Architecting a Next-Gen Hybrid Cloud to Support Digital Resilience in 2021 and Beyond

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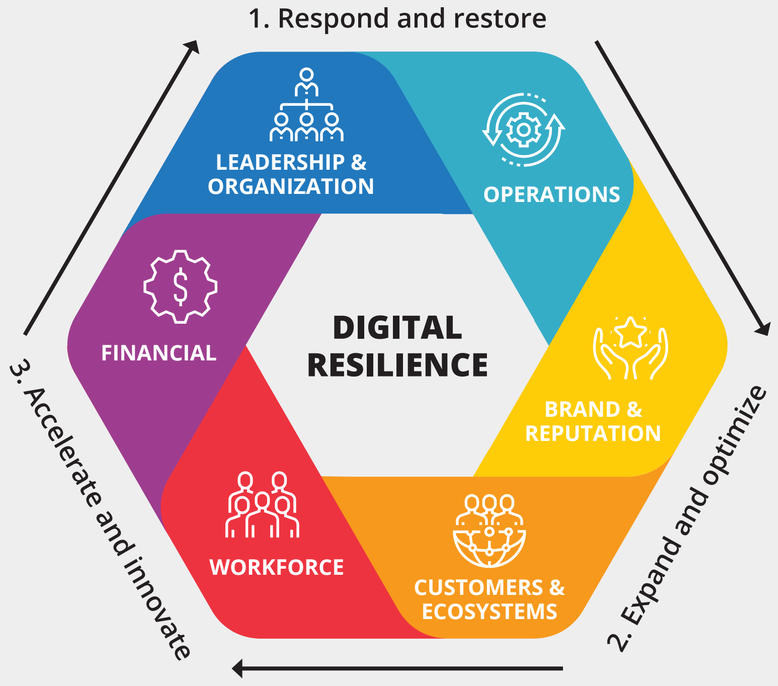
Why Digital Resilience Matters

A key learning from the pandemic is that organizations need to be prepared for unforeseen disruptive global events. Digital resilience helps them to prepare.

What is digital resilience?

The ability for an organization to rapidly **adapt** to business **disruptions** by leveraging **digital capabilities** to not only **restore** business operations, but also **capitalize** on the changed conditions.

Digital resilience has six dimensions that organizations need to master to deal with a volatile future. There are three steps in the digital resilience process:



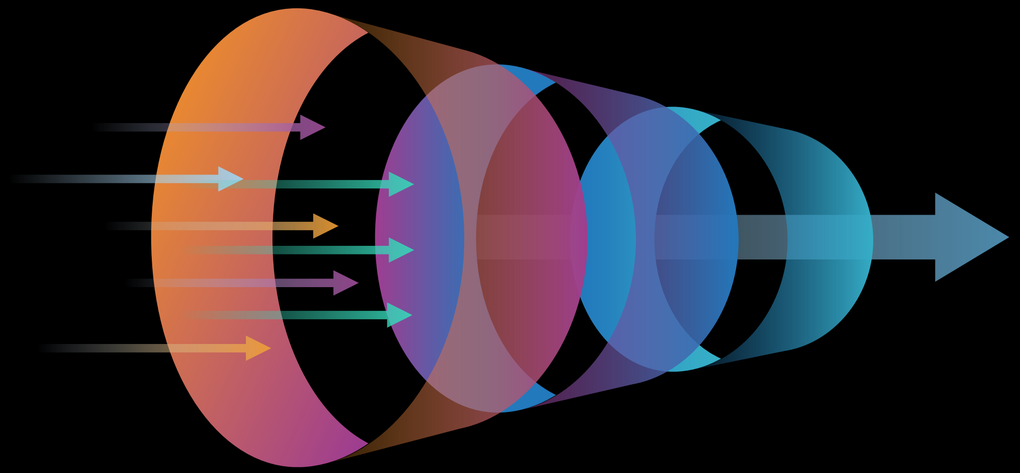
Building a Digitally Resilient Enterprise Using Digital Technologies and Platforms

BEFORE COVID-19

BUSINESS RESILIENCE

IT RESILIENCE

Digital resilience is the convergence of two previously separate functions — business and IT resilience — because **business is IT!**



FUTURE

TIME

By 2022, 70% of all organizations will have accelerated use of digital technologies, transforming existing business processes to drive customer engagement, employee productivity, and business resilience.

Source: IDC Digital Resilience Framework Research, 2020

Key Investment Areas to Drive Innovation, Adaptability, and Resilience

Digital resilience is about balancing investments in infrastructure with investments in business innovation. Investments in IT and hybrid cloud are investments in digital innovation.

Digital core investment, 2019–2024 CAGR

Digital transformation spend

18% ↑

Hybrid cloud

22% ↑

Security investment

6% ↑

Hybrid work

22% ↑

A third of EMEA organizations expect **IT spend to be higher in 2021**.

Technology objectives are also changing to focus on business value, growth, and innovation:

65%
Using technology to deeply transform a few parts of the business as opposed to broadly transforming the entire organization

62%
Focused on reducing the time to value from technology investments

61%
Using technology to obtain actionable insights about customers and operations

55%
Aggressively shifting to consumption models

Digital investment areas will **outpace the 5% CAGR for overall IT spend** to 2024.

Source: IDC Directions, March 2021

Significant Role of Cloud-Centric Infrastructure to Support Digital Resilience

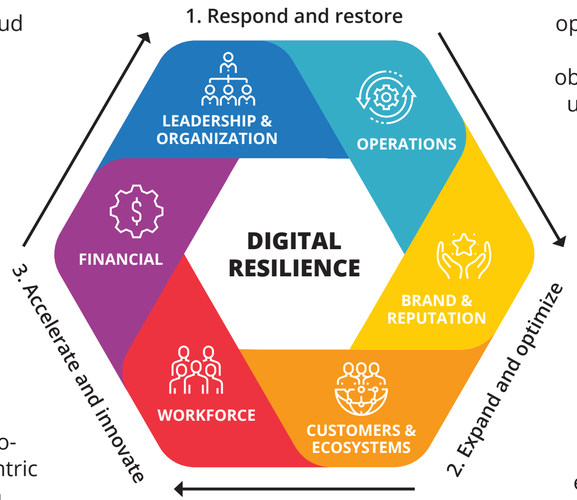
Infrastructure resilience delivered through a hybrid cloud strategy and developer services such as containers and open APIs are seen as critical for digital resilience

Cloud architectures play a key role in succeeding in every digital resilience dimension:

Leadership and organization: Hybrid cloud culture, cloud center of excellence, DevOps/agile development

Financial: Cost optimizations, CloudFinOps, strong links between investment and business outcomes

Workforce: Overcoming cloud skills gaps and complexities, low-code/no-code task apps, cloud-centric development, application refactoring for cloud



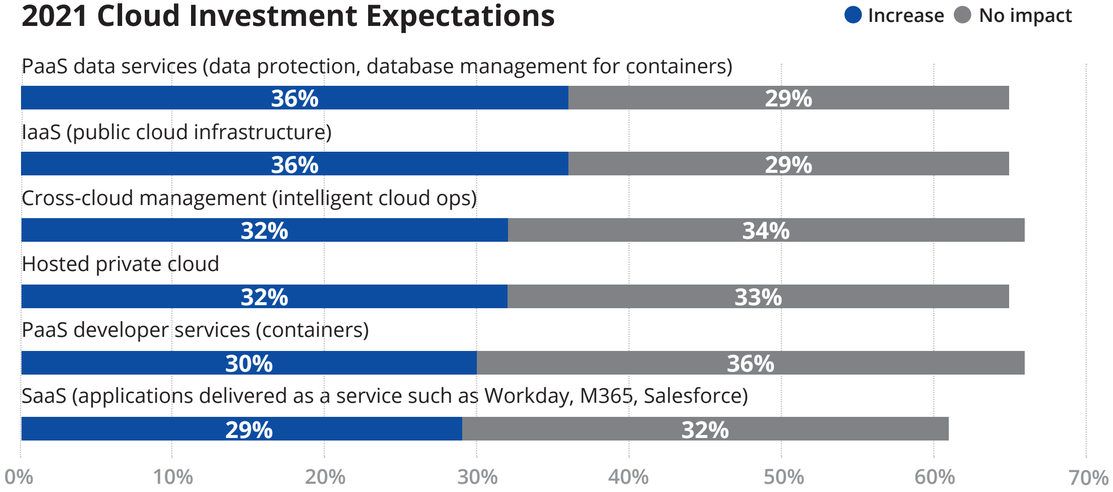
Operations: Optimized operations at scale, intelligent operations through observability, operationalizing use of next-gen technologies such as containers

Brand and reputation: Application performance and stability; cloud governance, security, and trust; privacy and compliance

Customers' ecosystems: Community-delivered innovation, open ecosystems, interoperability and standardizations

Steady investment growth is expected across hybrid cloud and container platforms to meet **innovation and resilience expectations**.

2021 Cloud Investment Expectations



* Excludes not stated / don't know

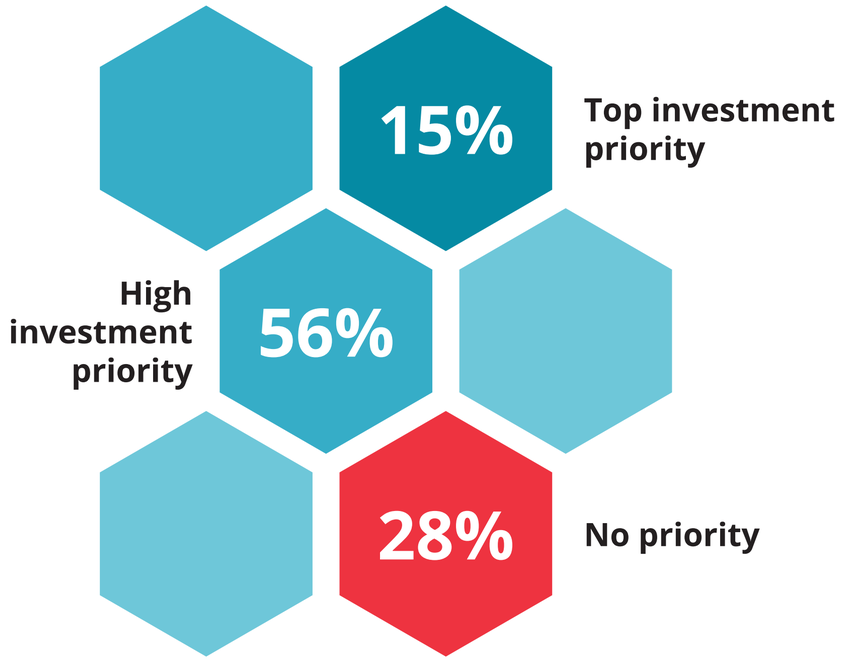
A third of organizations in Europe expect an increase in 2021 spending on all types of cloud infrastructure despite tight budgets.

76% of hybrid cloud users see IT as a "driver of competitive advantage" or "enabler of business efficiency," compared with 67% of non-hybrid cloud users.

Source: FERS Survey Europe, Wave 4, May 5–16, 2021 (n = 530); IDC European Multicloud Survey, 2020

Investment in Digital Infrastructure Resilience Rises in Priorities

Only 28% consider it as "no priority"



Digital infrastructure resilience continues to be a core enabler of modern digital business. 71% of organizations see it as a top or high investment priority. Key areas where enterprises will invest:

- Hybrid/multicloud solutions for frictionless connectivity and visibility (**76% already have hybrid cloud environments and are working on integrations**)
- Containers, software-defined on-prem infrastructure, and cloud-native platforms (**57% already use them**)
- Professional services to overcome complexities (**54% of organizations engage a cloud services company during the migration and integration phase**)
- Formal governance processes for risk mitigation and data protection (**58% are already following this to varying degrees**)
- Observability (**16% of organizations have identified observability tools as an area of key investment to optimize cloud operations**)
- Unified cloud management plane for greater consistency of operations

Cloud infrastructure is cited as the most critical technology for remote business operations in the post-pandemic world.

Source: FERS Survey Europe, Wave 4, May 5–16, 2021 (n = 530)

Digital Infrastructure Resilience: Expectations and Inhibitors

Digital infrastructure is expected to enable business outcomes around innovation, risk reduction, and efficiency. It is expected to leverage automation and data-driven strategies for successful business transformation.

EXPECTATIONS

35%
New digital products and services

35%
Improve business insight with data

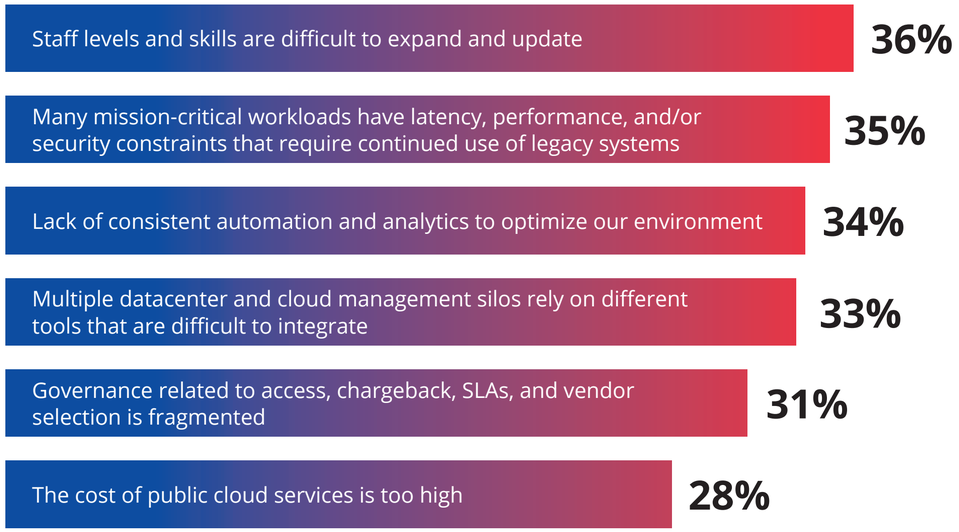
32%
Reduce risk with security automation

30%
Simplify multicloud management

29%
New business from edge and branch solutions

Inhibitors need to be addressed with modern integrated architectures to achieve business outcomes and meet expectations.

Inhibitors to Achieving Expectations



The ability to deliver various types of cloud environments consistently, cost efficiency, and rich cloud ecosystem are the top 3 attributes organizations are looking for in their modern hybrid cloud partner.

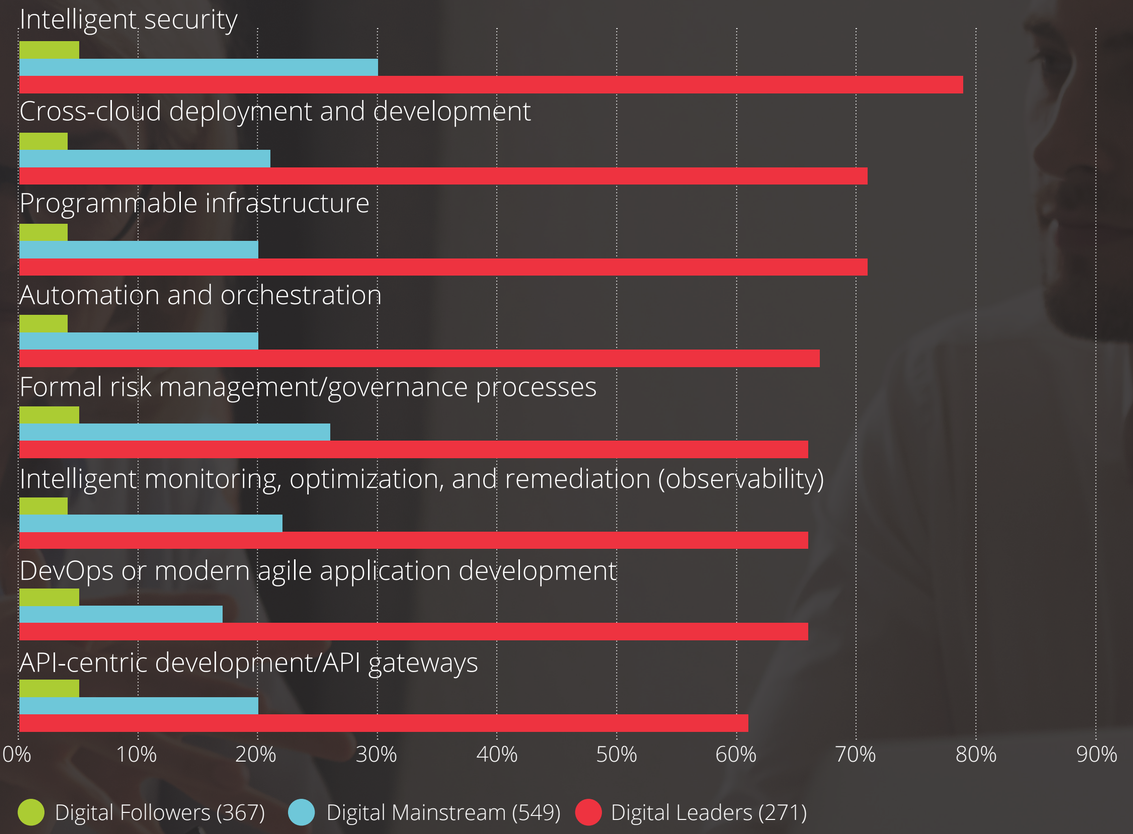
Source: FERS Survey Europe, Wave 4, May 5–16, 2021 (n = 530); IDC European Multicloud Survey, August 2021

Digital Leaders Are “Cloudifying” On-Premises Infrastructure and Relying on Modern Infrastructure Capabilities More Than Digital Followers

Digital Leaders rely on advanced IT approaches to deliver agility and flexibility because they recognize that:

- Automation and orchestration are key to effective IT service delivery — building on top of cloud-ready infrastructure and applications.
- Intelligent management and observability can help adapt to changing workloads and identify potential bottlenecks and threats in advance for effective remediation.
- Cloud-native architectures and container management holistically can eliminate complexities and cost wastage.
- Security, governance, and cloud economics are first considerations.

Extensive Use of Advanced Capabilities in IT Environments



Source: IDC European Multicloud Survey, 2020

Containers Are a Key Enabler for a Successful Hybrid Multicloud Architecture

Containers enable the next wave of digital infrastructure — and adoption is on the rise. Containers will be the new backbone for cloud-native applications and modernized applications alike. Getting containers right is critical for success. Containers help modernize on-premises cloud and enable cross-cloud mobility and operations.

CLOUD-NATIVE APPS

kubernetes

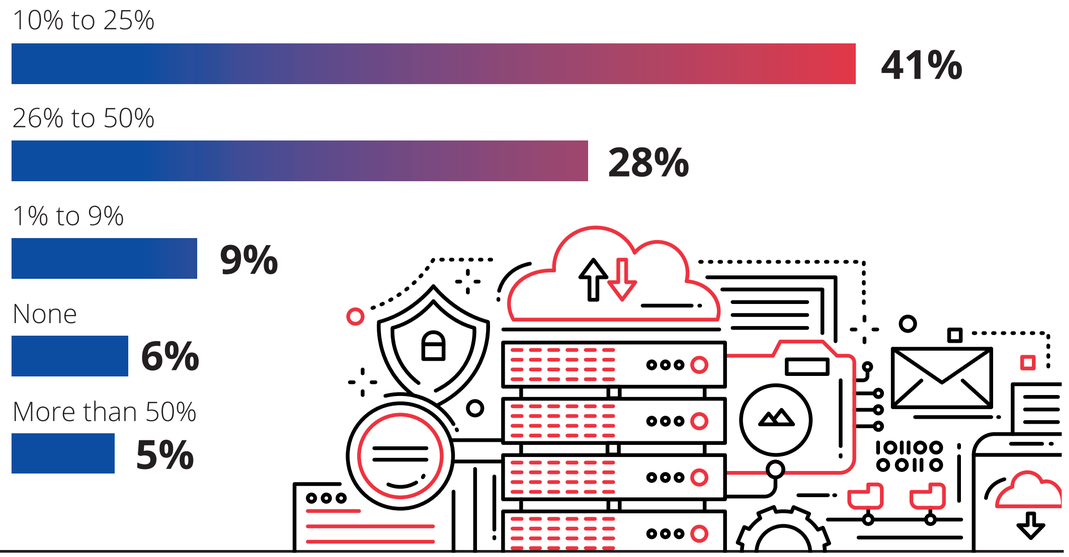
By 2024, net-new production-grade cloud-native apps will increase to 70% from 10% of all apps in 2020, due to adoption of technologies such as microservices, containers, dynamic orchestration, and DevOps.

IDC FutureScape

Two-thirds of midsize and large organizations in Europe indicate that by 2022 cloud-native initiatives will be integrated across various parts of their businesses.

More than 7 out of 10 European organizations are already running more than 10% of their applications on containers

Proportion of Applications Running on Containers Today (August 2021)



Access to Containers, Agile Infrastructure, and Cloud Experience On-Premises Makes Hybrid Cloud a Reality

Application and digital innovation components come to datacenters — time to drive standardization, integration, automation, and consistent management to find success in modern hybrid cloud

- DevOps and developer friendly
- VMs and containers
- Automation and orchestration
- Simplicity
- Modern experience

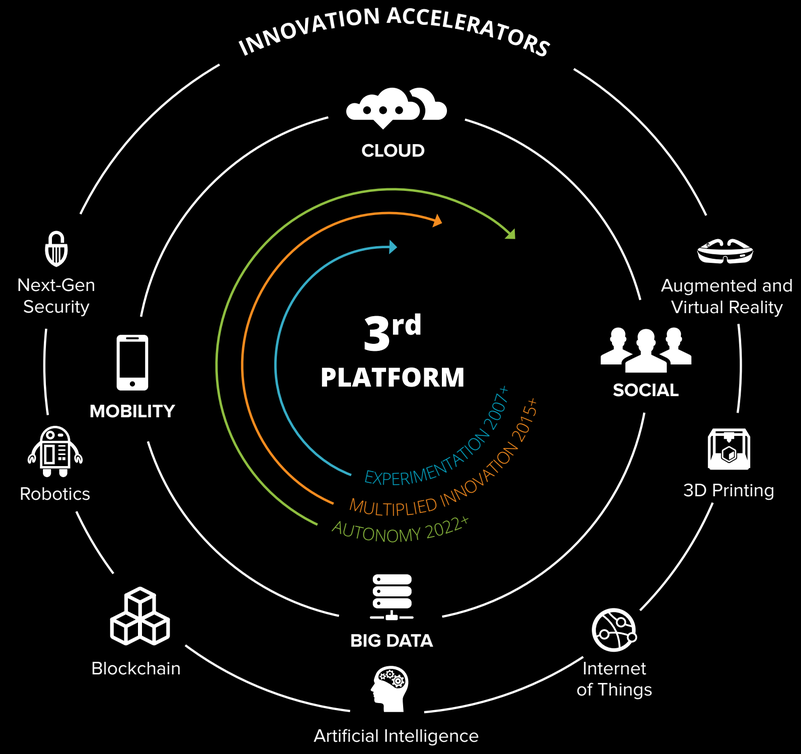
Platform for innovation

- Intelligent ops
- Full stack management from single vendor for simplicity
- Cross-cloud operations

Agile application architectures

- Trust and security by design
- Resilience
- Data management (backup, DR, and security of world-class standards)
- Sustainability
- Cost efficiency

Foundation for "digital trust"



IDC Custom Solutions

Programmable infrastructure

- Evolve to be agile, scalable, software defined, API driven, and code centric
- Fault tolerant, highly available
- Workload accelerators
- Standardized
- Integrated
- Cloud-connected to eliminate silos

Modern processes and culture

- Build automation and monitoring templates for infrastructure and apps
- Identify skills needed and training plan/recruitment
- Continuous optimization, monitoring, and review
- Set aside time and budget to manage technical debt
- Focus on business outcomes, long-term cloud strategies, and modern experience

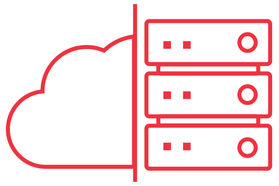
Cloud-like architectures now possible on premises

Modern on-prem and public cloud together deliver modern hybrid cloud necessary for continuous innovation and resilience

Cloud-like infrastructure, processes, and operations now possible on premises

Ultimate Hybrid Cloud Resilience Goal: Application Centricity and Optimized Operations

Organizations are building modern hybrid cloud architectures that can deploy any workload on the most suitable part of hybrid cloud with ease and fluidity

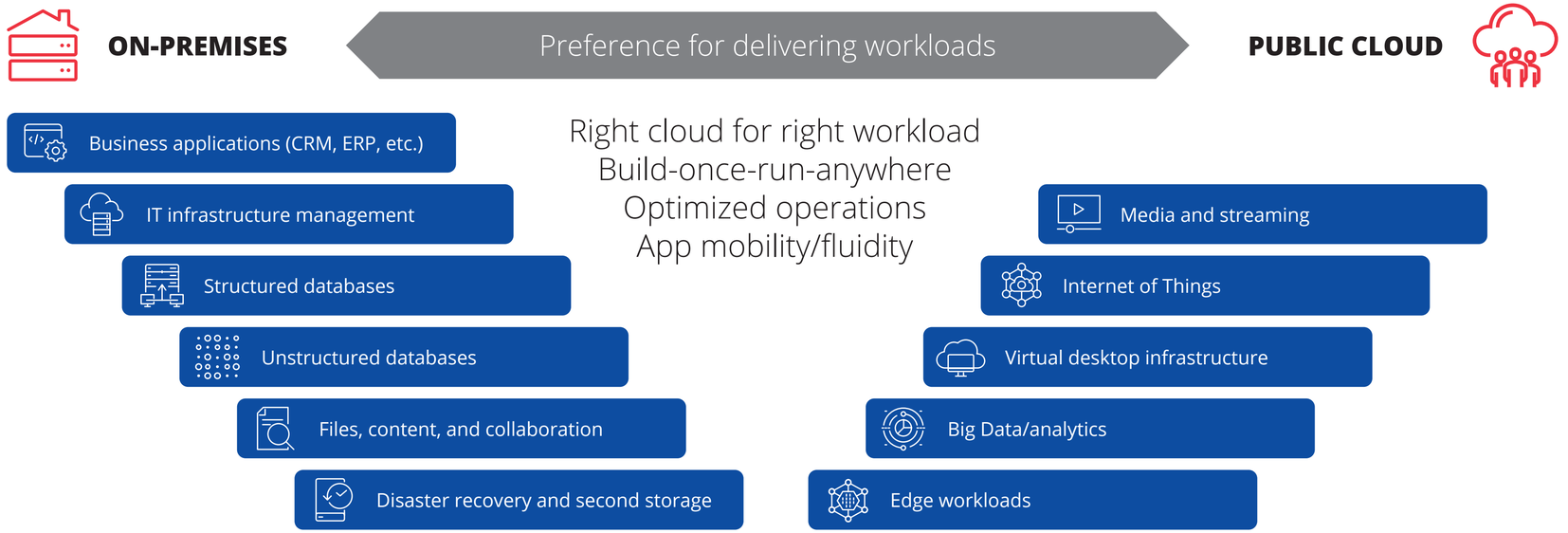


Hybrid cloud is a default reality for most European organizations …

8 in 10

… but true success requires consistent and standardized operations

Expectations from modern hybrid cloud — app and data fluidity, standardized operations and management, unified experience on any infrastructure



Top 5 areas identified for immediate investment to optimize cloud operations

- **23%** Security operations center
- **21%** Application and infrastructure performance management
- **20%** Continuous monitoring, remediation, and optimization tools
- **19%** Cloud cost assessment
- **19%** Cloud center of excellence for best practices and standards

Source: IDC European Multicloud Survey, August 2021

Ultimate Hybrid Cloud Resilience Goal: Application Centricity and Optimized Operations

Healthcare IT services company

Business objective: **operational resilience**

As an IT service provider for the healthcare insurance sector, the company needed a high degree of scale, self-service, automation, and cross-cloud operations

Challenges

- Rigid hardware-defined infrastructure
- Management complexities and overheads
- Lack of adaptability
- Absence of cloud-like experience

Solution and benefits

- Modern hyperconvergence-based private cloud with integrations to public cloud and edge that was implemented as a turnkey infrastructure solution
- Benefits include cloud-centric IT that meets business objectives through high automation, flexible cloud operations, and unified control plane for management and self-service

SAP service specialist

Business objective: **operational resilience**

Expand customer base by ensuring high degree of customer satisfaction through best-in-class SAP services to customers

Challenges

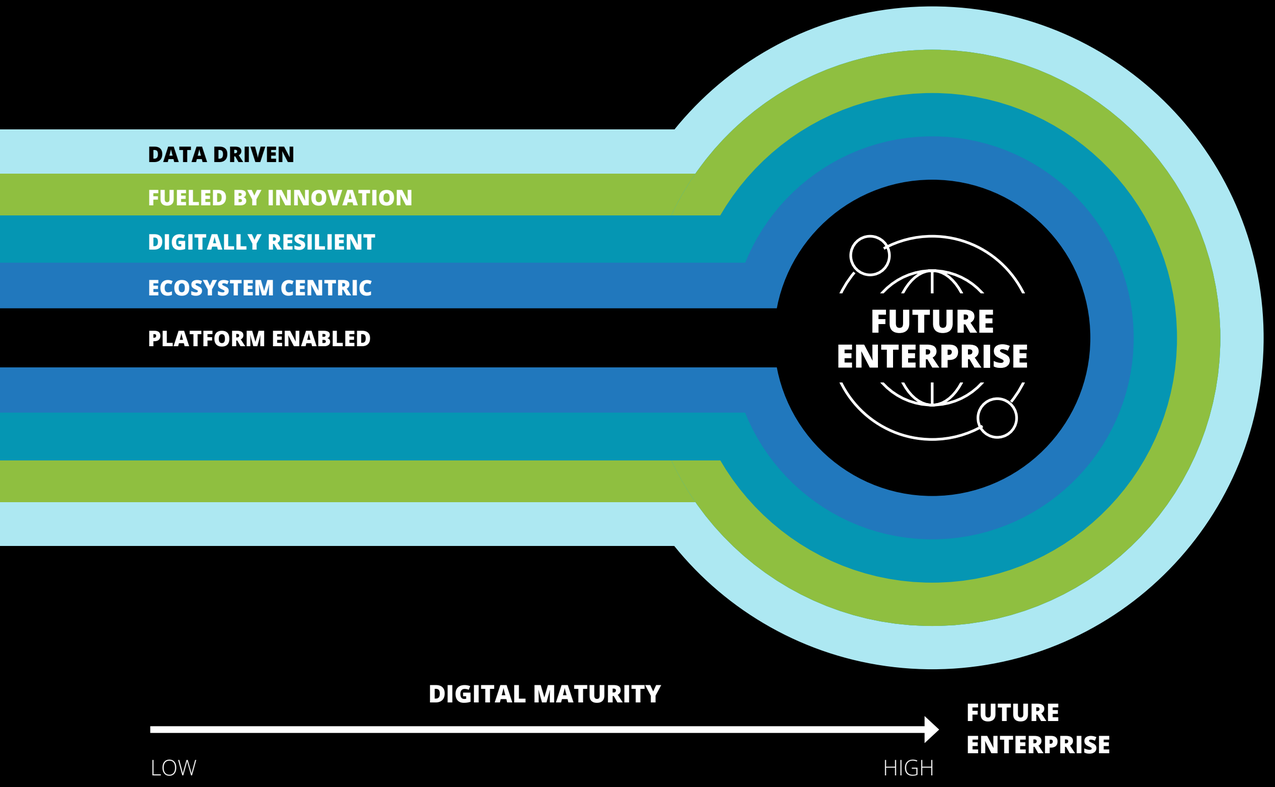
- Doubling the customer base without compromising on quality, manageability, and customer experience was unachievable with existing technology architectures
- Need to shift from lengthy migrations and planned downtime that was resource intensive

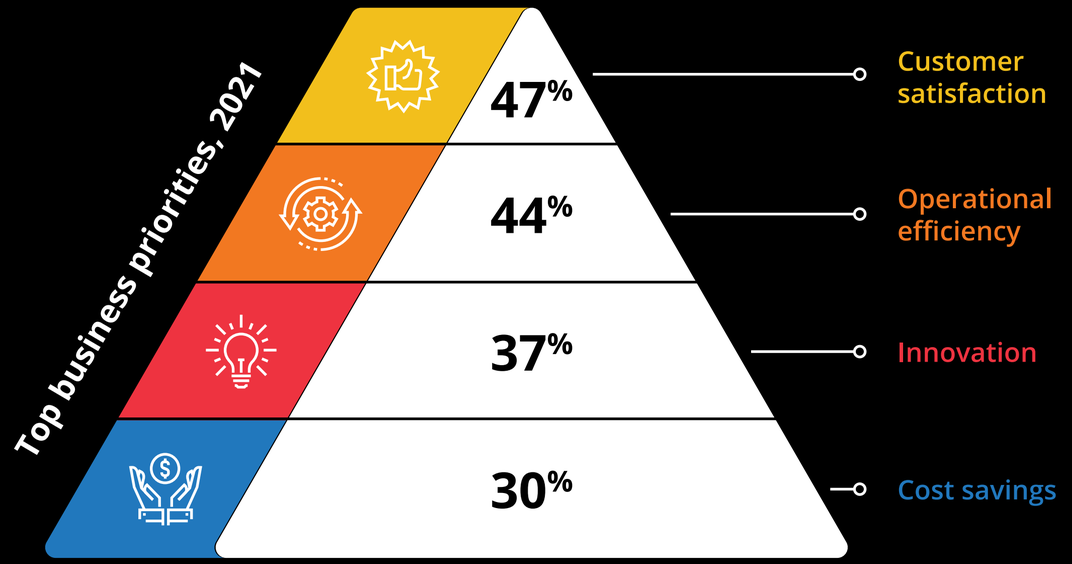
Solution and benefits

- Highly available resilient infrastructure fit for customers' SAP environments; infrastructure efficiency and zero data loss for digital resilience
- Benefits included highly automated, non-disruptive maintenance to deliver reliable services to growing customer base
- Scalable cloud-like platform to support business expansion without need to invest in more skilled professionals or additional IT budgets

Being Digitally Resilient Is a Central Tenet of the Future Enterprise

To become a "future enterprise" and be ready for a volatile future, organizations need to balance customer satisfaction and innovation with operational and cost efficiency. Only a future enterprise will be ready to deal with sudden changes in the business environment and be digitally resilient.





Source: FERS Survey Europe, Wave 4, May 5–16, 2021 (n = 530)

Time to Shine: Savvy C-Suites Are Investing to Make Modern Hybrid Cloud the Bedrock for Digital Resilience and Optimized Operations

When planning a hybrid cloud strategy, savvy business and technology leaders have long-term, continuous value in mind. Here are the key hybrid cloud 2.0 success pillars for hybrid cloud. Are you ready?

Hybrid cloud 2.0 success pillars

- Containers and microservices
- Cross-cloud operations
- Cloud economics
- Cloud governance
- Application performance and mobility in hybrid cloud
- Cloud strategy, leadership, and culture

Long-term design strategy

- By 2024, nearly 70% of organizations' new custom-developed applications will be built and managed using microservices and containers as foundations for stronger and higher-performing automation.
- More than 40% of enterprises will replace outdated operational models with cloud-centric models that facilitate organizational collaboration for better business outcomes.
- The belief that they are wasting at least 15% of their public cloud spending will drive enterprises to invest in cloud cost management to cut cloud waste in half.
- All enterprises will struggle with app modernization and data integration across cloud silos; 20% will adopt connected cloud architectures to overcome these concerns.
- To gain business agility, enterprises will commit to modernizing up to half of their existing applications, with cloud-native development and deployment services.
- Leaders will focus on skills, digital KPIs, business outcomes, and standardized operations; hybrid cloud adoption will be defined by the company's applications, culture, terms, speed, and choice.

MESSAGE FROM FUJITSU

The Need for Change

For many years, we have been able to successfully differentiate ourselves through brilliant technological features and the high quality of our products. However, in a fast-changing industry like ours, technological features and quality are not sufficient anymore to meet all of our customers' needs. To remain attractive and benefit from dynamic changes in the market, repositioning is inevitable. Market conditions are constantly changing, which is why we need to stay relevant to our customers' challenges, today and in the future.

We strive to add value to our customers' business and to make a positive difference in the lives of our people, our customers, and our partners. By investing in more customer-centric themes to improve customer experience (CX), Fujitsu is looking to stay relevant and to be a trusted advisor for our customers, providing a unique CX.

Why hybrid cloud?

In line with Fujitsu's vision, the latest report from IDC clearly shows that hybrid cloud is the natural evolution as organizations optimize their infrastructures and 83% of European organizations leverage the benefits of running hybrid cloud. Being customer obsessed, we are simply responding to our customers' requests. Fujitsu is uniquely positioned to help customers find the right cloud for the right workload because we can offer a choice of solutions on which to build a hybrid cloud. These solutions build on Fujitsu's engineering heritage, where we have already pre-certified, pre-integrated, and pre-built solutions to take out the complexity, cost, and risk for our customers.

Craig Parker, Head of Hybrid Cloud Europe Product Business, Fujitsu

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