# Transforming your Infrastructure for Digital

How agile and scalable is the infrastructure of European businesses today and how are they adapting to enable digital transformation?

Simon Abrahams, Senior Analyst – Cloud & Infrastructure Services
Mathieu Poujol, Head of Cloud & Infrastructure

November 2017

Gold Sponsor

FUJITSU

CXP Group

BARC · le CXP · PAC

# Transforming your Infrastructure for Digital

## INTRODUCTION

IT infrastructure has long been a critical supporting element powering European businesses. For many years, European organizations have been challenged to adapt their IT infrastructures in line with the evolving needs of the business. This has never been truer than it is today, in a European market that is subject to an uncertain economic future, and exposed to significant digital business change.

In parallel with the transformation of European business, European IT infrastructures are having to adapt to the new market realities, to deliver the agile foundations for this digital transformation.

The challenge for today's infrastructure professionals is not to do the old things better. Instead, the challenge is to start embracing radically new ways of delivering technology solutions to today's new business challenges. The requests from the business are clear and demanding: like the rest of the business, the IT infrastructure team needs to learn to deliver at break-neck speed, to compete with the best that is available on the global market. This is an unavoidable reality – whilst it is true that the European markets remain relatively complex and fragmented, it is also now clear that this is no protection against disruption from the most efficient competitors worldwide.

For the IT infrastructure team specifically, this means creating a capability to deliver with greater agility, with more ability to scale up and down, in less time, and at a higher level of efficiency. And at all times, to protect and secure the systems applications and data.

This is a big change for the IT infrastructure team. Individuals that have historically been valued for their deep knowledge of infrastructure are now being asked to adopt much more of a services broker role, with deeper knowledge of the application and business layers.

This study highlights how organizations are adapting their infrastructures to address this digital challenge, enabling their businesses to thrive and prosper in the new digital environment. The report also provides an invaluable guide to the current level of maturity in the European IT infrastructure marketplace.

# KEY FINDINGS

**For almost all organizations (82%), transformation is still work in progress.**
The majority are either at the very beginning (38%) or in the midst (44%) of their transformation journey.

**Market pressures are the key triggers for infrastructure transformation.**
Being responsive to customer demands is the most significant driver for digital transformation (a major consideration for 57% of organizations) followed by responding to new market opportunities (a major driver for 49%).

**The market prioritizes business operational outcomes.**
Once committed to a transformation program, over 60% of the companies sampled rate performance and availability as major priorities for their transformation.

**In line with this focus on delivery, IT operational capabilities are ranked as most important.**
'Cooler' capabilities such as APIs and orchestration are important, but IT ops management (including operations analytics, infrastructure as code etc.) gets top place, ranked highly important by 52% or organizations.

**Many organizations still prefer on-site solutions.**
Notwithstanding the benefits of public/hybrid cloud solutions, 42% of organizations are considering solutions that deliver 'public cloud'-style capabilities, delivered on-premises.

**Partner support is important.**
Cloud service providers, systems integrators, and managed service providers are regarded as somewhat or very important partners for infrastructure transformation by 90% of companies, split fairly equally between the two categories.

**Cyber security is still a significant concern.**
Two thirds of all organizations sampled find security to be a major challenge. This has now become a board-level issue, because of the much more stringent requirements of the EU GDPR and NIS regulations.

**Provider location is now embedded into transformation policy.**
A third of organizations will only use cloud/hosting delivered from EU DCs. Another third will only source from EU headquartered organizations. The remaining third is agnostic regarding national boundaries, preferring to buy according to technical criteria.

# KEY TRENDS

**Services**

The services sector is much more likely to be driven by competitive pressure than other segments. Some **55%** of services companies see competitive pressure as a major driver, compared with less than **45%** in manufacturing and less than **40%** in the public sector. IT operations management (analytics, infrastructure as code, etc.) is over-represented in the services sector, where it is in production for **60%** of businesses, compared with only **40%** of organizations in the public sector. Compliance is a challenge for the services sector (a major issue for nearly **55%**, compared with **40%** of organizations in manufacturing and public sector).

**Manufacturing**

Manufacturing leads the market in cloud adoption: approx. **30%** already have half their IT in the cloud, compared with only **20%** in other sectors. It is also ahead in public cloud adoption – in manufacturing, it is **twice** as common for an organization to have more than **75%** of its cloud IT delivered from the public cloud, compared with services or public sector.

**Public Sector**

Understandably, the public sector is not driven by new market opportunities in the same way as the private sector (it is a major driver for less than **40%** of public sector organizations, compared to **50–59%** of organizations in other sectors). DevOps is also much less important: in the public sector, it is highly important to only **20%** of organizations, compared with **40%** in manufacturing and services. The proportion of public-sector organizations that regard digital transformation as vendor marketing is twice as large (at **11%**) as in other sectors (**3–6%**).

**Key trends by region**

**France**

France is particularly motivated by ecosystem disruption (a major driver of transformation for **48%** of French organizations) – this is nearly double the rate of other regions. France is also very open to outsourcing – **56%** of French organizations outsource most of their traditional infrastructure, almost twice the rate of other regions.

**DACH (Germany, Austria, Switzerland)**

DACH is polarized between cloud believers and cloud skeptics. Consequently, the proportion of non-cloud users is highest there (**14%**), but equally the proportion that have more than 75% of their IT in the cloud is also highest here (**20%**).

**UK**

**68%** of UK organizations are either in the thick of their transformation, or already fully digital. This enthusiasm for transformation is driven by self-interest: **62%** of UK organizations see digital transformation as an opportunity to access new markets.

**Nordics + Benelux**

In the Nordics & Benelux, **50%** of organizations have less than a quarter of their IT in public and/or private clouds. This is a surprising finding from a region synonymous with early adoption of new technology, and places this region behind UK, France and Germany.

# MARKET CONTEXT AND DRIVERS OF INFRASTRUCTURE TRANSFORMATION

The term "digital transformation" has been used extensively for the last three to four years, and there is now broad market consensus that digital transformation is a real and present phenomenon. Based on the evidence of their own eyes, a wide variety of organizations now understand that:

(a) digital technology can enable them to innovate their business model in previously unimagined ways

(b) if they do not take advantage of these new possibilities, it is inevitable that eventually a competitor will do so.

Organizations of all sizes and in all vertical sectors are now attempting to reinvent themselves to take advantage of these new digital opportunities. For many organizations, the fear of losing their existing market is even greater than the attraction of new opportunities. This competitive pressure is driving organizations of all types to embrace change by adopting a digital solution, which, in turn, has major impacts on their overall infrastructure strategy. Throughout the developed world, most organizations are embracing their digital future. Consequently, some of the most traditional sectors, including banking, automotive and transport, are now exploring digital transformation.

**53%** of CIOs in PAC's sample consider digital transformation to be the natural evolution of their services, to accommodate the changing needs of internal stakeholders and users.

**To set the scene, we first asked what digital transformation means to European organizations:**



The natural evolution of services to meet new needs — 53%

Opportunity to change our business model and to step into new markets — 41%

Buzzwords only, introduced and used by technology vendors — 6%
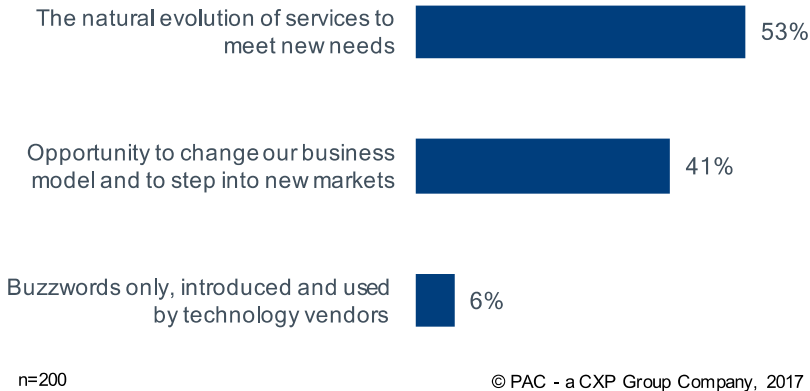
n=200

© PAC - a CXP Group Company, 2017

Fig. 1:   Which of the following best describes what digital transformation means to you?

The overall picture, looking at all segments and all geographic markets, is unambiguous: digital transformation is real for European organizations.

Given that so many European businesses believe that digital transformation is real, how much progress have these businesses made in their own transformations?

The results show that for the huge majority of organizations, digital transformation is still work in progress. For almost **40%** of all organizations, digital transformation is still in its very earliest pilot phases. Another **45%** are in the thick of transforming their infrastructure for digital, indicating that – within 12 to 18 months – almost half of all European businesses will have made significant headway with their transformation initiatives.

For great majority of organizations that PAC sampled (over

# 80%), digital

transformation is work in progress – either in an early or a mature phase.



Our organization is entirely focused on the digital transformation of infrastructure — 14%

We are in the thick of transforming our infrastructure for Digital and have already successfully implemented a number of related projects/initiatives — 44%

At the very beginning, first pilot projects — 38%

Not started yet, we are still evaluating/discussing the opportunities — 4%
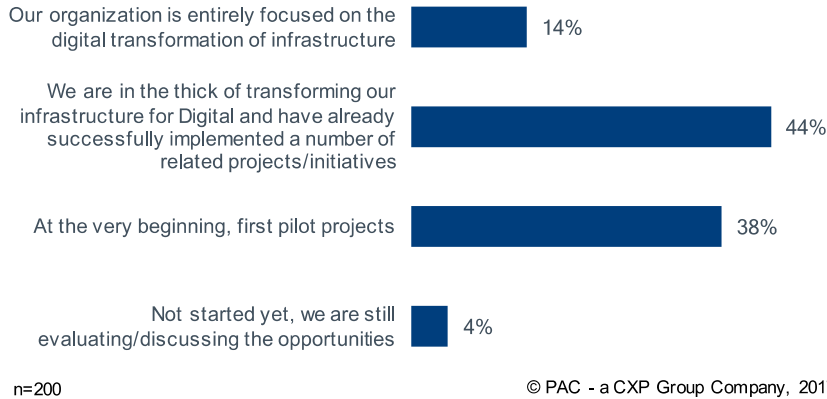
n=200

© PAC - a CXP Group Company, 2017

Fig. 2:   Which of the following best describes the status of your digital transformation journey with respect to your IT infrastructure?

# TRIGGERS, GOALS AND PREFERRED SOLUTIONS

There is a very clear separation between what triggers the need for digital transformation, and the goals defined for the delivery of this transformation.

The triggers of digital transformation overwhelmingly relate to market pressures. By far the most important drivers for transformation initiatives are the need to respond to customer demand (which is a highly important factor for **57%** of respondents, and the opportunity to exploit new markets (highly important to **50%** of the market). This reflects the new reality that almost all existing business ecosystems are susceptible to disruption through digital technology. Alongside these 'pull factors', there are also 'push factors' that drive organizations to initiate digital transformation to avoid predictable bad outcomes – over **90%** of respondents regard competitive pressure as a driver of digital transformation and for **46%** this is a major consideration. Having decided that digital transformation is called for, the business goals are broken down into more concrete, operational requirements. For most of the market, this is articulated in terms of performance and availability – which is clearly the **number**

**Market pressures** are by far the most important triggers of digital transformation, way ahead of simple infrastructure modernization requirements.

Overall, **customer demand** is the most compelling driver of transformation, rated highly important by

# 57% of organizations.

**one** infrastructure priority, even in the planning and execution of infrastructure transformation initiatives.
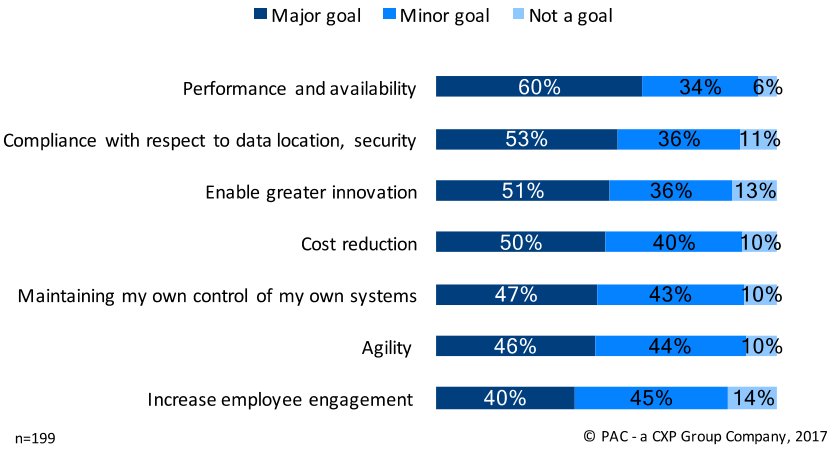
Fig. 3: Which of the following do you consider a major, minor or not a business goal for your organization with respect to digital infrastructure transformation?

Compliance (with regard to both data location and data security) is the number two priority, subsidiary in importance only to the primary goal of availability and performance. **Over half** of all organizations highlight compliance as a major goal of their infrastructure transformation.

Once committed to a transformation programme, **over**

# 60% of

companies see **performance and availability** as a main priority for their Transformation – reflecting the **critical importance** of infrastructure to businesses today.
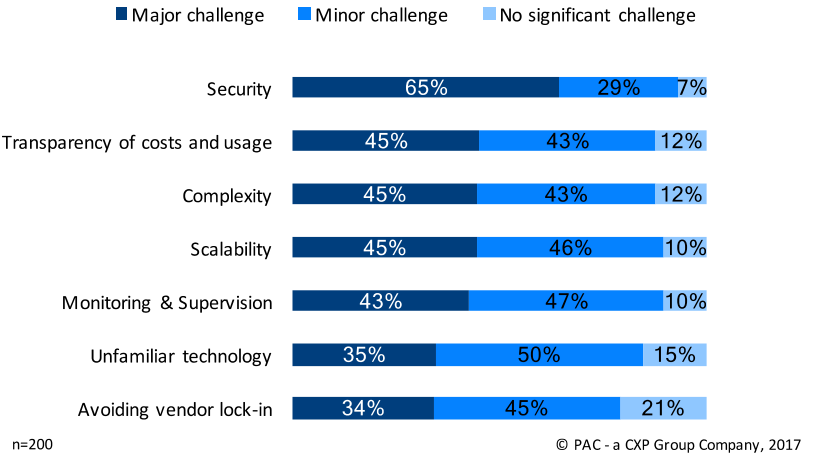
Fig. 4: Which of the following present a major, minor or no significant technological challenge when it comes to your digital infrastructure transformation program?

In terms of technology barriers, security is a major challenge to **65%** of respondents – unsurprisingly, since cyber events, when handled badly, now pose an existential threat to an organization. Alongside this, **45%** had major challenges regarding transparency of costs and usage. This fear of uncontrolled consumption-based charges is understandable, especially where the Infrastructure team is unable to

cap usage and/or recharge it. Alongside this are concerns that transformation may increase complexity and reduce scalability. In PAC's experience, some organizations do create complexity through "service sprawl", but this is easily avoided through active management. Scalability should not be a concern – modern infrastructure services are specifically designed to avoid this.

The litmus test of market attitudes towards newer technologies and practices is what users actually put into production. The study shows that the services and technologies that the market regarded as most important are also those that are most likely to be in production today. This correlation is illustrated in the graph below.

■ Very important    ■ Using in production

| Capability | Very important | Using in production |
|---|---|---|
| IT operations management | 52% | 52% |
| Cloud orchestration | 40% | 44% |
| APIs (application programming interfaces) | 37% | 45% |
| Containers | 30% | 29% |
| SDDC (software-defined data center) | 28% | 33% |
| SDN (software-defined networking) | 26% | 35% |

n=195

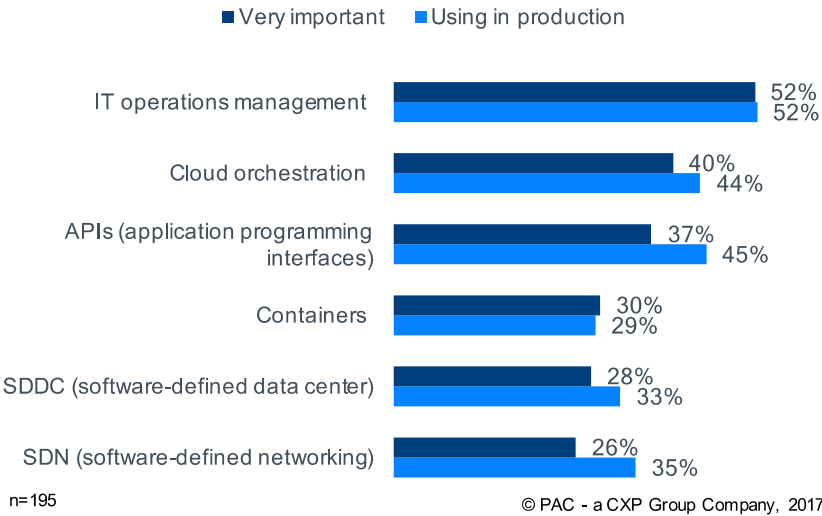© PAC - a CXP Group Company, 2017

Fig. 5:    Comparison of importance and production use of key capabilities

This conservative perspective aligns with market preferences regarding platform preferences, where there is a strong bias towards on-premises solutions. Almost **half the market** is considering old-fashioned in-house virtualization, and **42%** of our respondents are considering the option of an on-premises public cloud. For a long time, the industry has considered this idea as somewhat oxymoronic. However, solutions are now becoming available from Microsoft, Oracle, and (eventually) from Alibaba, which offer the promise of public cloud performances, on-site.

Interestingly, public cloud solutions (which have dominated media headlines for the last few years) are only in third place, albeit by a narrow margin. Conclusion: public cloud solutions are definitely under consideration, but are not yet the default preferred solution.

Self-managed private cloud / virtualization — 48%
Public cloud-style technologies, delivered on-premise — 42%
Self-managed public cloud — 41%
Third party-managed private cloud / virtualisation — 36%
Third-party-managed public cloud — 30%
Hybrid / multicloud solutions — 28%
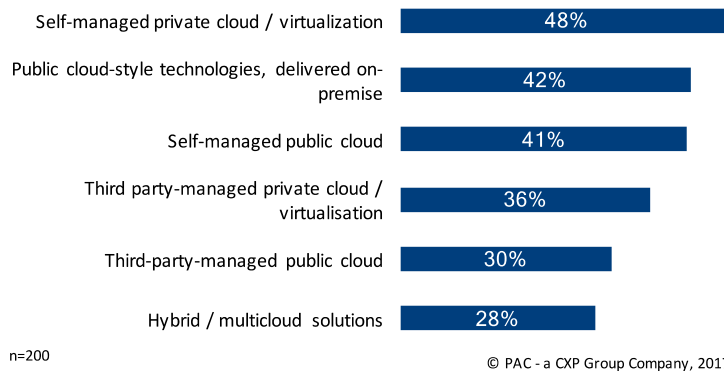
n=200

© PAC - a CXP Group Company, 2017

Fig. 6: Which cloud models are you considering as possible solutions for your digital infrastructure transformation?

Once the infrastructure solution has been agreed, the next major challenge is to determine how best to migrate applications onto the new platform. Our study reveals that several different approaches are more-or-less equally popular in the market.

The most popular approach is selective migration. The focus is on migrating only the components that can take advantage of cloud characteristics, and the target is a hybrid or multi-cloud infrastructure. This pragmatic approach is preferred by around one third of the market, and shows that the market is open to cloud solutions, albeit only where there are demonstrable benefits.

The rest of the market is split roughly evenly between-engineering applications to take advantage of cloud technologies, migrating (where possible) to third-party SaaS, and moving existing on-premises applications unchanged to the cloud. Ultimately there is no single approach that is preferred by most of the market.

Moving to cloud-based or cloud-like solutions is a key foundational step for infrastructure transformation, but for most of the market this is far from simple. The fact that almost all organizations are nonetheless engaged in transformation, only highlights the key enabling importance of infrastructure today. Done well, infrastructure is now capable of unlocking enormous value for the business, and this is the ultimate goal of infrastructure transformations across all sectors of European business.

One of the most interesting findings about how organizations plan to move to the cloud, is the absence of any single approach preferred by most of the market

# CONCLUSIONS

European businesses have accepted that digital transformation is not only a reality, but also a necessary enabler both for defending existing markets and for penetrating new ones.

The huge majority of European organizations are already engaged in transformation initiatives – in fact, only 4% have not yet started. However, almost 40% are just at the very beginning of their journey, which means that many will not have completed their transformation by 2020.

Although the CIO plays the largest role, the CEO of 40% of organizations is also strongly involved in selecting technology for transformation. This underscores the criticality of digital transformation to the health (or even survival) of the business.

While digital transformation is initiated principally due to new market pressures (e.g. customer demand, the need to access new markets), the delivery priorities are very traditional, and place performance and availability before anything else.

The technologies considered for transformation are conservative. Although the public cloud gets lots of press attention, most users actually plan to use private clouds /virtualization (whether outsourced or in-house) or other on-premises cloud-like solutions (e.g. Azure Pack, FlexPod, etc.)

The greatest challenges to transformation are largely the same as those faced during any major IT project in the current environment. Getting firm commitment to resources (e.g. time, people, skills, budgets, etc.) is a barrier for more than 50% of organizations. In parallel, concerns about security are a challenge for two thirds of organizations.

While these fears are understandable, this overlooks the opportunity that transformation presents. Properly delivered, transformation will result in much more agile, more efficient IT, which will make much better use of available resources. At the same time, new infrastructures provide a rare opportunity to implement a much more robust solution that is capable of delivering the availability, performance and security that modern businesses require. Ultimately, infrastructure transformation is the critical enabler of digital transformation.
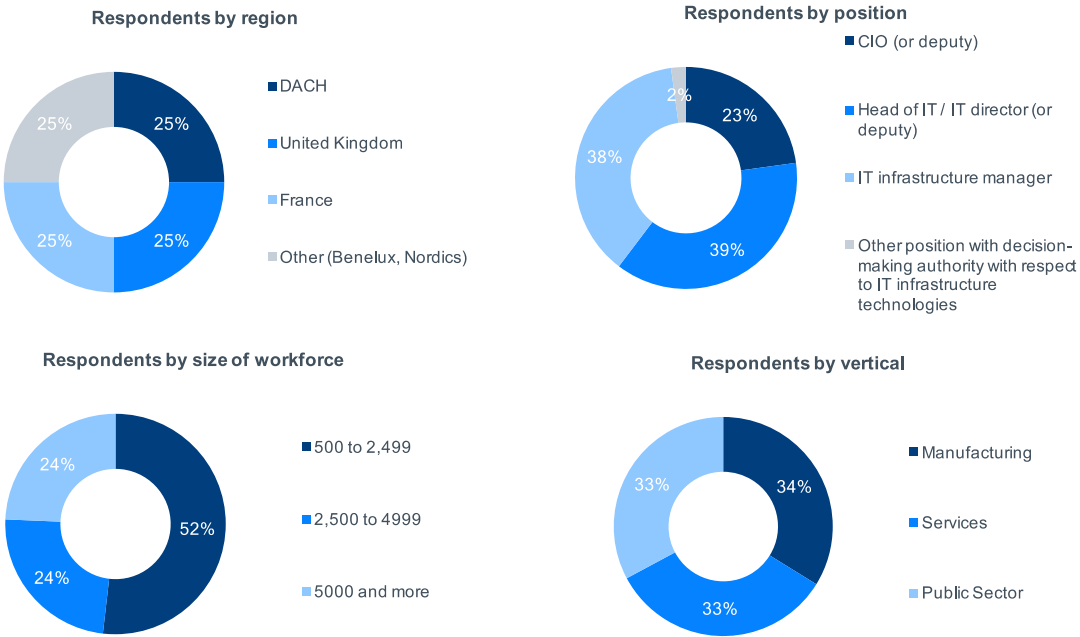
# METHODOLOGY

This study is based on interviews with senior IT decision-makers who play a major role in their company's digital transformation initiatives. The primary research supporting this study was completed during the third quarter of 2017.

Typically, respondents were CIOs or deputy CIOs, heads of IT/IT directors (or their deputies), and IT infrastructure managers.

The sample comprised representatives of 200 European organizations active across a broad range of industries, commerce and the public sector. To ensure an internationally representative sample, research was conducted among companies from the DACH German-speaking countries, the UK, France and others (Benelux, Nordics).

The profiles of organizations polled was split evenly between mid-size organizations (500-2,499 employees) and larger entities (over 2,500 employees). The following graphic gives a more detailed breakdown of study participants:

**Respondents by region**

- DACH — 25%
- United Kingdom — 25%
- France — 25%
- Other (Benelux, Nordics) — 25%

**Respondents by position**

- CIO (or deputy) — 23%
- Head of IT / IT director (or deputy) — 39%
- IT infrastructure manager — 38%
- Other position with decision-making authority with respect to IT infrastructure technologies — 2%

**Respondents by size of workforce**

- 500 to 2,499 — 52%
- 2,500 to 4999 — 24%
- 5000 and more — 24%

n=200

**Respondents by vertical**

- Manufacturing — 34%
- Services — 33%
- Public Sector — 33%

© PAC - a CXP Group Company, 2017

# ABOUT FUJITSU

**About Fujitsu**

Fujitsu is the leading Japanese information and communication technology (ICT) company, offering a full range of technology products, solutions, and services. Approximately 155,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. Fujitsu Limited (TSE: 6702) reported consolidated revenues of 4.5 trillion yen (US $40 billion) for the fiscal year ended March 31, 2017.

For more information, please see http://www.fujitsu.com

**Contact**:

Wolfgang Ries
Chief Marketing Officer
Fujitsu Enabling Software
Technology GmbH
M: +49 17 61 90 18 00 5
E: wolfgang.ries@est.fujitsu.com

**About Fujitsu EMEIA**

Fujitsu enables customers to capitalize on digital opportunities with confidence, by helping them to balance robust ICT and digital innovation. Fujitsu's full portfolio of products, solutions and services gives its customers a competitive advantage in the era of digital transformation. In Europe, the Middle East, India and Africa (EMEIA) the company employs more than 29,000 people.

For more information, please see http://www.fujitsu.com/fts/about/

# ABOUT PAC

Founded in 1976, Pierre Audoin Consultants (PAC) is part of CXP Group, the leading independent European research and consulting firm for the software, IT services and digital transformation industry.

CXP Group offers its customers comprehensive support services for the evaluation, selection and optimization of their software solutions and for the evaluation and selection of IT services providers, and accompanies them in optimizing their sourcing and investment strategies. As such, CXP Group supports ICT decision makers in their digital transformation journey.

Further, CXP Group assists software and IT services providers in optimizing their strategies and go-to-market approaches with quantitative and qualitative analyses as well as consulting services. Public organizations and institutions also base the development of their IT policies on our reports.

Capitalizing on 40 years of experience, based in 8 countries (with 17 offices worldwide) and with 140 employees, CXP Group provides its expertise every year to more than 1,500 ICT decision makers and the operational divisions of large enterprises, as well as to mid-market companies and their providers. CXP Group consists of three branches: Le CXP, BARC (Business Application Research Center) and Pierre Audoin Consultants (PAC).

For more information, please visit: www.pac-online.com

PAC's latest news: www.pac-online.com/blog

Follow us on Twitter: @CXPgroup

A CXP GROUP COMPANY

# DISCLAIMER, USAGE RIGHTS, INDEPENDENCE AND DATA PROTECTION

The creation and distribution of this study was supported among others by gold sponsor Fujitsu.

For more information, please visit www.pac-online.com.

### Disclaimer

The contents of this study were compiled with the greatest possible care. However, no liability for their accuracy can be assumed. Analyses and evaluations reflect the state of our knowledge in November 2017 and may change at any time. This applies but not exclusively, to statements made about the future. Names and designations that appear in this study may be registered trademarks.

### Usage rights

This study is protected by copyright. Any reproduction or dissemination to third parties, including in part, requires the prior explicit authorization of the sponsors. The publication or dissemination of tables, graphics etc. in other publications also requires prior authorization.

### Independence and data protection

This study was produced by Pierre Audoin Consultants (PAC). The sponsors had no influence over the analysis of the data and the production of the study.

The participants in the study were assured that the information they provided would be treated confidentially. No statement enables conclusions to be drawn about individual companies, and no individual survey data was passed to the sponsors or other third parties. All participants in the study were selected at random. There is no connection between the production of the study and any commercial relationship between the respondents and the sponsors of this study.