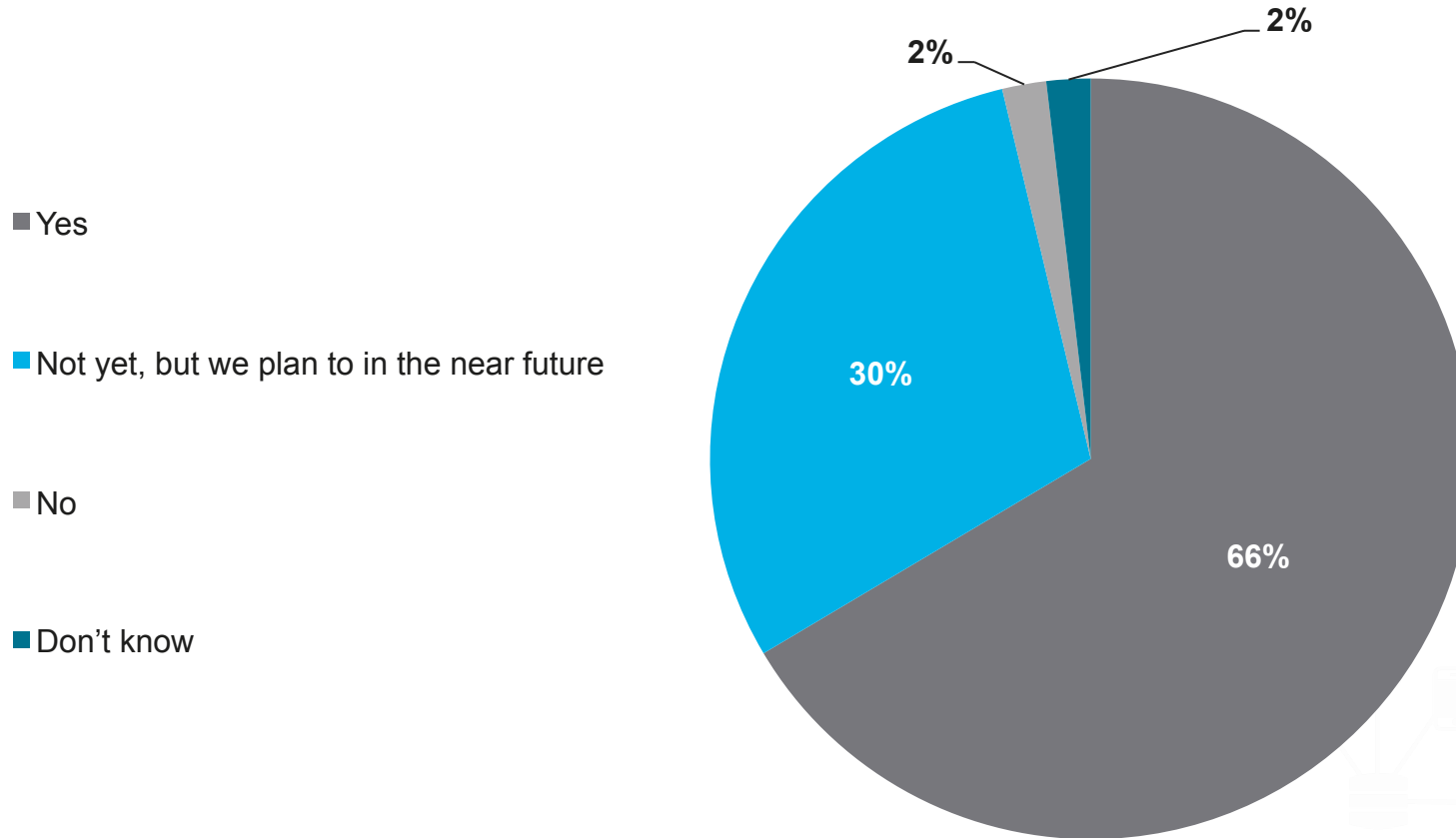


The digital transformation paradox



Most everyone is doing digital transformation

Is your company executing on digital transformation initiatives?



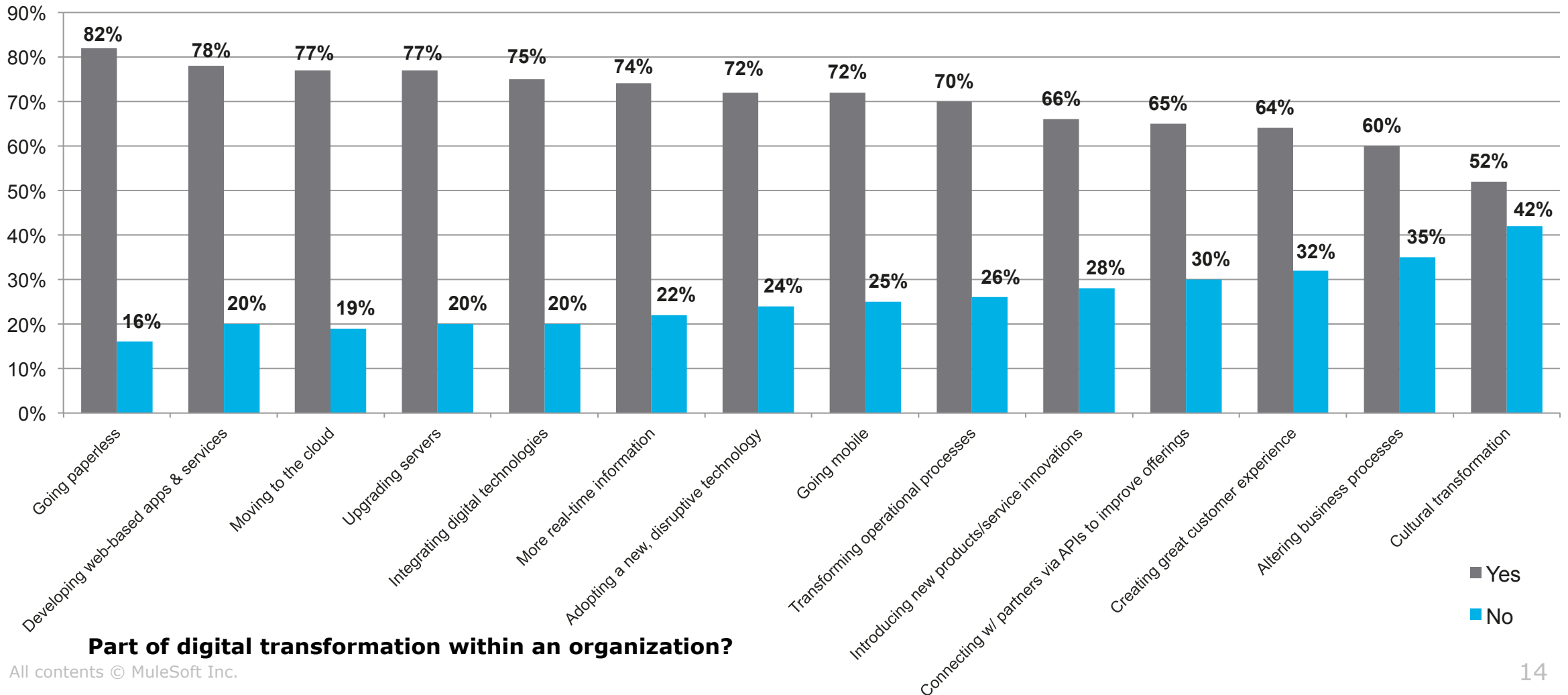
Two thirds of respondents say their company is executing on digital transformation initiatives, with another 30% saying that they plan to do so in the near future.

Percentage of respondents in various industries that are executing on digital transformation initiatives or plan to do so are as follows:

1. Retail (100%)
2. Education (98%)
3. Financial services (94%)
4. Healthcare (92%)
5. Government (91%)

Missing “transformation” in digital transformation

Most everyone is doing digital transformation, but that means “going paperless” to the majority of ITDMs. The top initiative that ITDMs (42%) least associate with digital transformation is cultural transformation – a component that involves changing the way businesses work, which is especially critical when adopting new digital technologies.



"Going paperless" is a common phenomenon across industries



What do you believe is a part of a digital transformation within an organization?

Education	Financial Services	Government	Healthcare	Retail
1. Going paperless & moving to the cloud (79%)	1. Upgrading servers (86%)	1. Developing web-based applications and services & integrating digital technologies (81%)	1. Moving to the cloud (97%)	1. Developing web-based applications and services (90%)
2. Developing web-based applications and services (75%)	2. Going paperless & developing web-based applications and services (84%)	2. Moving to the cloud, going mobile & going paperless (77%)	2. Going paperless (92%)	2. Going paperless (86%)
3. Going mobile (77%)	3. Going mobile (82%)	3. Adopting a new, disruptive technology, e.g. Internet of Things & transforming operational processes (74%)	3. Developing web-based applications and services (85%)	3. Adopting a new, disruptive technology, e.g. Internet of Things (85%)

Organizations across countries are at stage one of digital transformation

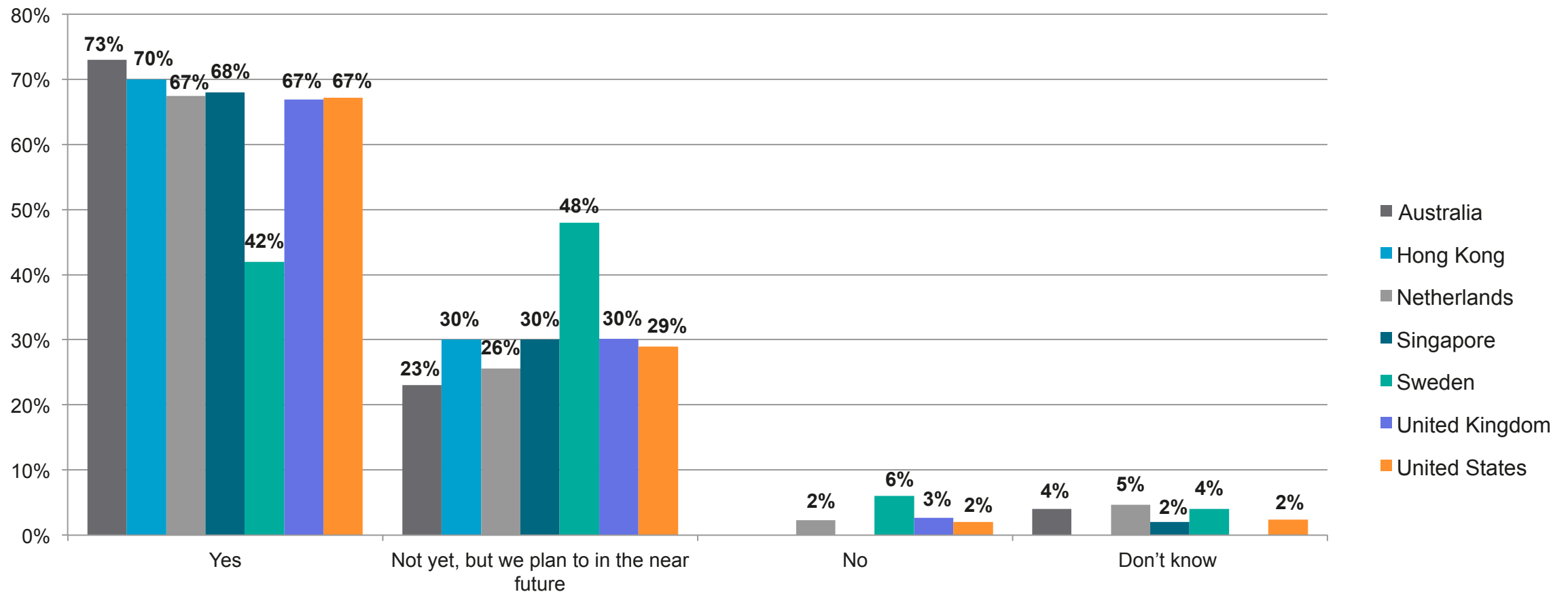


What do you believe is a part of a digital transformation within an organization?

Australia	Hong Kong	Netherlands	Singapore	Sweden	United Kingdom	United States
1. Developing web-based applications and services (80%)	1. Going paperless (84%)	1. Going paperless (81%)	1. Upgrading servers, more real-time information & integrating digital technologies (80%)	1. Going paperless & developing web-based applications and services (68%)	1. Going paperless (85%)	1. Moving to the cloud (85%)
2. Going paperless & integrating digital technologies (77%)	2. Upgrading servers (78%)	2. Upgrading servers (72%)	2. Going paperless, moving to the cloud & developing web-based applications and services (78%)	2. Adopting a new, disruptive technology, e.g. Internet of Things (66%)	2. Upgrading servers (81%)	2. Going paperless & developing web-based applications and services (83%)
3. Adopting a new, disruptive technology, e.g. Internet of Things (72%)	3. Going mobile & more real-time information (74%)	3. Developing web-based applications and services & more real-time information (70%)	3. Going mobile & creating great customer experience (70%)	3. Moving to the cloud, more real-time information & integrating digital technologies (64%)	3. Developing web-based applications and services, more real-time information & integrating digital technologies (77%)	3. Developing web-based applications and services (82%)

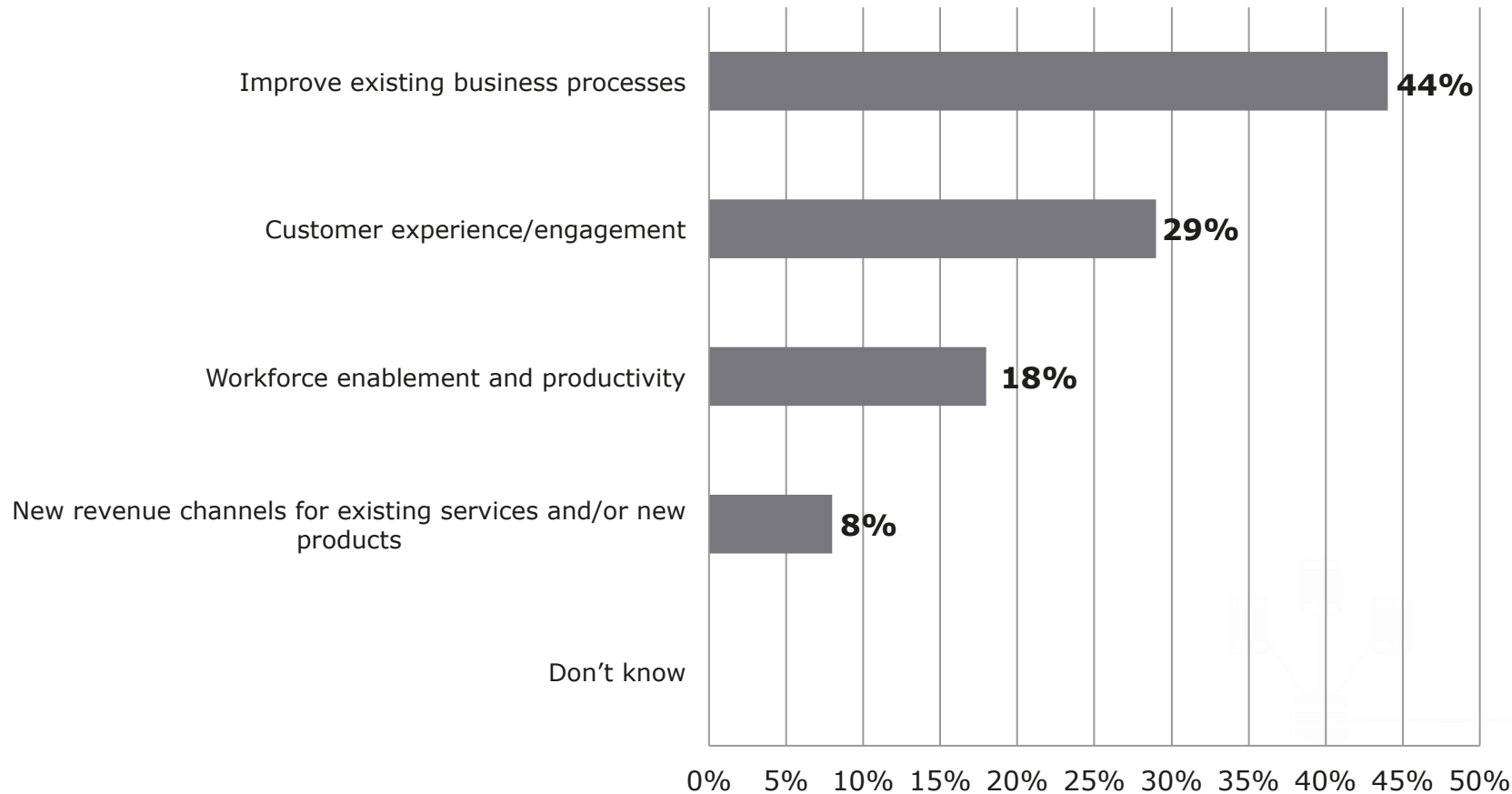
Top countries currently executing on digital transformation initiatives are from APAC

Is your company executing on digital transformation initiatives?



More focus on incremental business process improvements rather than business outcomes

What is your company's top digital initiative priority?



While a majority of companies say that they are doing digital transformation, the paradox is that most IT teams are executing on incremental business process improvements, rather than focusing more on transformative initiatives that deliver business value, such as creating new sources of revenue.

This paradox ties back to the gap between business priorities and IT investments, highlighted earlier. Successful digital transformation needs alignment between technology investment and business goals.

IT challenges and business risks

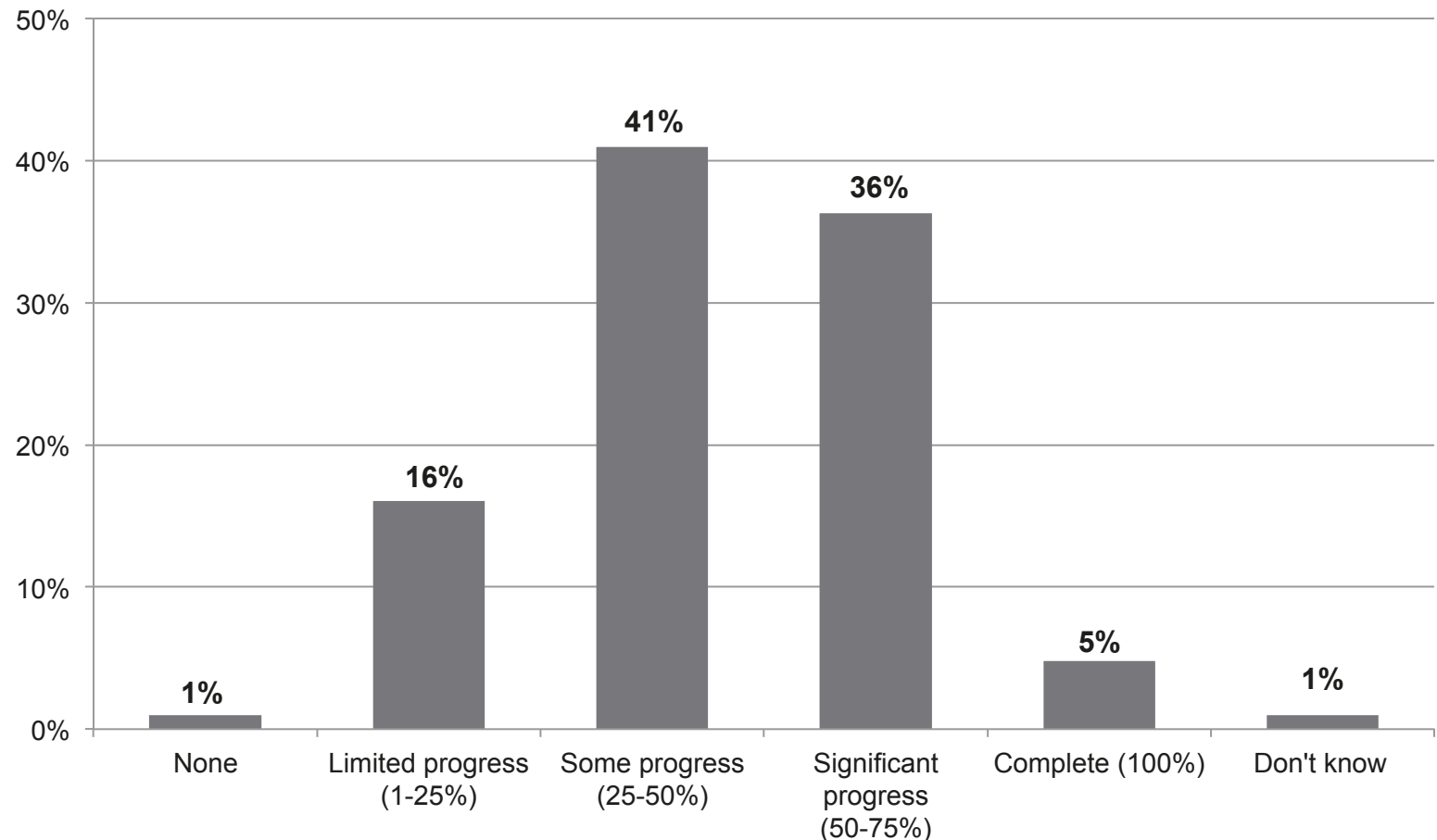


Very few organizations have mastered digital transformation

Digital transformation is not easy for many organizations. Only 5% have completed their company's digital transformation goals.

A majority (58%) are less than halfway through in terms of progress.

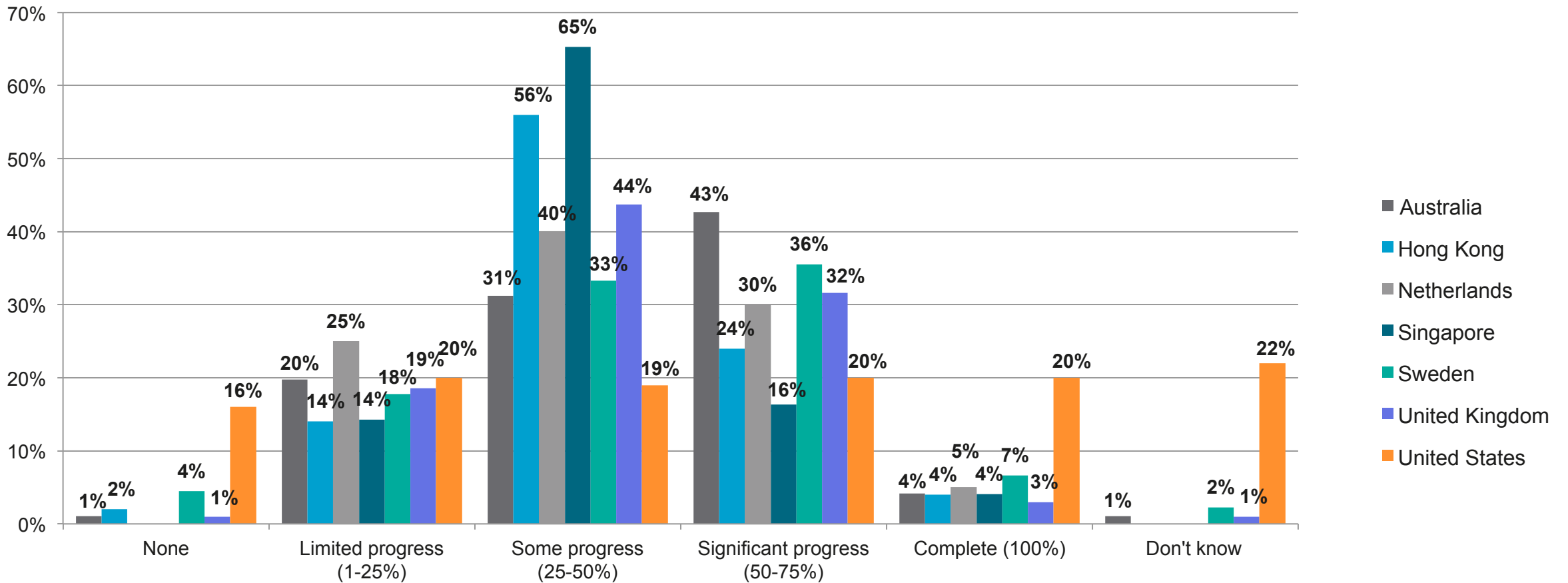
How much progress has IT made on meeting your company's digital transformation goal?



U.S., Australia and Sweden have made the most progress

Top countries that have exceeded the halfway mark for progress in meeting digital transformation goals:
1) U.S. at 50% 2) Australia at 46% 3) Sweden at 42%

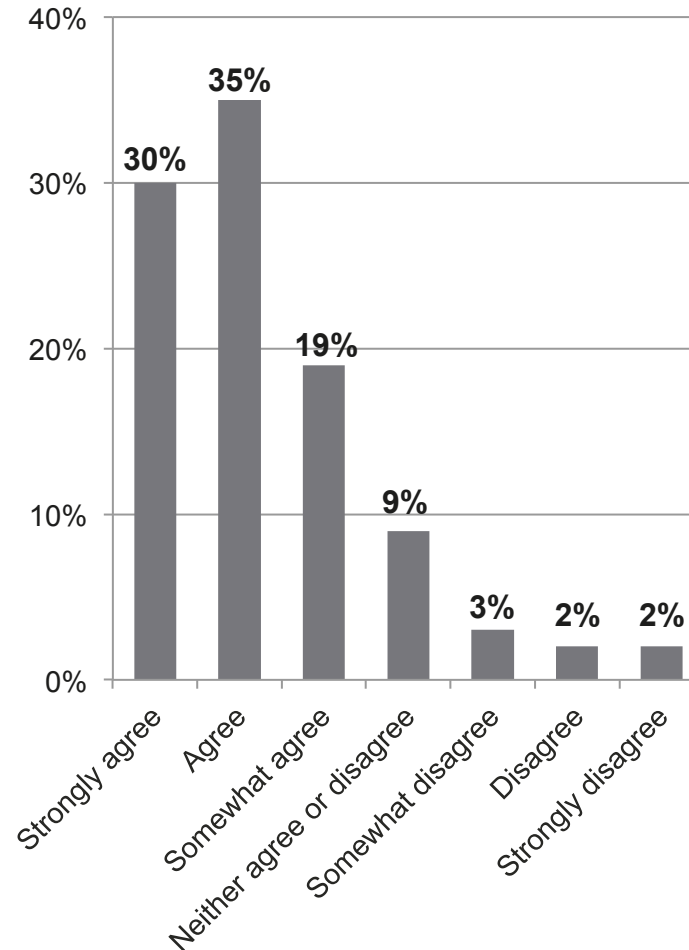
How much progress has IT made on meeting your company's digital transformation goal?



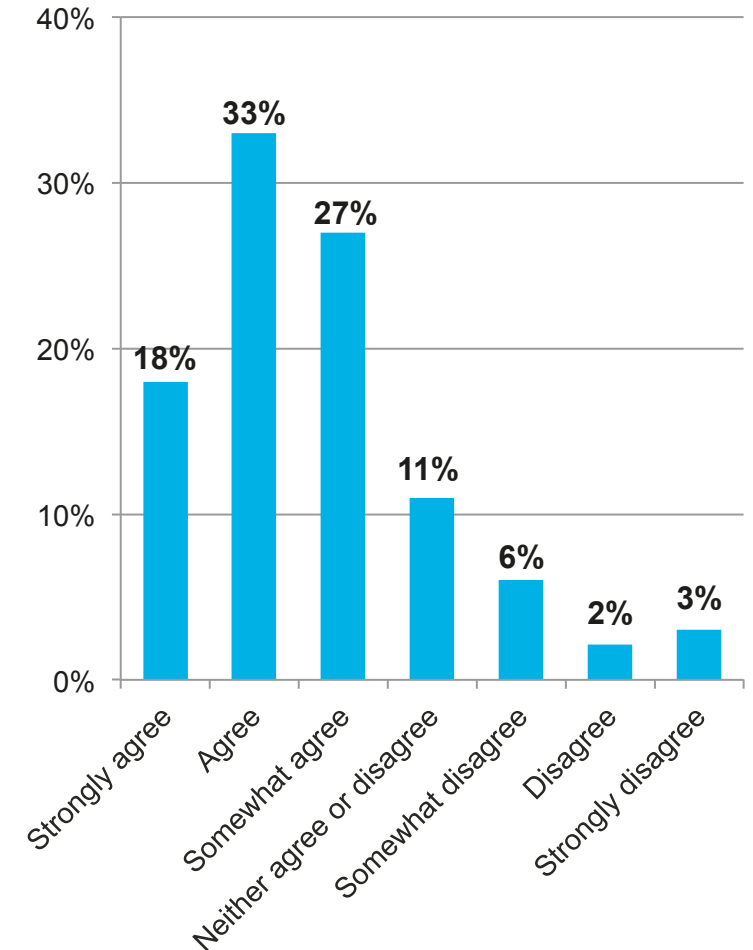
IT is central to digital transformation

While IT is a primary part of driving digital transformation, not many are very confident about it.

In fact, 65% of ITDMs agree that IT plays the central role in digital transformation, but just 18% are very confident that they will succeed in meeting this year's goals.



I believe that IT plays the central role in digital transformation.

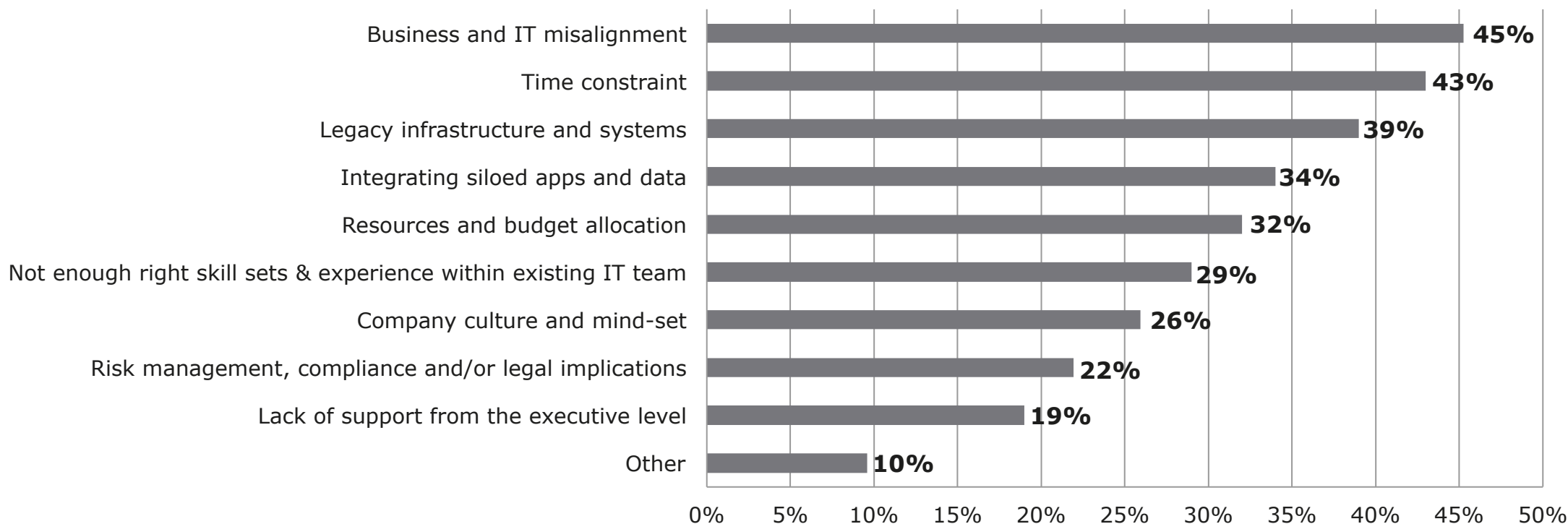


I expect to succeed in meeting this year's digital transformation goal(s).

Business and IT misalignment is the biggest challenge to digital transformation

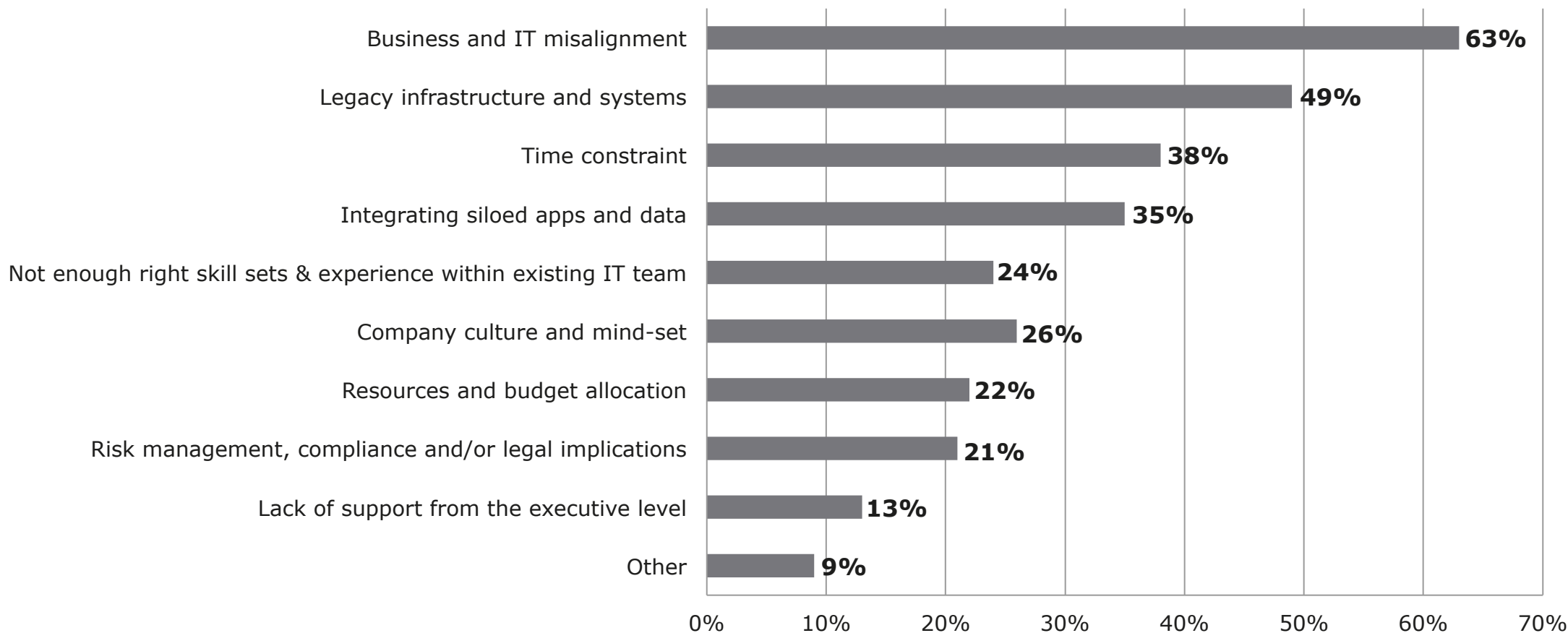
With only 5% of companies having completed their digital transformation goals, most IT teams need to figure out how to quickly address their biggest challenges, including business/IT alignment and legacy technologies. With cultural transformation as the action that ITDMs (42 percent) least associate with digital transformation, IT may need to reconsider how they think about IT service delivery to business units and their approach to meeting their company's digital goals.

What are the top three challenges to IT executing on the company's digital transformation initiative(s)?



Business and IT misalignment is even more apparent in very large organizations

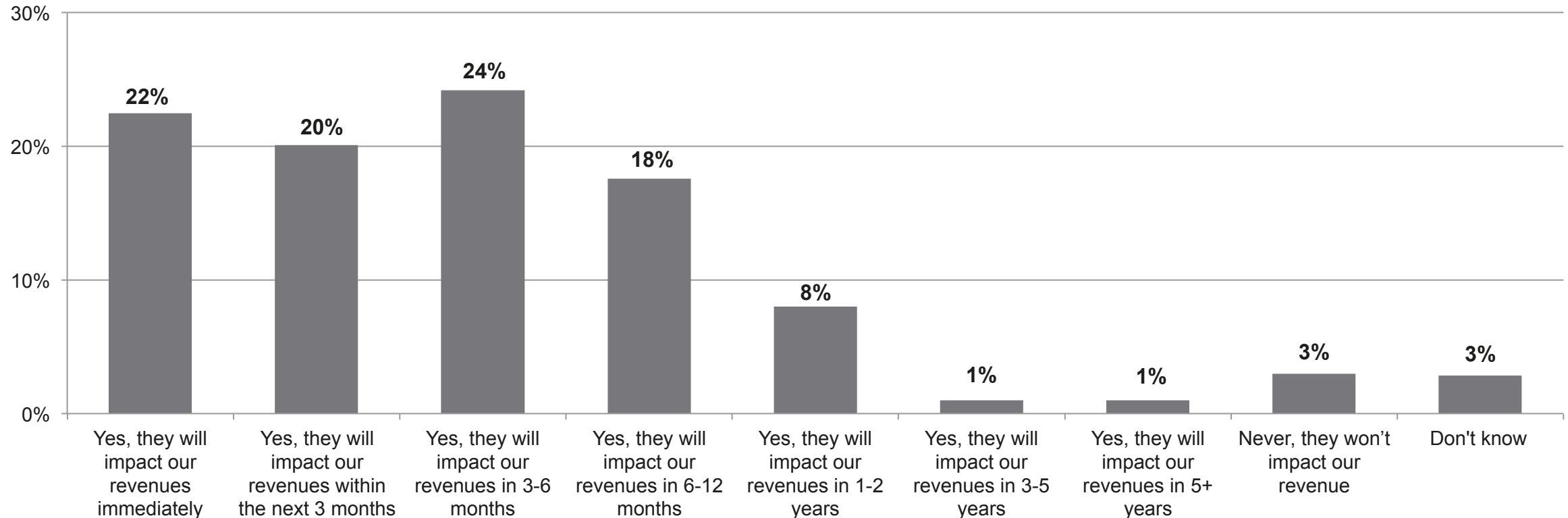
What are the top three challenges to IT executing on the company's digital transformation initiative(s)? **Organizations with more than 100,000 employees answered:**



High pressure on IT teams to resolve challenges that would impact business revenue

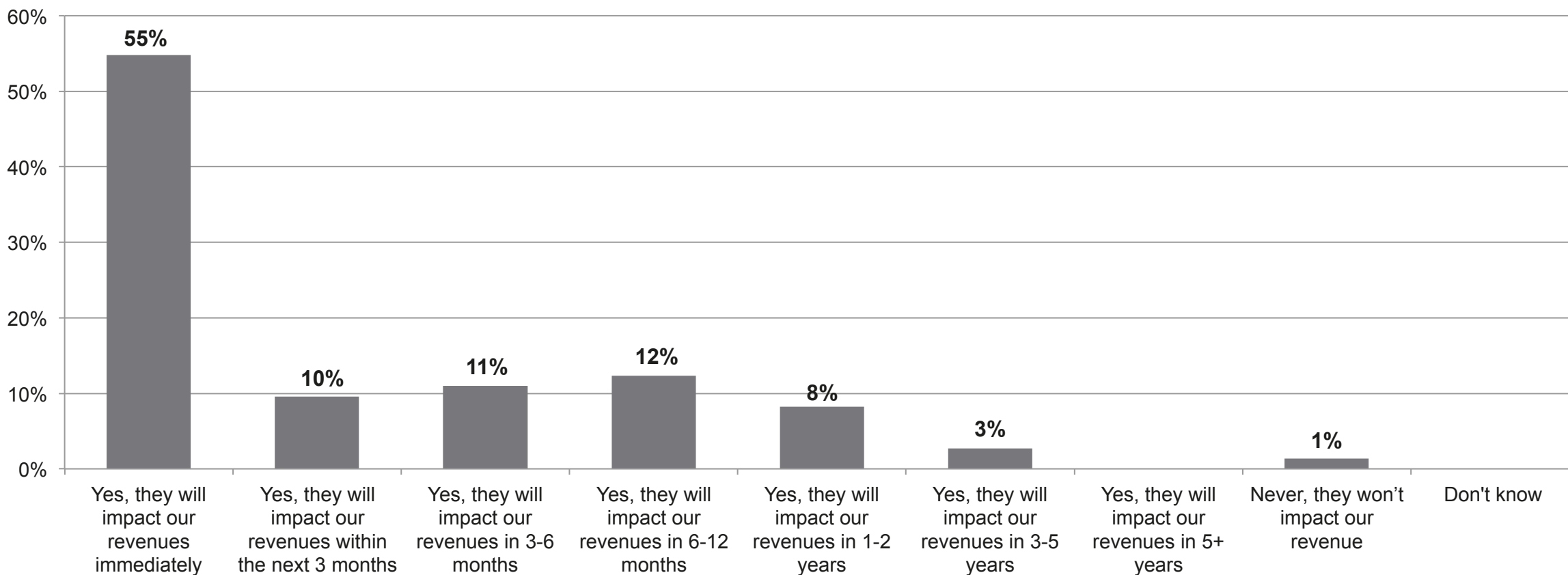
66% say that their challenges to completing digital transformation, if not resolved, will negatively impact their company's revenue within 6 months. With the dependence of business revenue on digital transformation success, the stakes are high for IT teams to deliver on their company's digital transformation goals this year.

Do you think your challenges to executing on digital transformation will impact your company's business revenue negatively if they aren't addressed quickly?



Business risk is higher and consequences are immediate in the retail industry

Do you think your challenges to executing on digital transformation will impact your company's business revenue negatively if they aren't addressed quickly? ITDMs from the retail industry answered:



IT toolbox for digital transformation



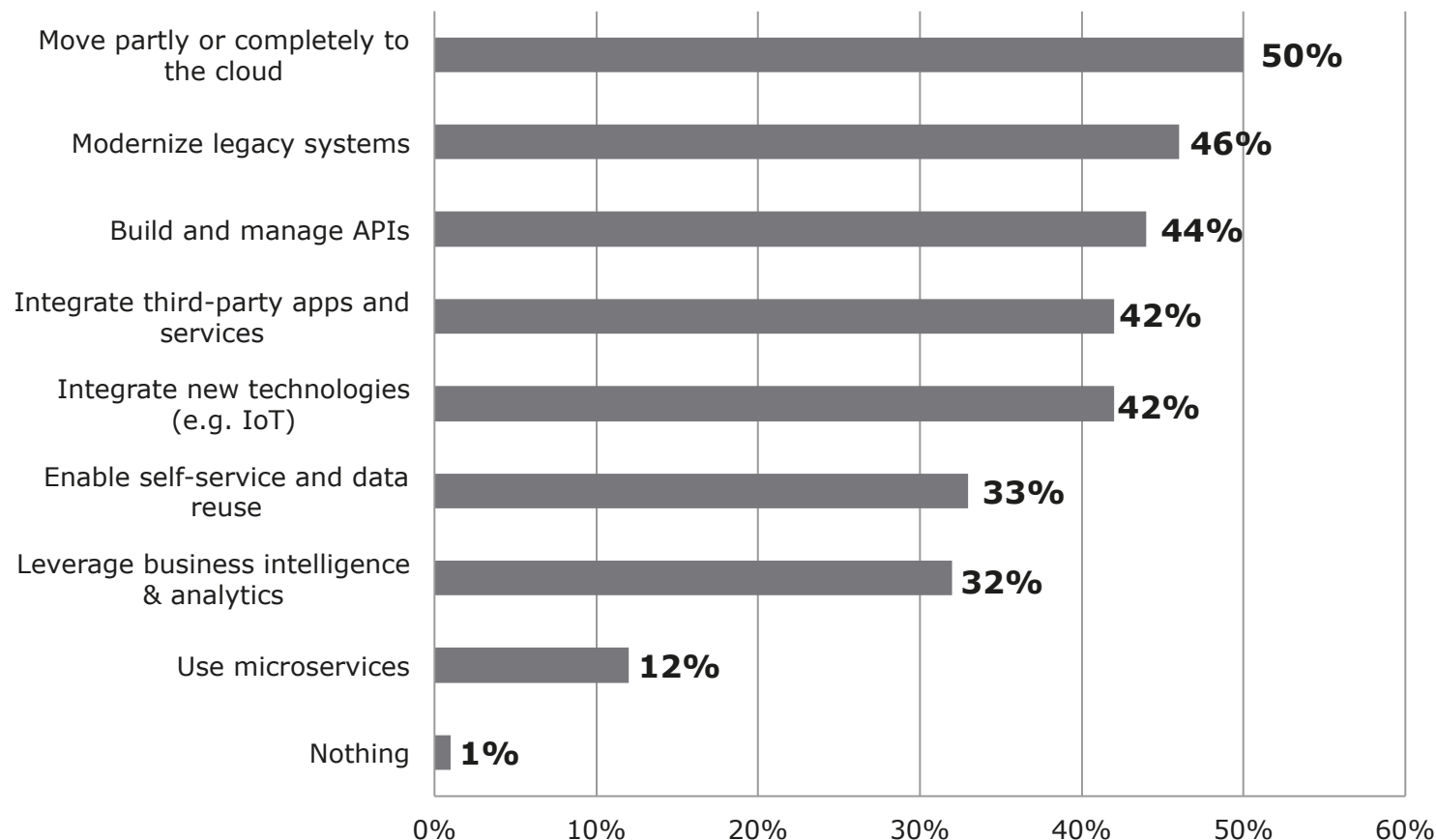
Cloud, legacy system modernization and APIs are top solutions to speed up digital transformation

With speed as a priority for businesses, IT is looking to cloud as a top technology enabler for digital transformation.

As organizations transition to and integrate cloud, legacy system modernization and APIs make sense to be the next top ways for completing digital transformation projects faster.

Overall, IT is focused on building the foundation for digital transformation by prioritizing cloud, legacy system modernization and APIs ahead of other approaches, such as integrating new technologies like IoT.

What is your IT team doing to complete digital transformation projects more quickly?

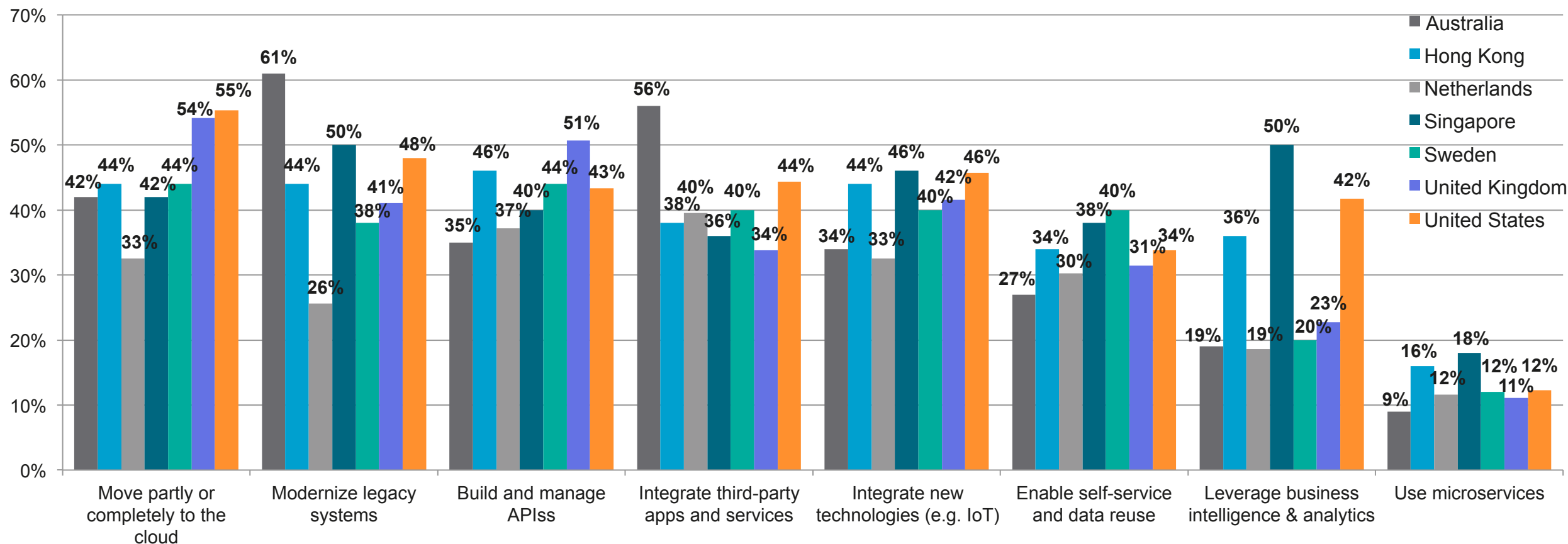


Hong Kong, Singapore and the U.S. tend to use newer technologies more

Top countries integrating new technologies for digital transformation are 1) U.S. 2) Singapore 3) Hong Kong.

Singapore and Hong Kong are the top countries leveraging microservices.

What is your IT team doing to complete digital transformation projects more quickly?

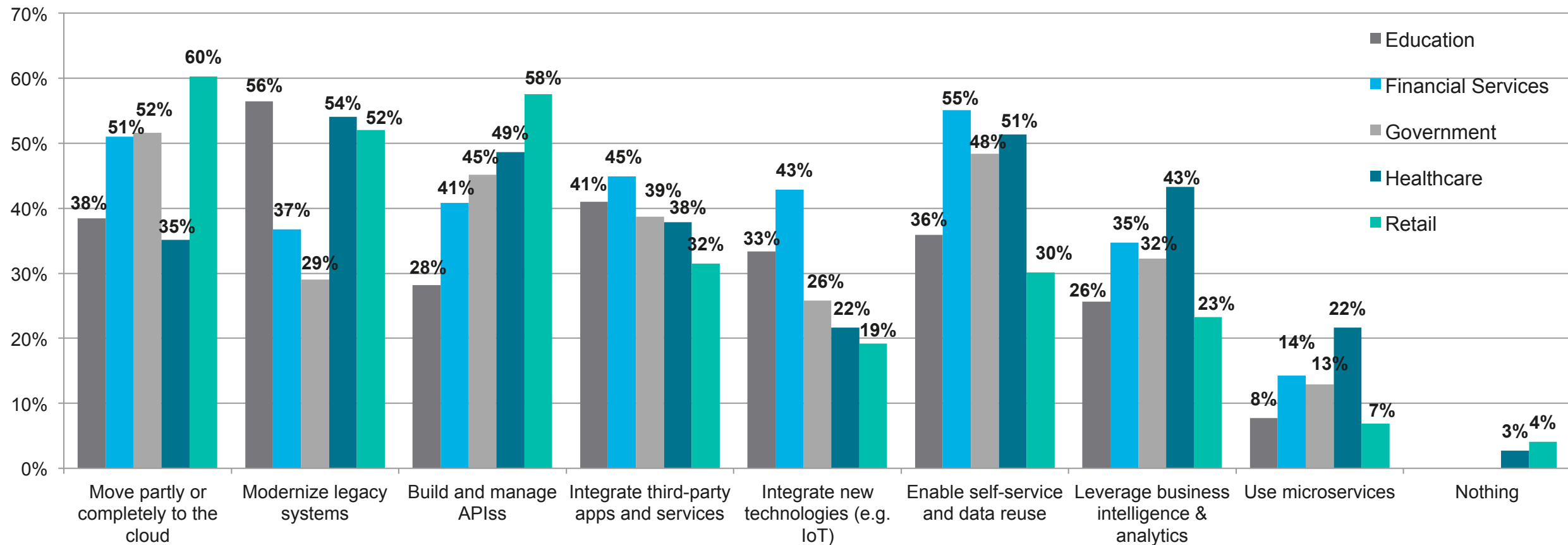


Financial services companies are integrating new technologies to speed up digital transformation



Modernizing legacy systems is the top way for government and retail to speed digital transformation, and moving to the cloud is the top for education and healthcare. Meanwhile, more financial services companies (55%) are looking to integrate new technologies to achieve digital transformation quickly.

What is your IT team doing to complete digital transformation projects more quickly?



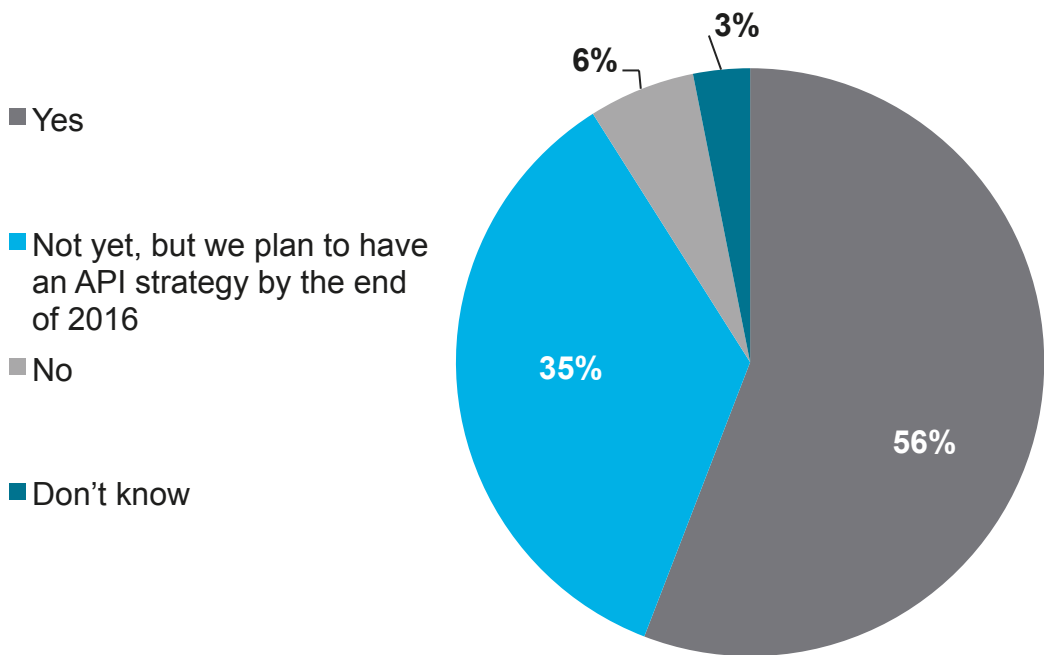
Enabling business with APIs and reuse



API strategy is a “must-have” for businesses



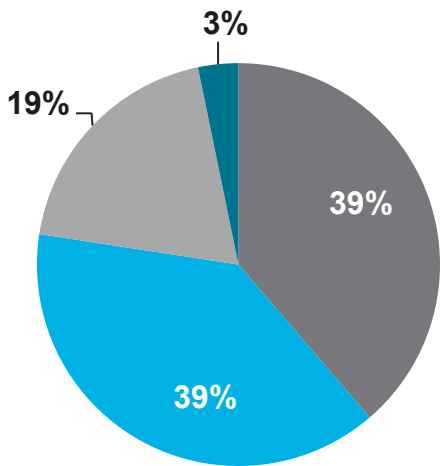
Does your company have an API strategy?



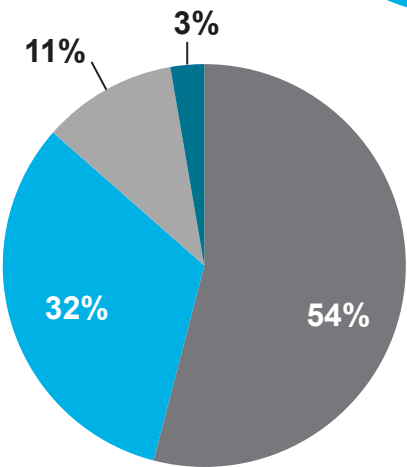
91% have an API strategy in place or plan to by the end of 2016.

All ITDM respondents

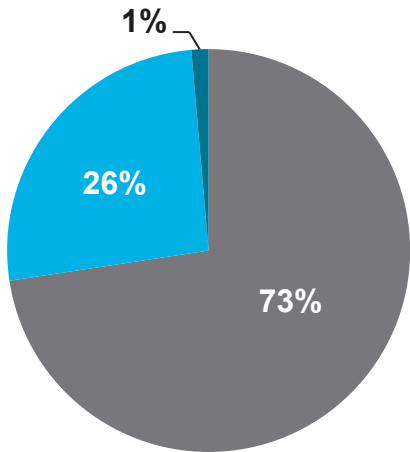
Government ITDMs



73% of retail ITDMs already have an API strategy, as well as a majority of healthcare respondents. On the other hand, nearly 1 in 5 government respondents do not have an API strategy nor plan to do so by the end of 2016.



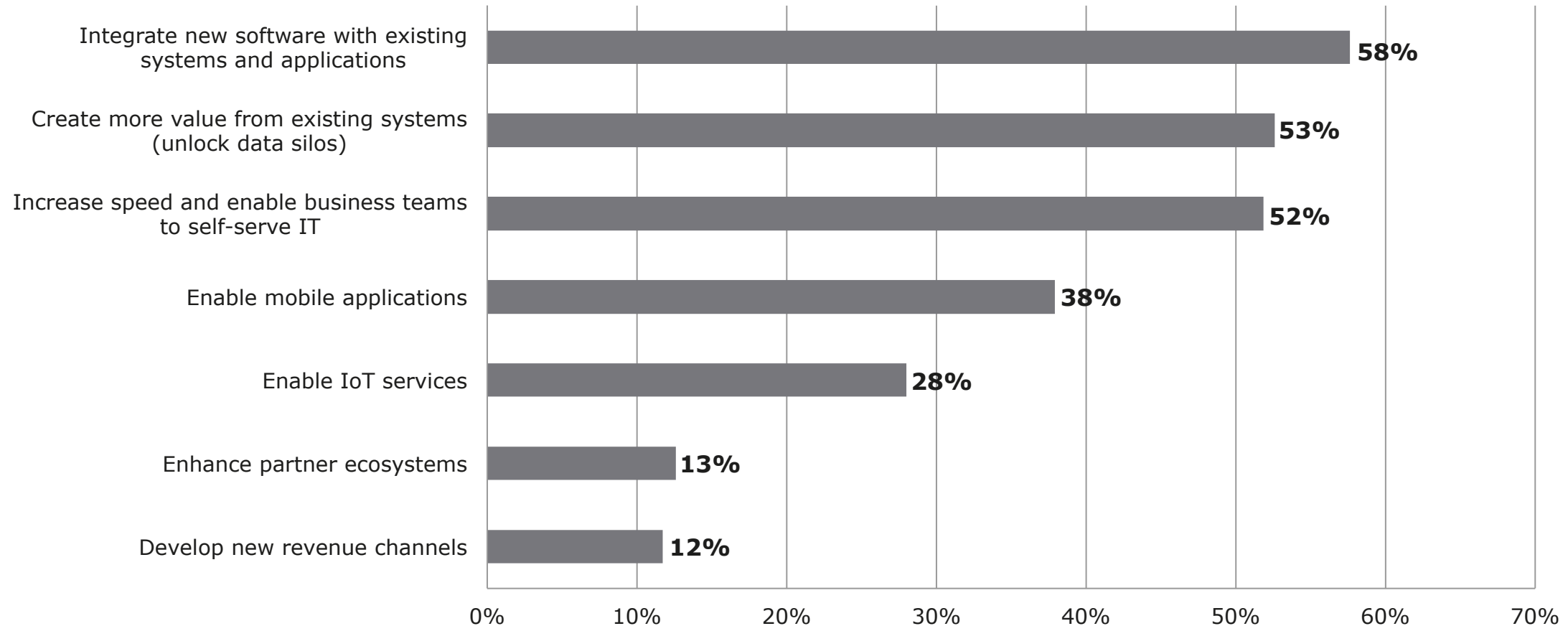
Healthcare ITDMs



Retail ITDMs

Software and application integration is a top driver of API strategies

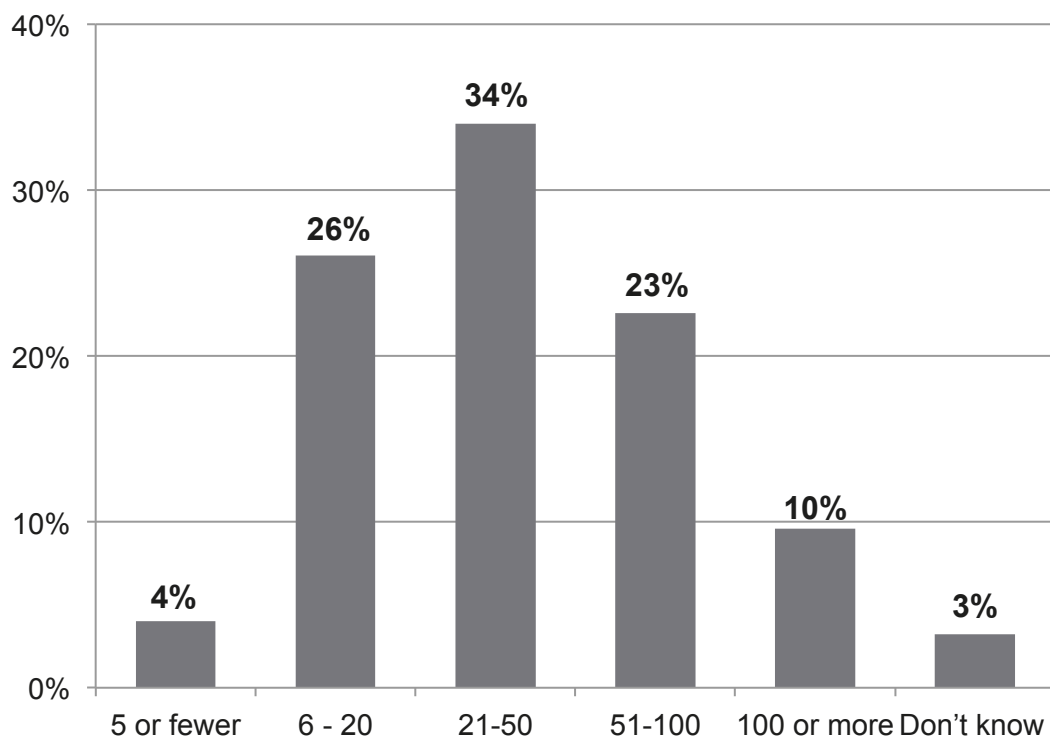
If you have an API strategy in place or plan to, what business needs are driving it?



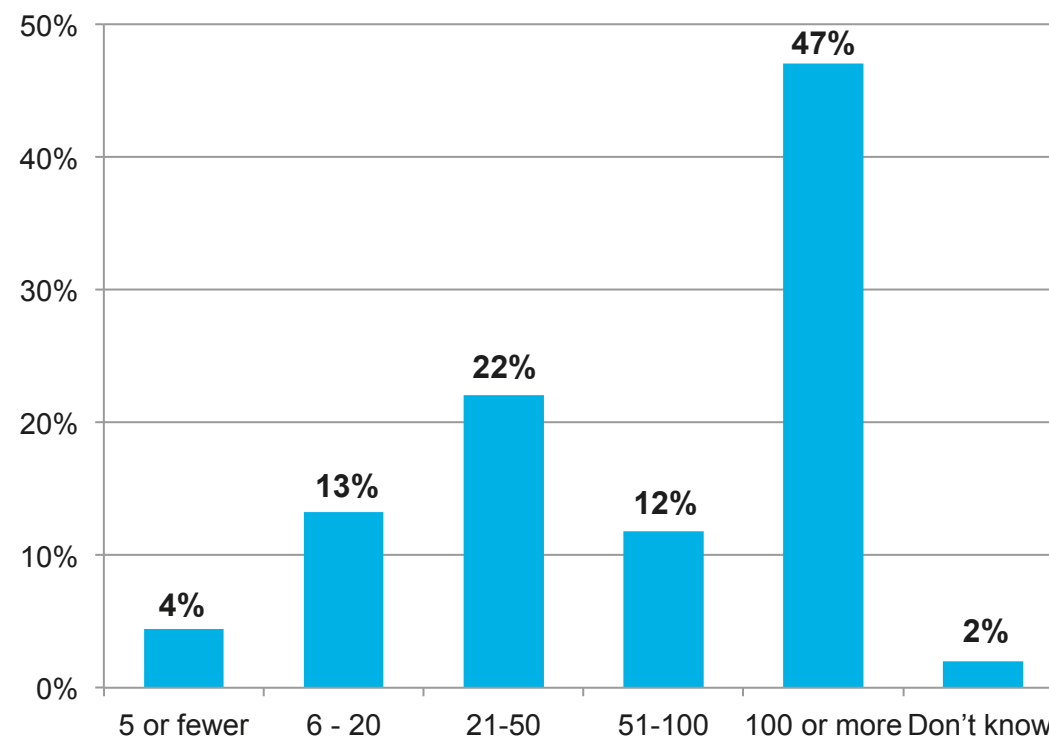
Most organizations currently integrate more than 20 apps; larger organizations integrate even more



Approximately how many applications does your organization currently integrate?



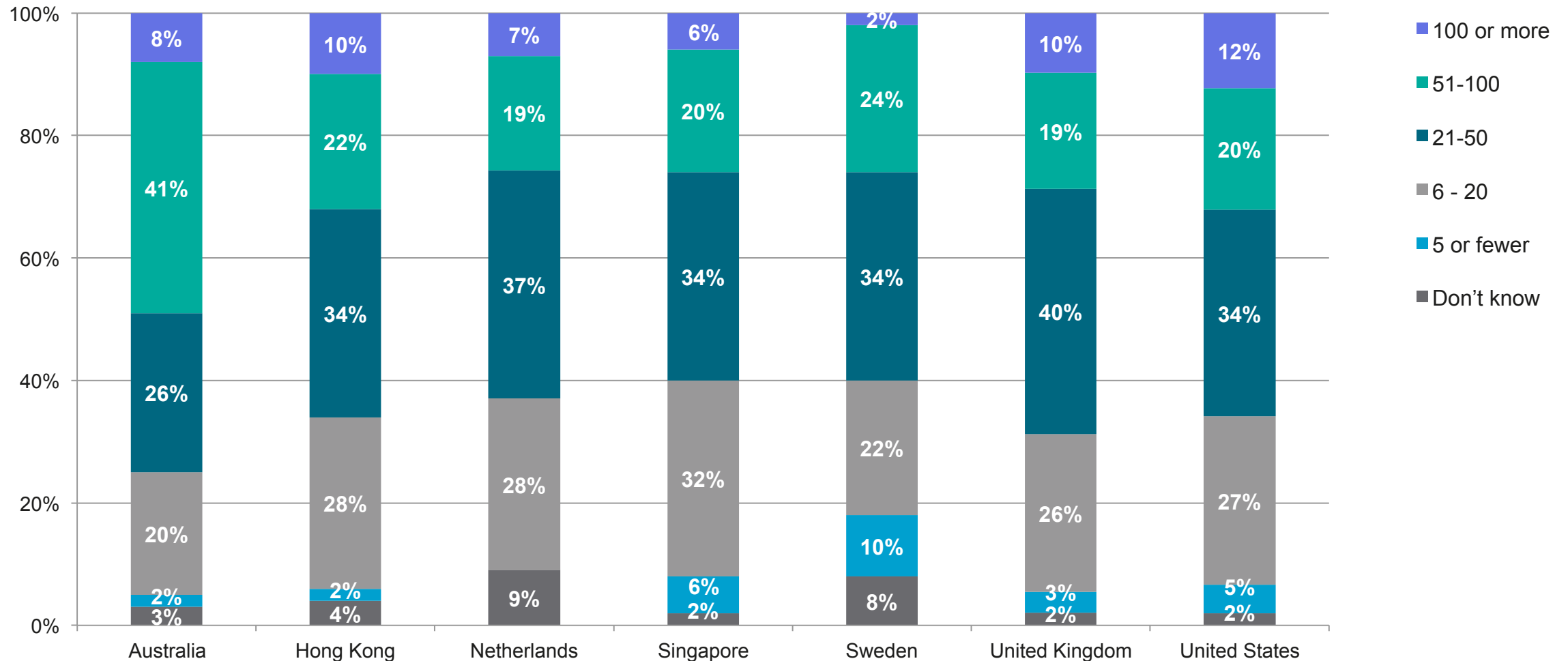
All ITDM respondents



Organizations with more than 100,000 employees

Top countries that integrate more than 50 apps: 1) Australia 2) Hong Kong & U.S. 3) U.K.

Approximately how many applications does your organization currently integrate?



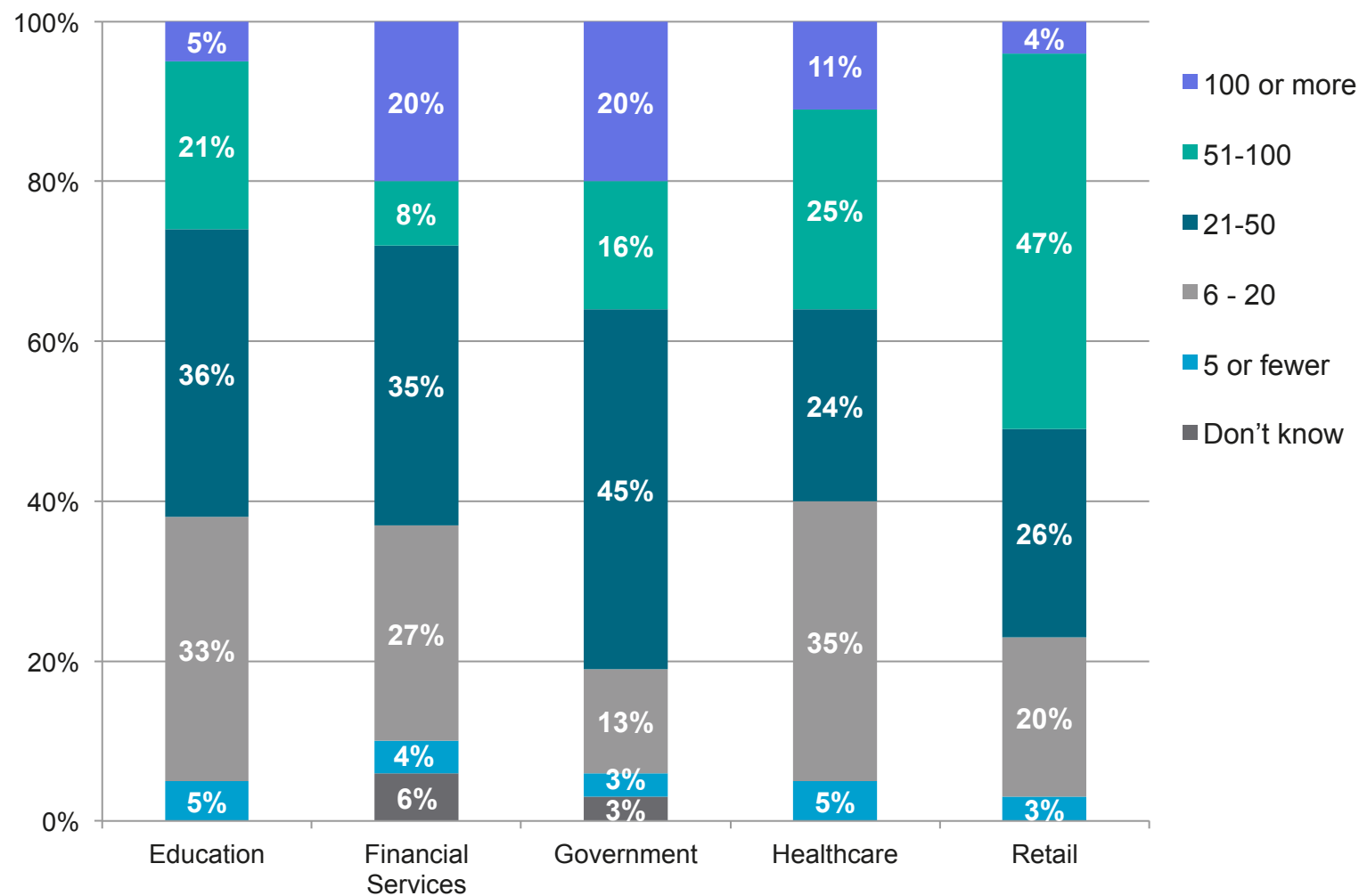
Financial services and government are the biggest integrators

More than a quarter of education and financial services respondents are integrating more than 50 apps.

36% of healthcare respondents and 51% of retail respondents are also integrating more than 50 apps.

One fifth of financial services and government ITDMs are integrating more than 100 apps.

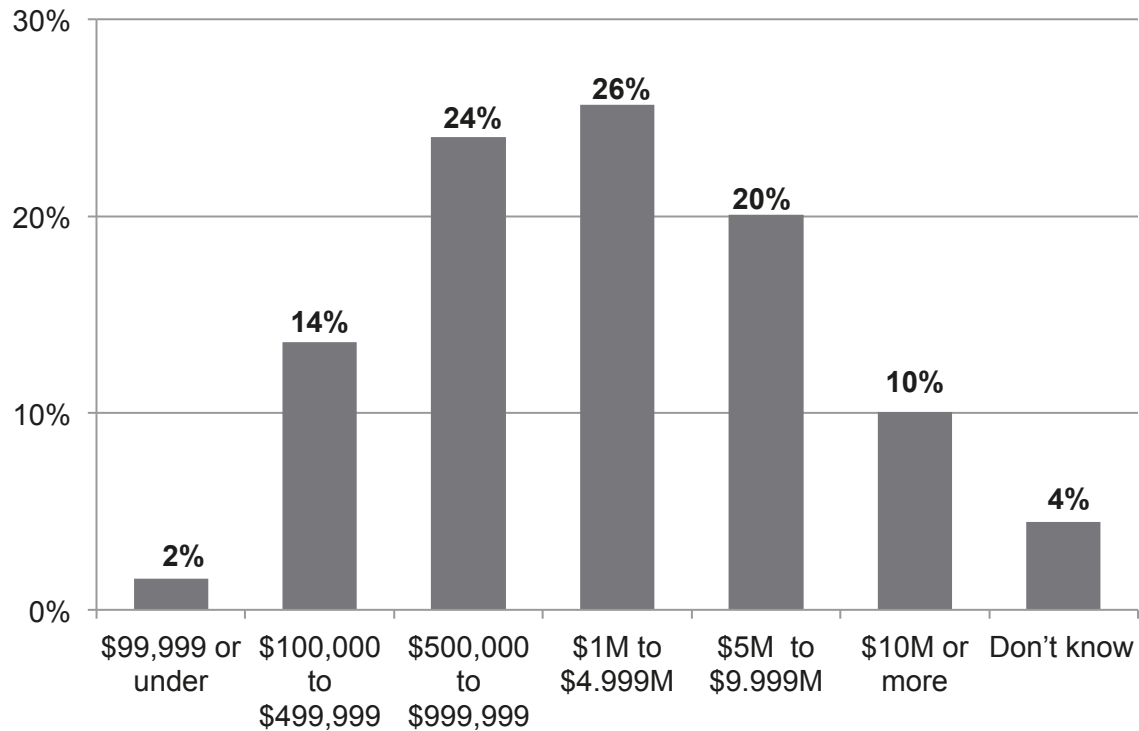
Approximately how many applications does your organization currently integrate?



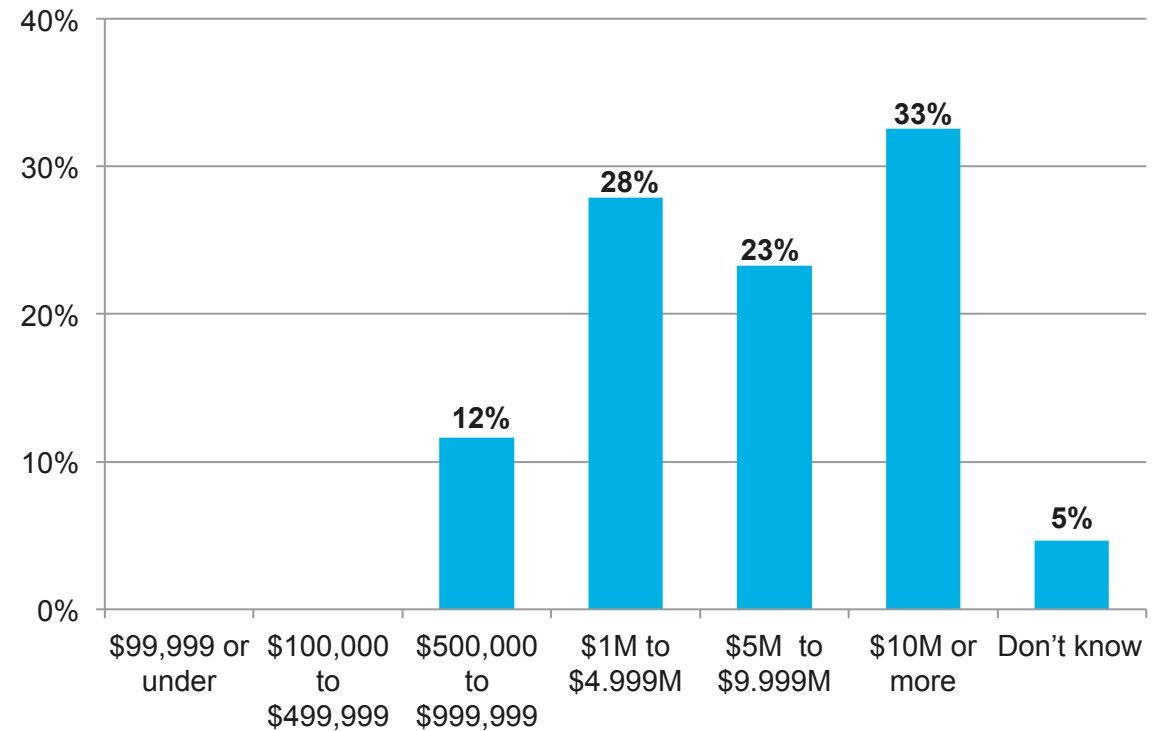
Making millions with APIs

APIs aren't only speeding IT delivery for digital transformation, but they are also driving revenue. One third of organizations with more than 100,000 employees expect to generate \$10M or more in revenue through APIs and activities directly related to API implementation. Organizations are recognizing that APIs provide real business value, as they impact the bottom line.

Approximately, how much revenue do you think your company generates through APIs and activities directly related to API implementation? (In US dollars)



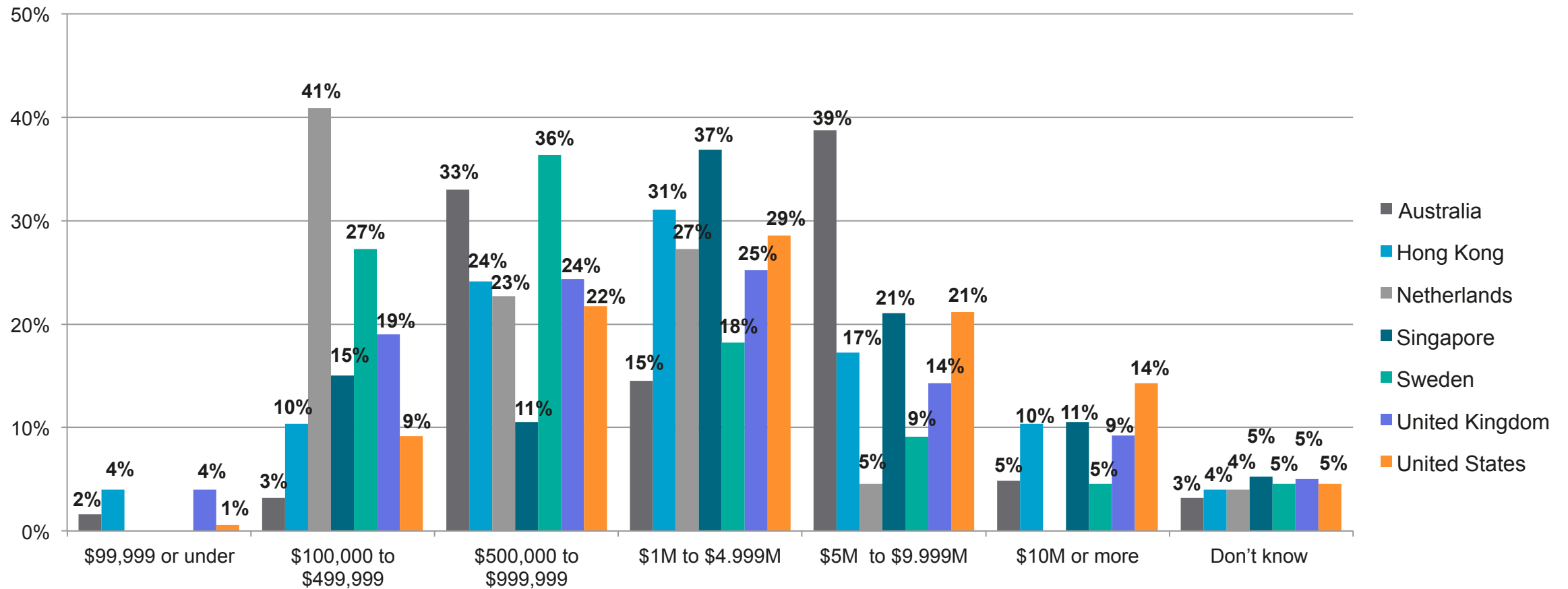
All ITDM respondents



Organizations with more than 100,000 employees

Top countries to generate \$10M or more through APIs: 1) U.S. 2) Singapore 3) Hong Kong

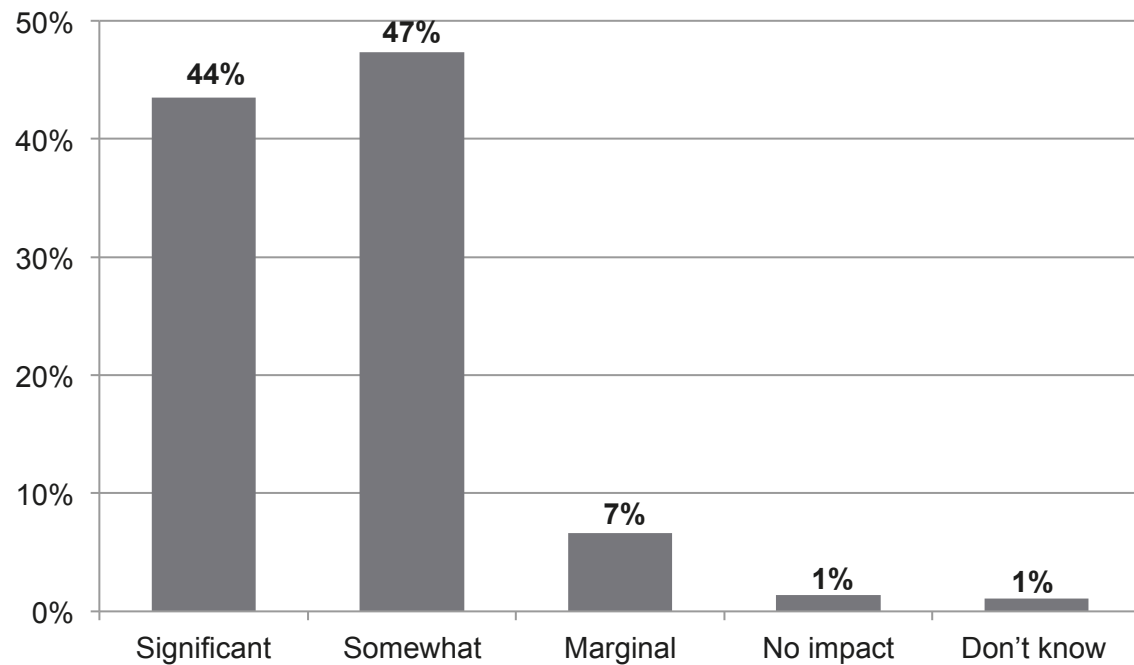
Approximately, how much revenue do you think your company generates through APIs and activities directly related to API implementation? (In US dollars)



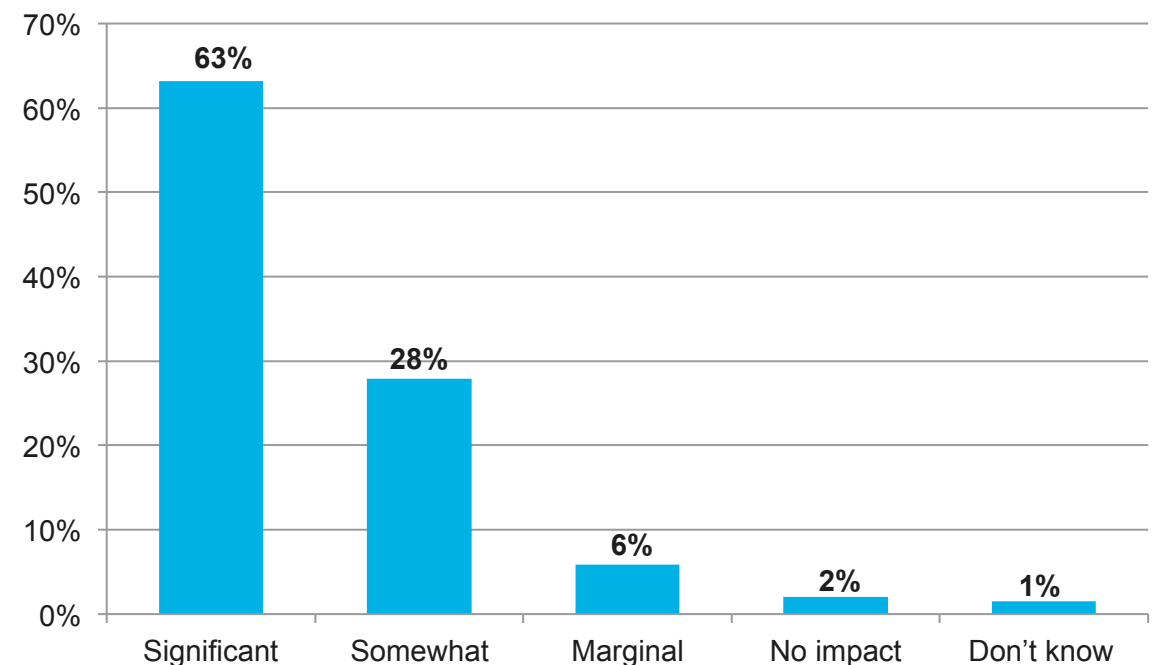
IT is also leveraging reuse to meet business needs quickly and efficiently

With pressure to deliver on LOB needs and meet digital transformation quickly, IT teams are responding to their challenges by driving speed and agility through the use of APIs. 44% say that reuse would significantly increase the pace of LOB and digital transformation projects. Larger organizations, which tend to integrate more apps, find significant value in reuse.

If you were able to more easily reuse existing applications, data and digital resources, how much more quickly would you be able to complete LOB and/or digital transformation projects?



All ITDM respondents

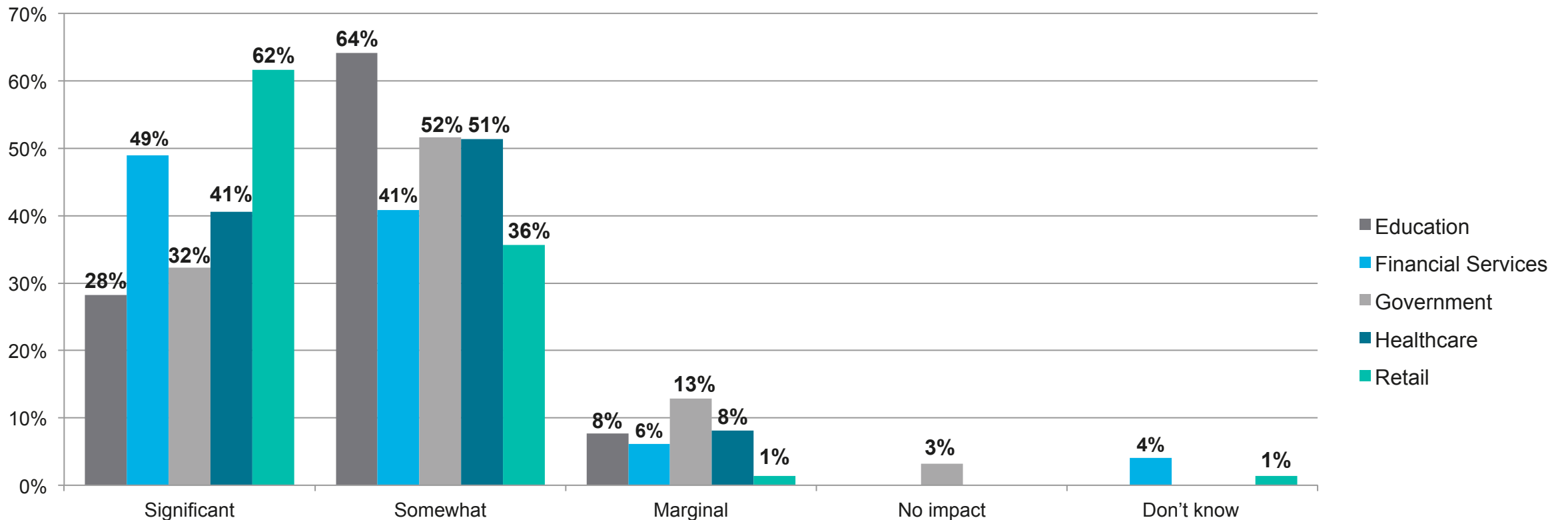


Organizations with more than 100,000 employees

Retail ITDMs see even more value in reuse

Industries that are known to focus heavily on customer experience, such as retail, see more value in reuse. 62% of retail ITDMs say that reuse would significantly impact pace of LOB and digital transformation projects. Nearly half of financial services (49%) and 41% of healthcare respondents also see significant value in reuse.

If you were able to more easily reuse existing applications, data and digital resources, how much more quickly would you be able to complete LOB and/or digital transformation projects?



Conclusion

- **Digital transformation won't be successful without IT's alignment with business priorities:** IT is no longer just a corner office that offers infrastructure and troubleshooting. IT's role needs to shift from the centralized support function to becoming the strategic business enabler, responsible for supporting innovation.
- **APIs fuel a cultural shift in businesses:** APIs will be key to enabling digital transformation. They aren't just changing how technologies work; they're also changing the way businesses operate and behave. APIs are igniting a cultural shift away from centralized IT and toward an open, collaborative environment. By opening up data instantly in governed way through APIs, lines of business can leverage this information to meet their needs quickly without IT serving as a bottleneck.
- **Enterprises need an application network:** IT needs to find new ways to enable the business to build its own applications, analytics and new digital experiences demanded by their consumers. IT teams need to move to a model where they deliver reusable assets – building blocks – that the business can build on top of. An application network, which seamlessly connects applications, data and devices within the enterprise and to external ecosystems, enables reuse by an entire organization to get the most value from IT assets on the network.

How do you compare?



- Is your IT team ready for digital transformation?
- Are you behind on digital transformation goals?
- Are you focusing more on incremental improvements that focus on tactical technology implementation than transformative initiatives that impact business outcome?
- Are LOB demands of IT increasing faster than IT delivery capacity?
- Is legacy technology maintenance hindering your IT team from meeting LOB and digital initiatives quickly?
- Do you want to deliver on digital transformation initiatives faster, but can't because you are stuck delivering on strategic projects the same way?

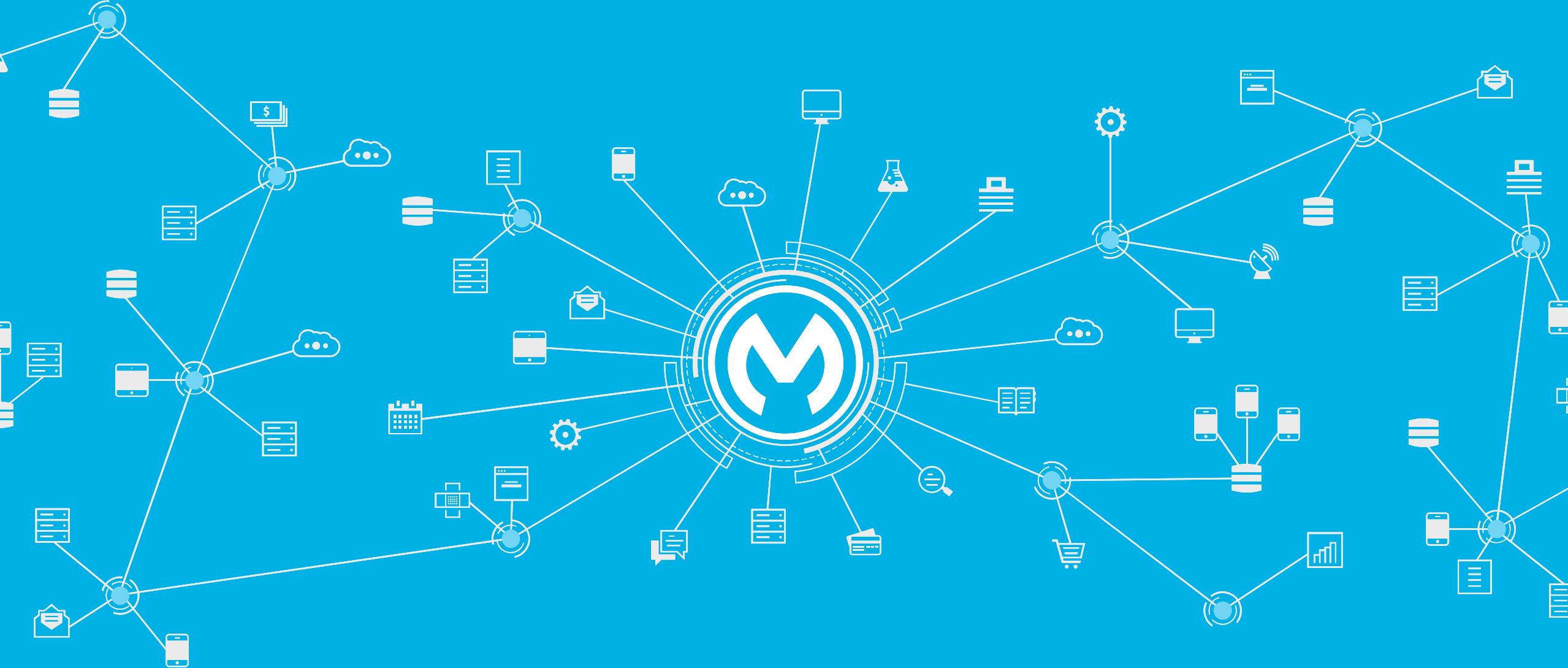
If you answered “yes” to all of these questions, we’d like to talk to you. MuleSoft customers are achieving digital transformation by applying an API-led approach to connectivity with Anypoint Platform™. With MuleSoft, companies are leveraging APIs and the ability to deliver reusable assets that the business can build on top of to increase the pace of their business. To learn more, you can reach us at info@mulesoft.com or 1-415-229-2009.

About Anypoint Platform™

MuleSoft's Anypoint Platform™ is a complete solution for API-led connectivity that creates a seamless application network of apps, data, and devices, both on-premises and in the cloud. This [hybrid integration](#) platform includes [iPaaS](#), [ESB](#), and a unified solution for [API management](#), design and publishing.

About MuleSoft

MuleSoft makes it easy to connect the world's applications, data and devices. With our market-leading Anypoint Platform™, companies are building application networks to fundamentally change the pace of innovation. MuleSoft's API-led approach to connectivity gives companies new ways to reach their customers, employees and partners. Organizations in more than 60 countries, from emerging companies to Global 500 corporations, use MuleSoft to transform their businesses. To find out how, visit <http://mulesoft.com>.



For any questions or sales inquiries, contact MuleSoft at info@mulesoft.com or 1-415-229-2009.