IDC Spotlight

# Gearing up for the Future With Converged Infrastructure

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## INTRODUCTION

In the current digital age companies are increasingly under competitive pressure to innovate and keep up with new market entrants and new ways of doing business. It is crucial to differentiate and offer superior services to end users and customers that ultimately need to run on an IT infrastructure. Therefore IT can no longer be regarded simply as a cost center, but needs to be seen as a key driver for competitive advantage by executives. Holistic solutions are required that are driven with a business mindset rather than technical specifications.

The integration of hardware and software is becoming more important, which also poses huge challenges for many organizations that run their IT functions in silos that need to be broken down before the technology can be integrated. The most forward-looking companies tend to outperform their less visionary and innovative competitors, and are seeking flexible and adaptive solutions. These include the integration of IT with business strategy and making funds available – not only to transform the infrastructure but also to target new markets with key IT projects. The most innovative companies – the ones we call the Future Creators – have higher requirements for agility, flexibility, and quality. These are reflected in greater use of cloud and analytics, a higher level of automation across the organization, and a greater focus on converged infrastructure in their datacenters.

In order to remain competitive in the digital age, it is essential that organizations transform their IT operations toward greater agility, scalability, and efficiency. Converged infrastructure and hyperconverged systems can play a crucial role in helping to achieve this by combining servers, storage, networking, and systems management in a model that is easy to deploy and manage.

## IN THIS IDC SPOTLIGHT

This IDC Spotlight is intended to help U.K. organizations establish where they are in terms of the future-readiness of their IT department and to take the necessary steps to improve their business processes and IT architectures in order to keep up with the increasing pace of innovation in the digital economy.

IDC has surveyed 200 organizations in the U.K. regarding various aspects that determine their future-readiness. These include the use of cloud, converged systems, Big Data and analytics, automation, and key performance indicators such as service level monitoring. The responses have been weighted according to their importance in terms of an organization's overall future-readiness, with the final scores based on these calculations. According to the final scoring, organizations have been categorized as Current Focused, Future Aware, Future Focused, and Future Creator.

Based on this scoring and the results of individual questions, IDC has put together some useful advice for organizations on how they can improve their status quo and the areas they should focus on in each category.

## FUTURE-READY ORGANIZATIONS

### IDC's Four Levels of Future-Readiness

The large and midsize organizations surveyed in this study have been classified into four stages of future-readiness. This was based on their commitment to innovative business models and strategies, as well as how they used technology to achieve this, particularly their adoption of best practice IT operations and use of converged infrastructure, cloud, and Big Data.

### TABLE 1

**Future-Readiness Category Profiles**

| | Current Focused | Future Aware | Future Focused | Future Creators |
|---|---|---|---|---|
| % of sample U.K. versus worldwide | U.K. 16%<br>WW 16% | U.K. 33%<br>WW 32% | U.K. 35%<br>WW 33% | U.K. 16%<br>WW 18% |
| Converged infrastructure | Evolutionary approach to IT infrastructure<br>Individualistic-driven IT transformation | Evolutionary approach to IT service delivery<br>Team-driven IT transformation | Revolutionary approach to IT service delivery<br>IT organization–driven IT transformation | Revolutionary approach to IT service delivery<br>Business-driven IT transformation |
| Cloud | No cloud efforts driven by IT organization<br>Ad hoc use of public SaaS, PaaS, and IaaS clouds by BUs | Pilot/limited private cloud deployment by IT organization<br>IT notification of cloud use by BUs | Well-defined public and private cloud service catalogues<br>IT organization tracking use and implementing showback/chargeback across multiple clouds | Cross cloud catalogues, audit/security, and data control<br>Usage/performance tracking and automated balancing across diversified clouds |
| Big Data/ analytics | Little or no BDA strategy<br>BDA outputs have little influence on decision makers | Department-level BDA strategy<br>BDA outputs have some influence on decision makers | Business-unit-level BDA strategy<br>BDA outputs have strong influence on decision makers | Enterprisewide BDA strategy<br>BDA outputs have significant influence on decision makers |
| IT organization | IT/LOB operate on a "request/requirement" basis<br>Less likely to engage in IT workforce planning | IT/LOB are aligned for specific functions<br>IT workforce planning is based on a 12-month hiring schedule | IT/LOB are aligned across all meaningful activities<br>IT workforce planning considers future IT infrastructure and career planning | IT/LOB are aligned across all meaningful activities<br>IT workforce planning includes career planning and infrastructure scenarios |

Source: IDC, 2016

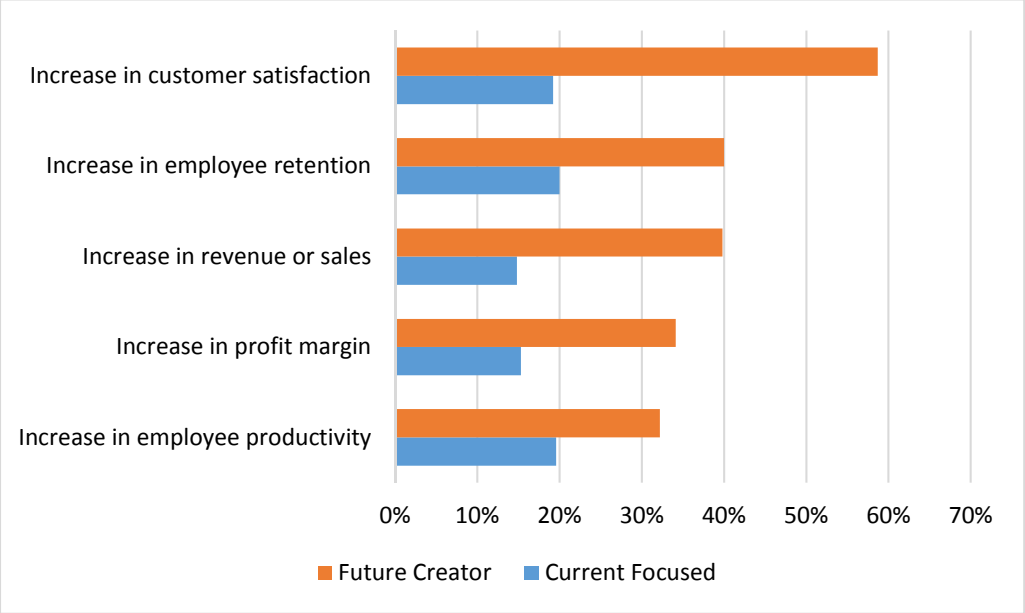
The results show that U.K. organizations are at a comparable level to worldwide scores in terms of their future-readiness. However, the bulk of U.K. companies are still at the Future Aware or Future Focused stages. The net effect is that these organizations – while having laid some or most of the required foundations for their future-readiness in terms of service delivery models, aligning IT with lines of business (LOBs) and adopting forward-looking cloud, Big Data, and converged infrastructure strategies – are not yet fully capable of implementing truly business-driven IT transformation.

## Business Benefits of Being Future-Ready

Our study shows that Future Creators have demonstrated significant improvements in various key business-focused KPIs over the past three years when compared with Current Focused organizations. These include customer satisfaction, employee retention, revenue, profit margins, and employee productivity. There is also faster progress in regulatory compliance and quicker time to market for new products and services.

## FIGURE 1

### KPI Improvements Seen Over the Past Three Years (U.K.)




Source: IDC, 2016

## Future-Readiness and the Evolution of IT

Future-readiness is an ongoing journey, and organizations need to understand where they are in terms of their current IT maturity level so that they can implement the right steps to advance to the next maturity stage. Improvements can be achieved in smaller, more realizable steps without having to "boil the ocean" by trying to implement too many changes at once.

Organizational practices are a catalyst for future-readiness, so it is important to adjust current organizational structures and processes so that IT is better aligned with business goals and can be managed efficiently with a clear vision for the future. This can be helped along if existing departmental silos are broken down. One key approach is to break down the divisions between IT operations teams for storage, server, and networking, bringing them together in a single

infrastructure unit. Another approach is to minimize shadow IT by encouraging users to request services via a clearly defined and easy-to-use service catalogue with two-way dialogue and a responsive IT department that can implement new services quickly and with confidence.

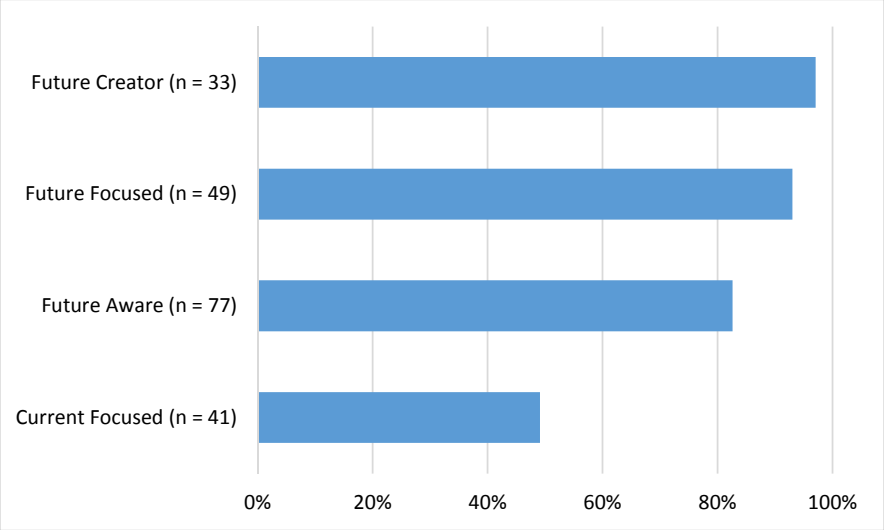
Convincing senior management and lines of businesses of the benefits that IT innovation can bring in terms of profitability, new business opportunities, and better operational efficiency will be a key skill of the future-ready IT leader, and enabling technologies such as converged infrastructure, cloud, and Big Data can be a catalyst for business transformation that can help organizations adapt and change as quickly as market conditions evolve.

## Characteristics of Future-Ready Enterprise IT

In addition to the importance of business and senior management support for innovative IT initiatives, the level of support delivered by the IT organization is a key criteria that affects future-readiness. It makes a significant difference how easily and efficiently IT services can be delivered to end users, including the existence of self-service provisioning portals, service catalogues, and service level monitoring. End-user satisfaction monitoring plays a key role in improving IT delivery, and this tends to be taken more seriously if IT is regarded as a proactive service provider with a business-led mindset rather than a necessary back-office process where cutting costs is the key goal. Our study shows that Future Creators have the most supportive IT organizations, and many Current Focused organizations lack sufficient support capabilities.

### FIGURE 2

**Future Creators Have the Most Supportive IT Organizations**




Source: IDC, 2016

## Minimizing Risks on the Journey to Future-Ready Enterprise IT

To ensure a smooth transition to a more future-ready enterprise it is important to avoid some common pitfalls such as the following:

- **Over-provisioning.** IT services need to be scalable as you add additional resources to improve the overall experience, otherwise costs can easily spiral out of control. This happens primarily where over-zealous technically minded IT managers upgrade to the latest equipment without a justifiable business case.

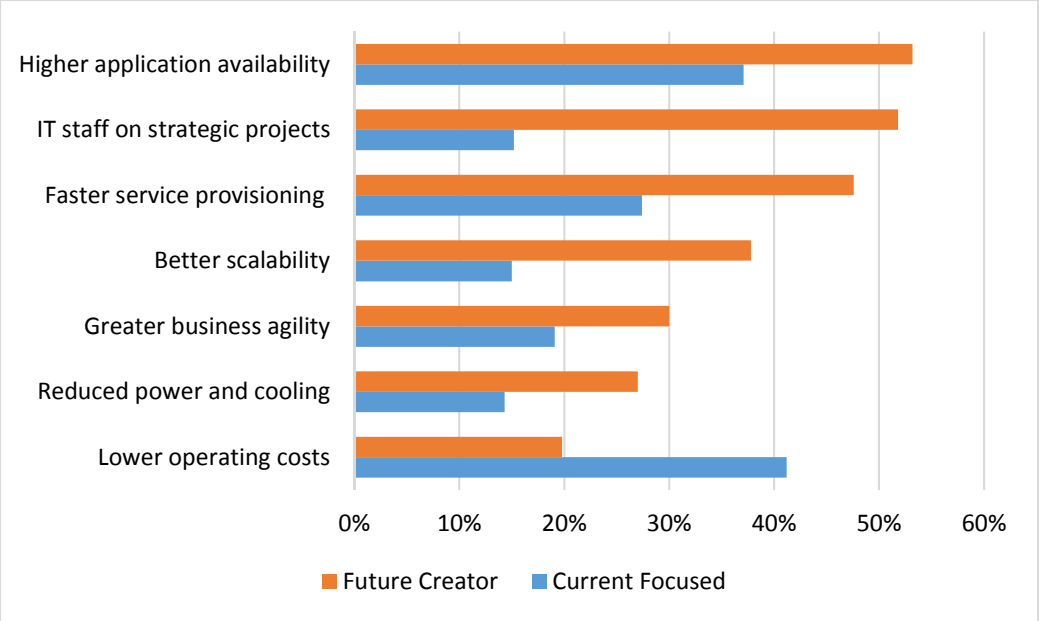
- **Losing focus.** It is crucial to maintain focus on this journey and have key measurements in place so that the strategic goals set at the beginning can be accomplished step by step with minimal disruption or delay.
- **Increasing complexity.** It is too easy to get stranded in an overly complex IT environment that is difficult to manage if various different technologies are added. Consider solutions that focus on reducing complexity, particularly the use of integrated systems where much of the complexity of integration has been engineered into the systems.
- **Insufficient staff skillsets.** The more advanced you get, the higher the level of IT and service delivery skills you will need in-house to manage your systems. Use automation wherever possible and outsource tasks that you cannot handle, while training staff to focus on delivering new services and supporting innovation and transformation rather than routine operations.
- **Vendor lock-in.** Single-vendor solutions are usually easier to implement and manage but come with a degree of lock-in. Therefore, focus on those with open APIs and ecosystems to allow multivendor and multicloud strategies to be implemented even with the integration that comes with a single vendor.

## Future-Ready IT — Use of Converged Infrastructure

Converged infrastructure integrates server hardware, disk storage, networking equipment, and systems management software into a single preintegrated and vendor-certified system. This approach helps to reduce operational costs and downtime and provides better resource utilization, agility, scalability, and efficiency. Future Creators pointed out higher application availability as a major benefit, followed by the ability to use IT staff on strategic projects and faster service provisioning. Current Focused organizations mainly focus on lower operating costs as the main benefit, indicating that they have yet to appreciate the business level benefits that come from taking a future-ready approach to investing in and running IT.

## FIGURE 3

### Benefits of Converged Infrastructure

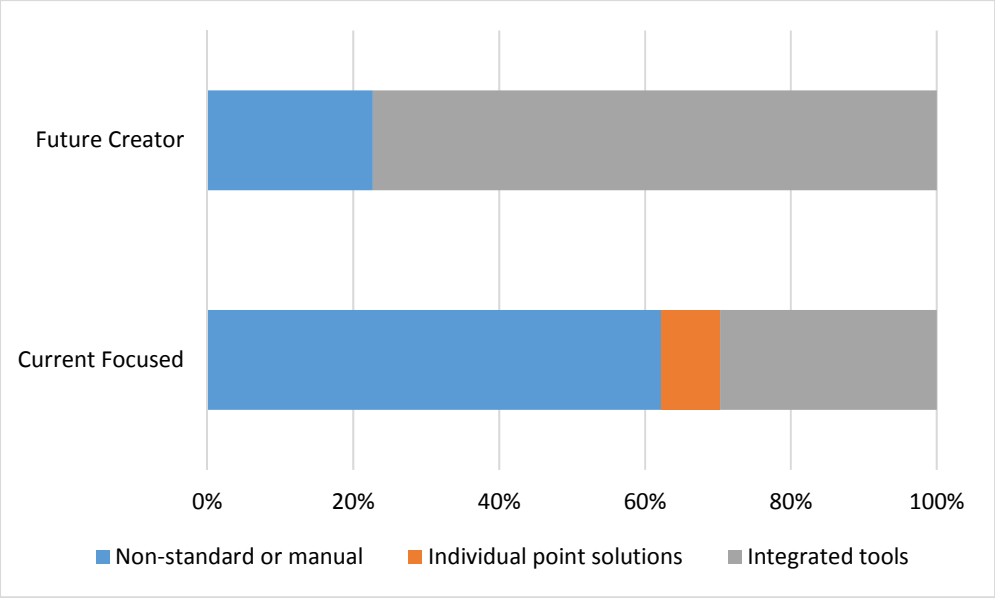



Source: IDC, 2016

Over two-thirds of Future Creators measure their IT utilization rates through integrated tools, while less than a third of Current Focused organizations do so. Some of these Current Focused companies have individual point solutions in place, but the majority rely on non-standard tools or traditional manual processes that greatly increase the timescales to manage change, as well as introducing many opportunities for error, adversely impacting IT service quality and user satisfaction.

## FIGURE 4

### Measurement of IT Utilization Rates




Source: IDC, 2016

## CLOUD AND BIG DATA

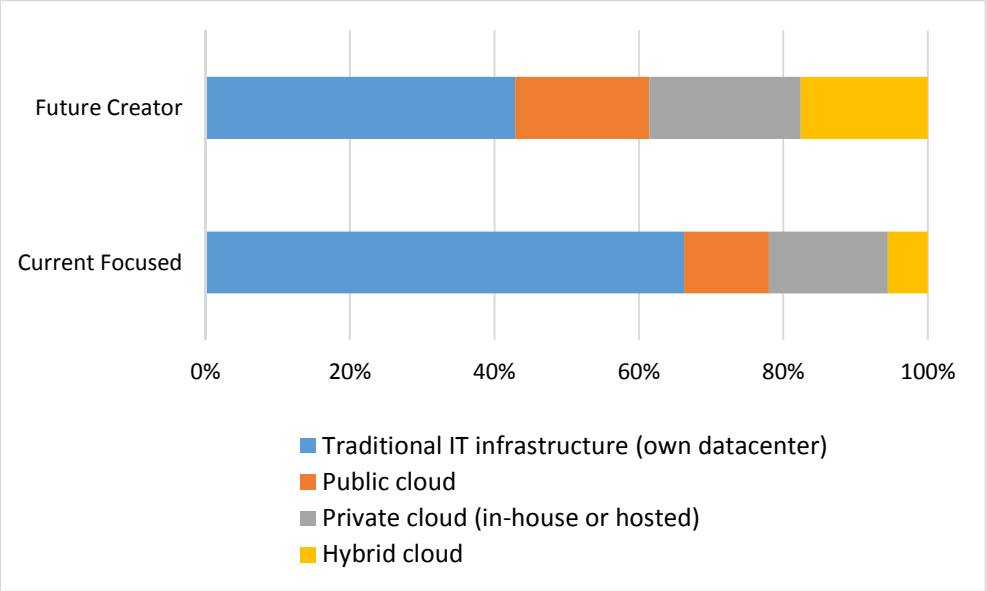
### Cloud

Cloud adoption is an important aspect regarding the efficiency of resource utilization and the ability to scale workloads according to demand. The public cloud forms only a part of the story, with the private cloud being seen as equally important for most organizations. Sensitive data and mission-critical workloads often need to run on-premises due to compliance reasons and latency requirements, but with the benefits that the cloud offers in terms of agility, flexibility, and lower operating costs than non-cloud environments.

Our study shows that Future Creators run more than half of their workloads in some form of cloud environment, with less than a fifth going straight to the public cloud. Around two-thirds of workloads in Current Focused organizations still run on traditional non-cloud infrastructure in their own datacenters. Current Focused organizations are also adopting cloud at a slower pace than Future Creators. For Future Creators, it is all about hybrid cloud, with a model that allows for seamless workload and virtual machine movement across clouds – both on and off premises.

## FIGURE 5

### Percentage of IT Infrastructure Supported by Cloud Type




Source: IDC, 2016

## Big Data

Big Data and analytics can play a major role when it comes to business innovation and IT resource monitoring. Most organizations already have large data volumes that they can use to optimize their processes, understand their customers better, and launch new services. The challenge is to bring different data sources together in a meaningful way that provides tangible business benefits.

Future-ready enterprises can no longer just rely on historical data for their demand forecasts but increasingly use real-time analytics. This can avoid disruption if faults or issues are detected immediately or even in a predictive way before they actually occur, or allow inventory to be redirected according to real-time demand in stores or cities. By gathering large amounts of data from various systems, their usage can be better understood and the infrastructure and related processes optimized to realize cost savings, provide higher agility, reduce downtime, and deliver greater end-user satisfaction.

## ESSENTIAL GUIDANCE — CONCLUSIONS AND RECOMMENDATIONS

Future-ready IT is a key enabler of today's enterprise, and four key components – converged infrastructure, cloud, Big Data and analytics, and future-minded IT organizational best practices – are critical to success. Future Creators, the organizations with the highest levels of future-readiness, excel across all four areas. This allows them not only to quickly adapt to disruption but also to drive innovation. Future Creators also have the strongest business results across a wide range of KPIs.

It should be noted that organizations lower on the future-readiness scale don't need to achieve the highest levels of future-readiness to begin seeing improvements. Future-readiness is a journey, and moving up a single level regardless of your starting point improves business outcomes.

Companies can also choose to focus on the technology or practice area most appropriate to their business needs and still see improvements.

However, two elements are fundamental for success across all levels: a strategic approach that drives business decisions (versus a short-term focus on cost reduction) and an IT organization that can work closely with LOBs to address the needs of the organization.

IDC advises U.K. organizations to consider the following aspects:

- **Focus on long-term outcomes.** Future-ready enterprises are less focused on cost take-out and more focused on strategic business outcomes like enhanced organizational agility, greater service availability, and more effective IT staff allocation. Future Creators understand that investing in the right infrastructure reduces business risks and drives innovation and future growth.
- **Take steps to improve your future-readiness, no matter your starting point.** Set well-defined intermediate goals aligned with your long-term strategy to become more future-ready. Regardless of where your organization is now, moving up a single level or focusing on a specific aspect leads to significant improvements; you don't have to immediately become a Future Creator across all aspects to see business benefits.
- **Start your future-readiness journey by developing an overall strategy.** Future Creators have a strategy that drives their business decisions across technology, processes, and IT organizational practices. Any company looking to move up the future-readiness scale should develop (or align with) their business strategy first. They will gain business benefits as they execute against that strategy.
- **Focus on the areas that will have the biggest impact on your business.** Though future-readiness is a journey, there is no single path to get there. Identify the area most impactful to your business and execute it to begin to see business benefits.
- **Assess your own state of future-readiness, and get help if you aren't where you need to be.** IDC has developed a Future-Ready Enterprise Index tool, which is available at www.dell.com/futureindex. You can use this tool to assess where you are on the future-readiness curve today. If you are not where you need to be to maximize your business success, you should work with expert vendors that can provide the tools, technologies, and organizational change management expertise to help you achieve your goal.

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