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Service Orchestration: Increasing The Efficiency Of Hybrid IT



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Deliberately using multiple cloud deployment types is a top strategic objective (79%).



Executive Summary

Business services are no longer relatively static, complex applications delivered as vast, complex projects resembling a fragile house of cards. As more companies adopt hybrid IT infrastructures to keep up in the digital age, the need to integrate, manage, and optimize legacy systems and cloud architectures has quickly become a core imperative. Doing so will enable greater business flexibility and agility, empowering firms to better win, serve, and retain customers.

However, the nature of cloud applications makes many businesses uneasy when their data and information is not housed on-premises. Therefore, it is important for businesses to better manage and orchestrate applications and services.

In February 2017, Fujitsu commissioned Forrester Consulting to evaluate the strengths of service orchestration and hybrid IT in the US, Australia, and European countries.

The study resulted in the following key findings:

KEY FINDINGS

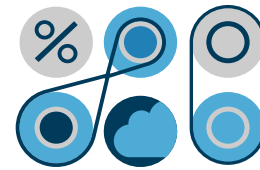
- › **Service orchestration requires a unified strategy and approach across IT and the business.** To improve an organization's ability to adapt to and meet customer expectations, firms must adopt hybrid IT environments. Hybrid IT gives organizations the flexibility and agility to adapt to changes in the market. Thus, organizations need service orchestration to unify strategies from both IT and the business.
- › **Organizations need to seek out expert service partners that have a track record in working with hybrid IT environments.** Working with service partners that are experts in hybrid IT environments helps support, build, and refine an orchestration strategy.
- › **Orchestration must occur on multiple layers.** While service orchestration is a common starting point (e.g., increased speed, control, and agility across disaggregated platforms), it must also take place around supplier management, security, compliance, and digital supply chain efficiency to build a truly efficient environment.

Transform IT To Deliver Success In The Digital Age

The digital age has given rise to rapidly changing customer expectations, to which businesses must respond in order to remain competitive. This change includes the expectation that consumers should be able to access what they want, whenever and wherever they want it. Providing this level of service in an efficient and cost-effective manner requires businesses to be more agile in their response to change and in exploring new capabilities.

Technology management teams are responsible for both maintaining and extending an organization’s capabilities, but the current IT delivery model is coming under mounting pressure. Technology managers face challenges globally, including organizational and budgetary pressures, as well as customer and business demands to deliver more, faster, and increasingly complex hybrid technology environments. To manage this complexity and to truly take a lead in enabling the digital transformation of their business, technology managers are turning to service orchestration solutions.

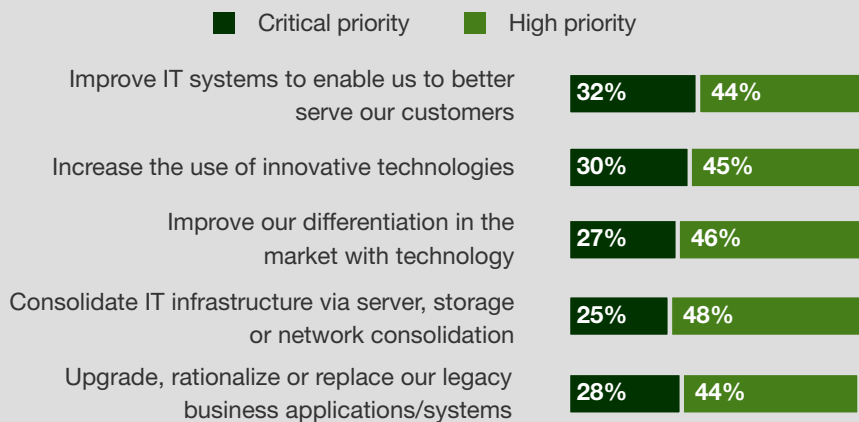
Companies recognize that the technology they employ plays a critical role in driving better customer outcomes. As such, when asked about technology priorities over the next 12 months, 76% of businesses indicated that they are prioritizing the improvement of IT systems to better serve customers. As part of that improvement, enterprises intend to leverage innovative technologies (75%), consolidate infrastructure where possible (73%), and update legacy systems (72%) (see Figure 1). These steps help organizations ensure a faster, more relevant, and more capable infrastructure to underpin business growth and meet evolving customer demand.



For the purpose of this study, we define service orchestration as “the processes, procedures, policies, and tools implemented to manage numerous suppliers, services, and systems. The orchestrated whole should deliver a seamless — and secure — user experience, ultimately aligned to the objectives of the business.”

Figure 1

“Which of the following technology initiatives is your organization prioritizing over the next 12 months?”



Base: 371 digital/technology strategy decision makers
 Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

CLOUD-FIRST STRATEGIES DRIVE HYBRID IT ENVIRONMENTS

As companies explore the best way to address their evolving technology requirements, cloud solutions often rise to the top. Eighty-two percent of organizations said they are looking to adopt a cloud-first strategy for all new applications, workloads, and license renewals. Under the right conditions, cloud environments can deliver the agility and flexibility that organizations will require. Additionally, companies are using multiple cloud environments to speed up software development and testing, improve performance customer-facing systems, and reduce their data center footprint. Cloud does not completely replace legacy infrastructure, however, but instead becomes part of a hybrid IT environment in which cloud and legacy systems work alongside one another to support a complex range of business requirements. This type of hybrid IT infrastructure offers businesses a number of advantages (see Figure 2), such as:

- › **Improved scalability and flexibility.** The cloud components of a hybrid environment grant the agility, flexibility, and elasticity to grow, try new things, and enter new markets; dedicated hardware can be used for more steady-state workloads.
- › **Lower total cost of ownership (TCO).** Because not all infrastructure must be bought and owned up front, businesses can significantly drive down technology ownership costs as they shift from capex to opex cost models.
- › **Increased competitiveness through access to cloud application programming interface (API) economy.** Access to cloud-native APIs and other capabilities enables companies to deliver faster releases of new products and features and explore more tailored solutions for their specific needs.

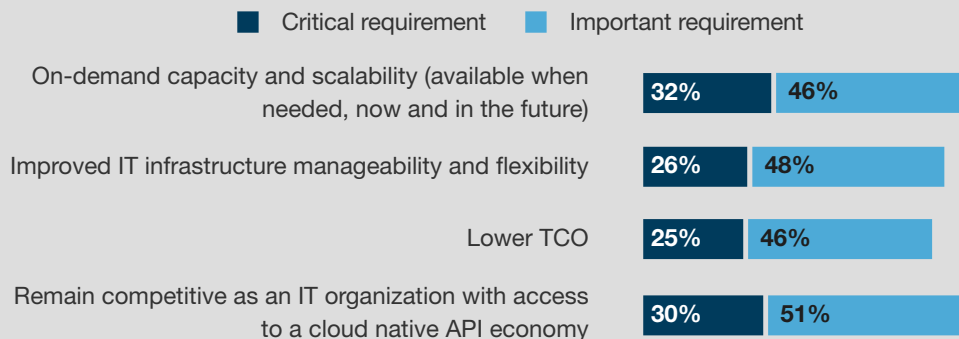


81% of firms said a cloud-first approach for all new apps, workloads, and license renewals is a top strategic objective.



Figure 2

“How important were the following in your firm’s decision to adopt a hybrid IT environment?”



Base: 371 digital/technology strategy decision makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

The Challenges With Hybrid IT

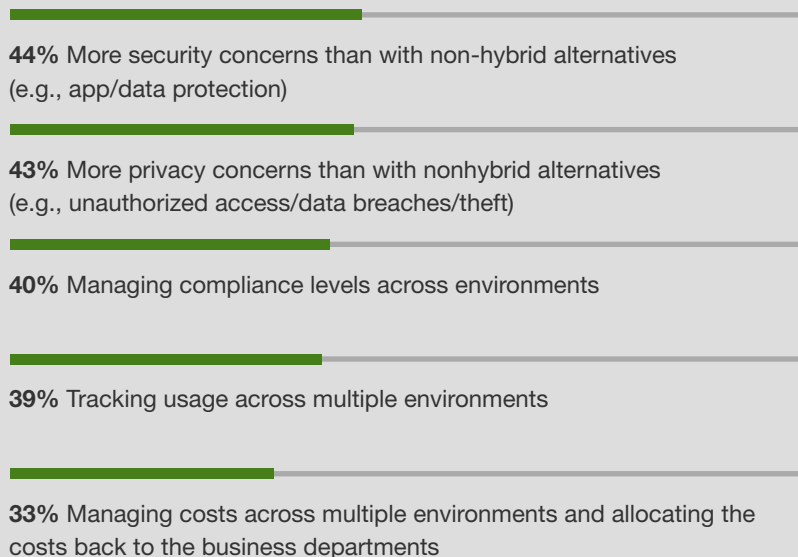
IT professionals today adopt hybrid IT as a way to accelerate the use of digital technologies throughout the business, differentiate themselves from their competitors, and meet the rapidly evolving needs of their customers. However, while hybrid IT offers these advantages, it also creates a number of complexities and challenges that can outweigh the benefits if not properly orchestrated. Top challenges include (see Figure 3):

- › **Heightened security concerns.** When using or deploying hybrid environments, 44% of organizations revealed security as a top expected challenge. The nature of cloud applications makes many businesses uneasy when their data and information is not housed on-premises. Interestingly, however, 45% of survey respondents felt that hybrid IT would actually improve security. This discrepancy may be explained by the lack of business and IT alignment within an organization (50% of companies report some degree of misalignment). Suppliers can alleviate potential issues by acting as ‘brokers’ between business users and the IT department, enabling both intra and inter-organizational co-creation. Business users assume more security issues will come from adopting cloud, whereas IT teams expect increased security from hybrid IT environments as they can leverage the rich security capabilities of their cloud partners.



Figure 3

“What challenges have you face/do you expect to face in deploying/using hybrid IT environments?”



Base: 371 digital/technology strategy decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017



Business users expect more security issues to come from hybrid IT and cloud adoption, whereas IT teams expect increased security.

- › **Increased privacy concerns.** Cloud environments also create concerns about data sharing, access management, and privacy. Businesses see an increased risk of data breaches and theft as users move and share information outside of their networks and firewalls. However, these concerns may reflect a fear of the unknown, more than a real threat.
- › **Added difficulty of managing compliance, usage, and costs across multiple environments.** The flexibility and variety provided by hybrid IT come with unique challenges. By introducing new environments for different applications across the business, it becomes more challenging to manage compliance (highlighted by 40% of respondents), track utilization (39%), and monitor costs (33%) across separate systems. Trying to connect the different services in a unified way is extremely challenging and can inhibit some of the benefits that hybrid IT is intended to deliver. The Forrester Data Global Business Technographics® Infrastructure Survey, 2016 confirms that infrastructure decision makers choose public cloud to improve overall infrastructure performance like on-demand scalability and flexibility, to boost availability, to lower costs, and even to improve their security posture.¹ Cloud isn't just a cost-saving vehicle; it's a proven path to establishing highly elastic, flexible, resilient, safe, and secure enterprise infrastructure foundations.

Managing these concerns can be an ongoing challenge for businesses as technology continues to change rapidly, as the skills required to navigate those changes are in short supply, and as businesses continue to struggle to align internal business and IT teams. Enterprises need a solution that will give them a more integrated view of their entire hybrid infrastructure and connect the various components in ways that promote employee efficiency, allowing organizations to better meet customer needs.



81% of survey respondents said using configuration management tools to optimize cloud applications or workloads is a critical or high priority



Firms said it is a critical or high priority to use a single management portal across multiple environments (77%)

Service Orchestration Delivers On The Hybrid IT Promise

It's easy to obsess about squeezing costs out of IT budgets or increasing the efficiency of IT teams. But neither, really, is the point. Organizations are becoming increasingly digital because their customers, suppliers, partners, and current and future employees demand it of them. Digital makes existing processes more efficient and unlocks whole new areas of business. To be truly digital, all organizations — from venerable, centuries-old conglomerates to shiny new startups — must seize every opportunity to connect processes, to extract insight from data, and to reach customers in ways that delight and deliver value. Many systems must be aligned to truly serve the customer. Behind the scenes, technological change and the orchestration of multiple silos and systems give the whole business (not just the technology management organization) the power and the potential to become truly digital.

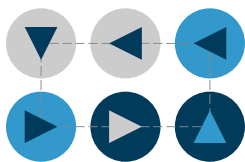
For an organization's complex hybrid IT landscape to deliver real business value, service orchestration is required to ensure IT systems are integrated and completely aligned to serve the business' needs. We define service orchestration as the processes, procedures, policies, and tools implemented to manage numerous services, suppliers, and systems. The orchestrated whole should deliver a seamless — and secure — user experience that enables true cocreation across multiple platforms, digital technologies, and service providers. This, ultimately, should be aligned to the objectives of the business.

Organizations can overcome hybrid IT challenges by adopting service orchestration. Service orchestration helps to optimize application performance by seamlessly coordinating disparate business systems and services into a more unified management structure. From our survey, the most important advantages for implementing a service orchestration solution were (see Figure 4):

- › **Ability to monitor service-level performance.** Operating a business built on top of various layers and types of infrastructure requires extensive monitoring and support (e.g., availability monitoring, scaling events, automatic provisioning, updates, etc.) to help the systems work together effectively. Poor performance within one system could drastically affect other business systems if not adequately monitored. Effective monitoring across all systems would allow the necessary provisioning or scaling to take place to meet unexpected demand or challenges.

It is a critical or important requirement to use peak capacity for times of high usage to a cloud native API economy (72%)

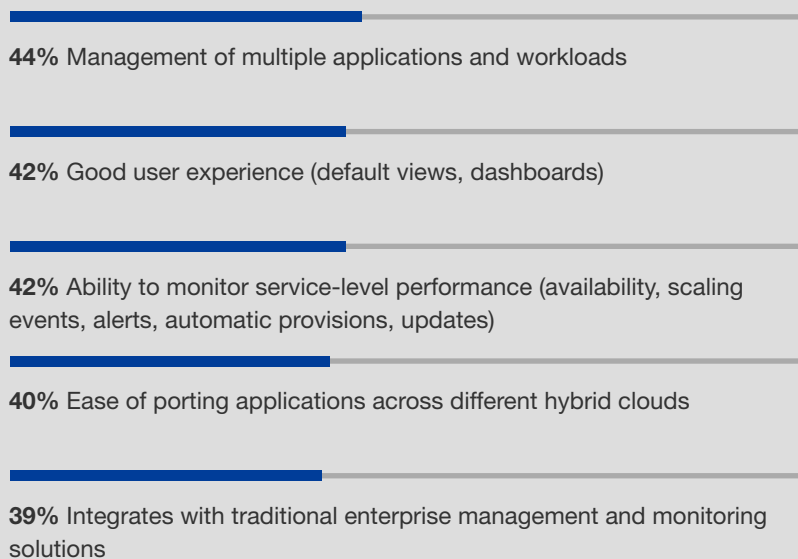
- › **Improved user experience.** Because of seamlessly connected internal systems, tools, and procedures, employees will be able to navigate applications with greater ease and be more efficient in their roles. With effective service orchestration, end users' experiences won't be affected whether they are working from the cloud or on an internal private solution, as the experience will be fluid and consistent.
- › **The management of multiple workloads.** Forty-four percent of organizations have implemented or are considering implementing service orchestration due to the automation it provides in managing multiple applications and workloads, which frees up time to drive innovation. Migrating a single application in a hybrid environment is a cumbersome and often manual process, and the deployment, management, and reconfiguration of complex applications over multiple cloud services would be exponentially more difficult without some sort of automation.



69% of firms said developing a comprehensive IT strategy is a critical or high priority.

Figure 4

“What are the most important factors that you consider when implementing a service orchestration solution?”



Base: 371 digital/technology strategy decision makers
 Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

Over 70% of survey respondents stated that service orchestration is a top or important priority.

Partner For Service Orchestration Success

The technology landscape in most organizations today is hybrid and will be hybrid for the foreseeable future. Instead of isolating legacy infrastructure from new, cloud-based infrastructure, IT leaders must find ways to connect these assets so that they align to the strategic goals of the business. IT service orchestration can meet this need, but managing that orchestration is difficult. When asked about the key challenges that companies expected to face with managing service orchestration, respondents highlighted three primary challenges (see Figure 5):

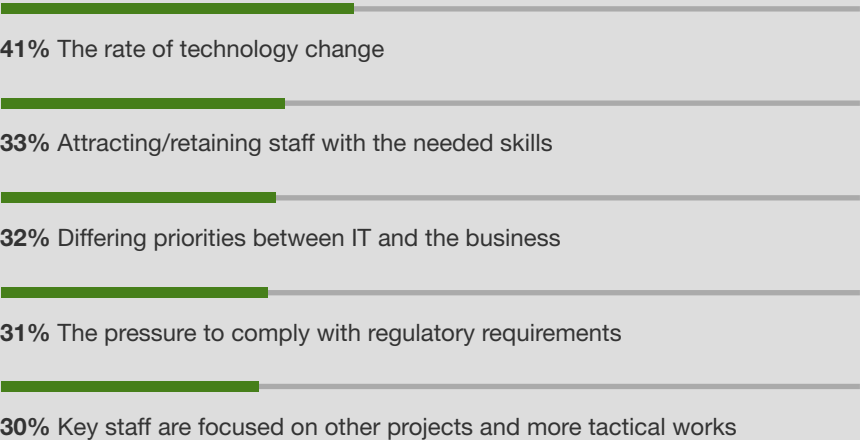
- › **Keeping up with the rate of technology change.** Technology is advancing at a rapid pace. Forty-one percent of companies see keeping up with the rate of technology change as a primary challenge. Businesses must understand new technologies and capabilities well enough to recognize how these potential new technologies may or may not fit within a company’s existing infrastructure and IT services configuration. In fact, over the next two to three years, 51% of companies expect that security and data requirements will accelerate the need to adopt service orchestration, if only to stop critical customer data from falling between the cracks.
- › **Finding the right skillsets.** Beyond just knowing what technology is available, companies also need the right skillsets to effectively orchestrate services from various cloud and noncloud infrastructures. Whether it is retraining existing talent or making new hires, companies need savvy IT professionals who can successfully operate across architectures to build effective end user and customer experiences.



60% of respondents are involved in vendor evaluation, selection, and management.

Figure 5

“What challenges does your organization face or expect to face in managing service orchestration?”



Base: 371 digital/technology strategy decision makers
 Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

- › **Managing differing priorities between IT and the business.** Getting support and aligning the business around technology improvements can be challenging when trying to meet the needs of both IT and business users. Proper orchestration of services can help assuage the concerns of both IT and business users by simplifying and improving the security, service levels, and usability capabilities of existing systems and applications.

FINDING THE RIGHT PARTNERS

Technology leaders must adopt service orchestration approaches if they are to deliver the correct balance between agility and control. But it is a big task that technology leaders should not embark on alone. Organizations are turning to service providers for help, and we found that enterprises most commonly need help in the following ways (see Figure 6):

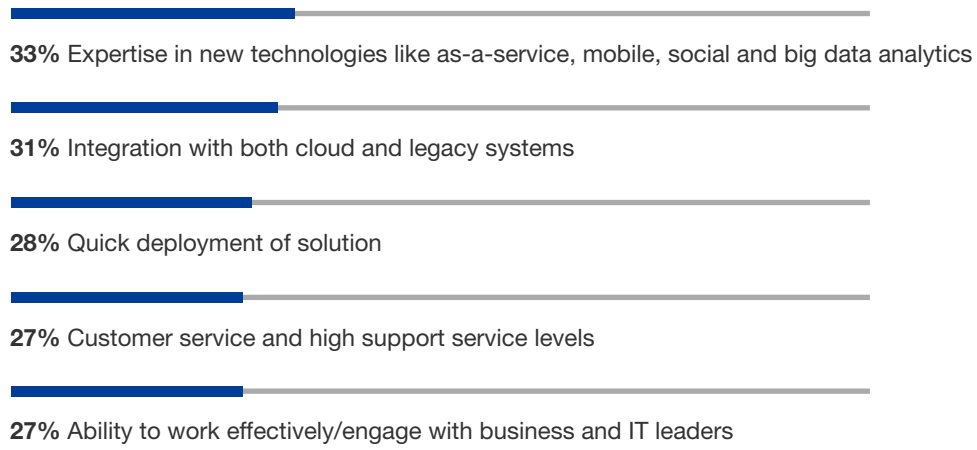
- › **Expertise in new technologies such as software-as-a-service (SaaS), mobile, and big data.** Service partners can be a great source of technical depth and breadth that companies lack. With a deeper understanding of cloud tools and mobile integration with those tools, service providers can offer valuable skillsets that enable more effective orchestration of services.
- › **Ability to integrate with both cloud and legacy systems.** Being able to manage experiences across multiple services and systems is the core premise of service orchestration. Legacy systems are not going away anytime soon, and businesses need help in ensuring their existing systems can operate effectively alongside new cloud-based technologies and services.
- › **High level of support and service.** It comes as no surprise that companies expect their partners to offer a high level of service. Part of this includes the ability to deploy new solutions quickly and efficiently. Also, as organizations often face challenges reconciling IT and business priorities, a service provider's ability to engage with both user groups effectively can be extremely beneficial in building unity.



69% of firms reported it is a critical or high priority when using a third-party tool to monitor cost, cost service levels or security

Figure 6

“Which of the following attributes do you consider when sourcing a technology partner to support your technology strategy?”



Base: 371 digital/technology strategy decision makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

Key Recommendations

As companies continue to adopt hybrid IT infrastructure to meet changing business requirements, the need to properly integrate and manage legacy and cloud architectures is paramount. Enterprises need a clear service orchestration strategy to help them seamlessly connect their end users and customers to necessary business systems in an integrated, efficient way. Doing so will enable greater business flexibility and agility, ultimately enabling companies to better serve their customers. As businesses take steps to improve the management and orchestration of applications and services across the company, Forrester recommends the following:



Appoint a service orchestration champion to create a unified strategy and approach across IT and the business. Ultimately, an organization will improve its ability to adapt to and meet customer expectations by adopting hybrid IT environments. In fact, hybrid IT offers organizations the capability to be flexible and agile by adapting to changes in the market. Thus, organizations need service orchestration to unify strategies from both IT and the business.



Look for service partners that are experts with hybrid IT environments to help build an orchestration strategy. Working with technology partners means more skills, more expertise, and a track record in helping organizations meet their service orchestration goals. In turn, organizations will be able to maximize the effectiveness of the hybrid environment mix.

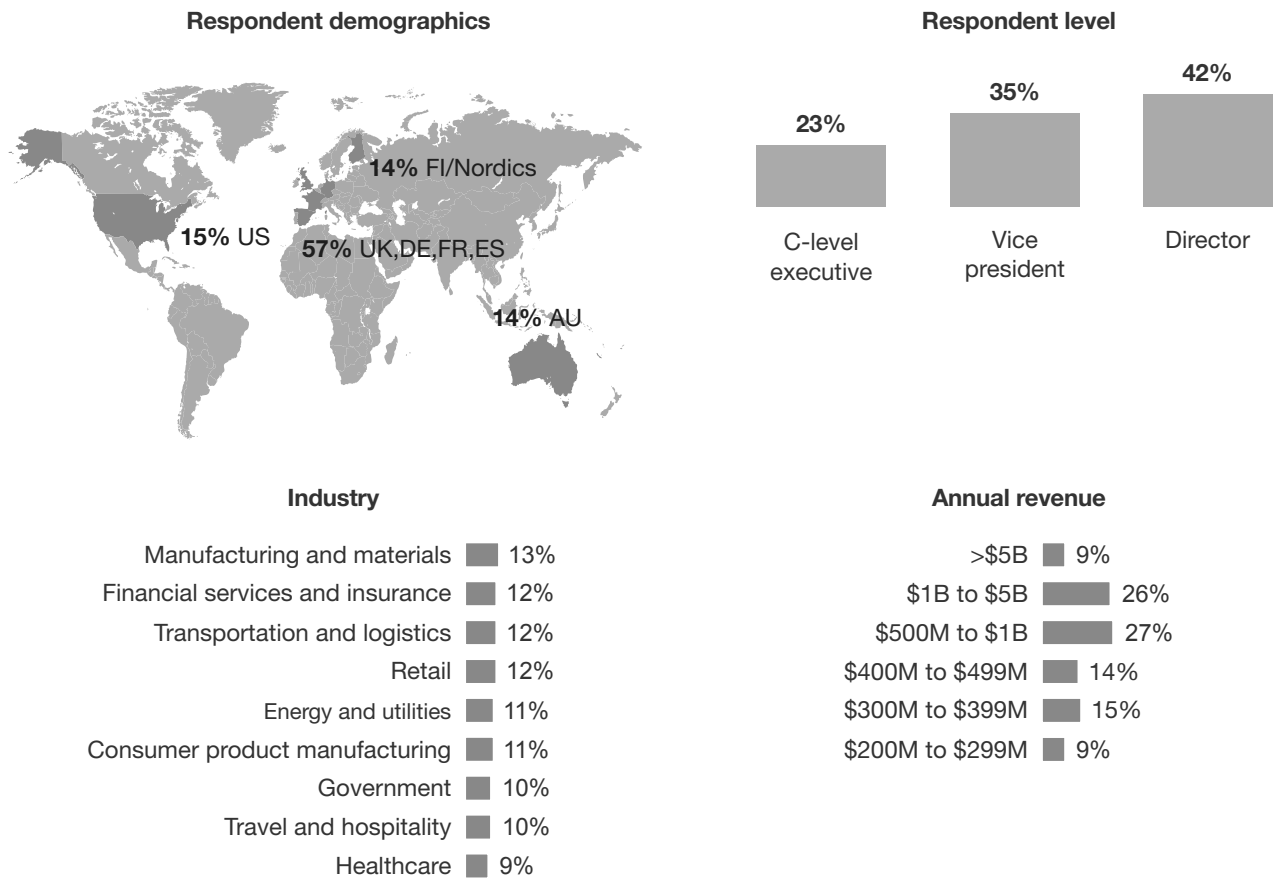


Recognize that orchestration must occur on multiple layers. While service orchestration is a common starting point (e.g., increased speed, control, and agility across disaggregated platforms), it must also take place around supplier management, security, compliance, and digital supply chain efficiency to build a truly efficient environment.

Appendix A: Methodology

In this study, Forrester interviewed 371 digital technology decision makers at organizations in companies in the UK, Germany, France, Spain, Finland, Australia, and the US. Respondents were from companies with a total revenue of \$200 million or more, with the majority over \$500 million. Survey participants included decision makers in primarily IT and operations roles. Respondents were offered a small incentive as a thank you for time spent on the survey. The study was completed in July 2017.

Appendix B: Demographics/Data



Base: 371 digital/technology strategy decision makers
 Source: A commissioned study conducted by Forrester Consulting on behalf of Fujitsu, July 2017

Appendix C: Endnotes

¹ Source: "Justify Your Hybrid Cloud Future With A Solid Business Case," Forrester Research, Inc., November 28, 2016.