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The future depends on Digitisation

The importance of leadership, vision and data

A Management Briefing by IDG Connect in association with NetApp

NetApp

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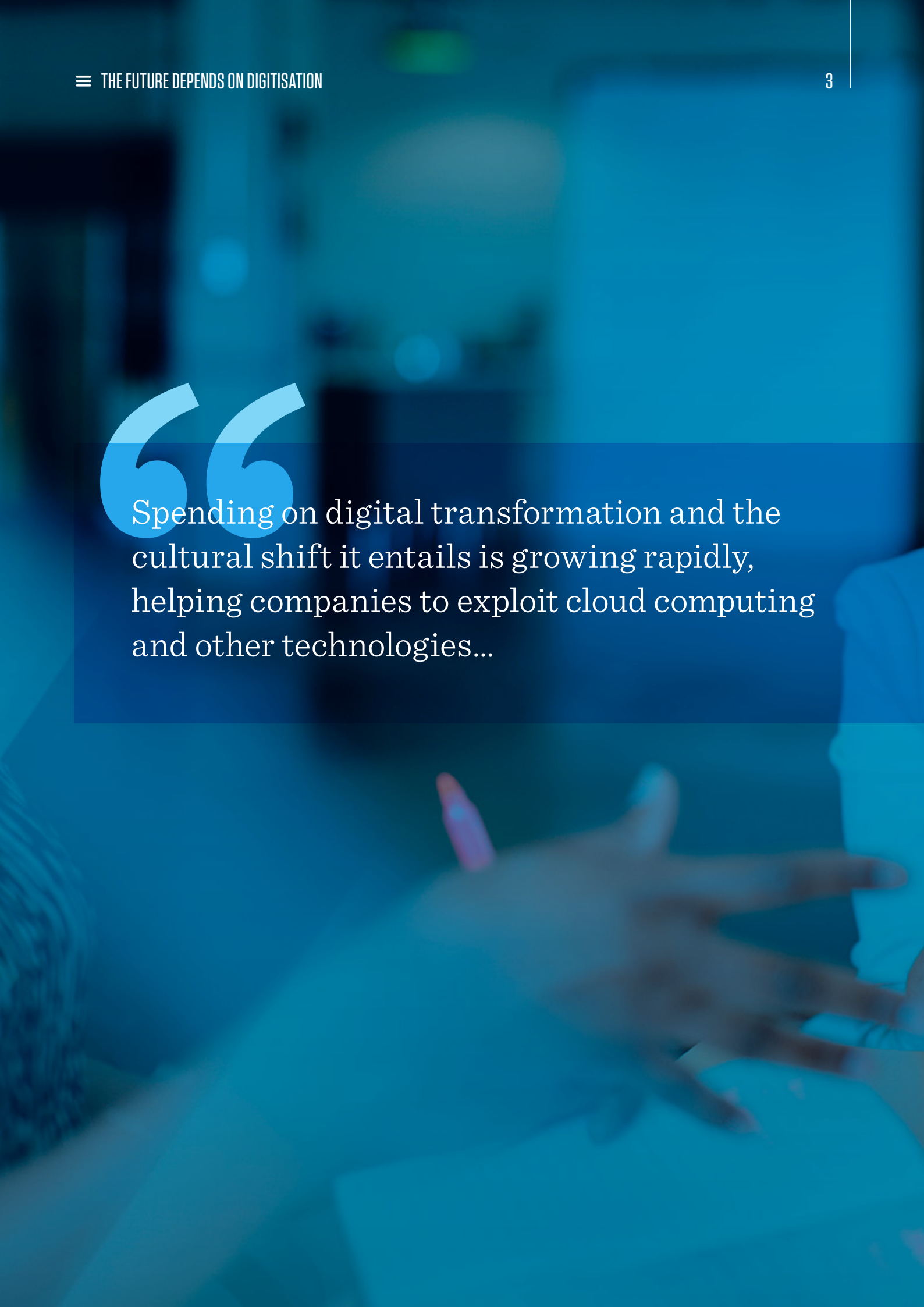

Spending on digital transformation and the cultural shift it entails is growing rapidly, helping companies to exploit cloud computing and other technologies...

Executive summary

Digitisation is the process of transforming all processes within the company so as both to integrate the organisation with the digital world that customers, partners and employees inhabit, and to take advantage of the added efficiencies and streamlining of existing processes that this transformation can deliver.

Spending on digital transformation and the cultural shift it entails is growing rapidly, helping companies to exploit cloud computing and other technologies, such as high performance storage and analytics, to gain greater insights into the data that they gather.

Achieving this goal requires leadership and vision, along with help from external partners such as storage vendors and consultancies. But it can be successful when driven from the top – with clear business benefits the ultimate reward.

In this regard, this document looks at digital transformation in general, but with specific focus on the manufacturing and service provider sectors. ■

Next:
What is digital transformation?

What is digital transformation?

Becoming a digital enterprise is something that no business, irrespective of its size, can delay any longer. Data from IDC shows that companies recognise this, as the analyst firm predicts that spending on digital transformation is set to maintain a strong pace of growth up to 2021, with a compound annual growth rate of 17.9%. In 2021, spending will have nearly doubled to more than $2.1 trillion.[1]

In this white paper, we shall discuss the nature of digital transformation, why this trend is accelerating and, most importantly, how data management and the right storage architecture are key to ensuring that it delivers clearly demonstrable benefits.

Our sources include a private study, commissioned by NetApp and executed by IDG Connect, of IT executives within EU-based manufacturers and service providers, as well as a range of studies by IDC and other analyst firms. ■

Next: Why are companies transforming?

Why are companies transforming?

Customers are becoming digitised: they work, live and play in a digital environment. Among other things, this means they use mobile applications first, bringing them contextual information wherever they happen to be and whatever they are trying to achieve. Customers are data-driven, using online information to make decisions about their lives and businesses. And your customers' customers are going digital too, making supply chains even more efficient.

Employees too are demanding and using digital technologies, and require support from the organisation for their devices.

The mass adoption by enterprises of cloud computing now means that the boundaries between enterprise and public infrastructures are highly blurred, implying new models of deployment, security, and data management, while the growth of AI yoked to big data drives further the need for digitisation.

"If your business sells almost anywhere to almost anyone, it needs to operate in that digital environment."

If your business sells almost anywhere to almost anyone, it needs to operate in that digital environment, it needs to undergo a digital transformation (DX). This means speeding up delivery of products and service, allowing customers to use self-service and crowd-sourced collaboration to make their choices while sacrificing neither quality nor security.

More specifically, it means deploying modern technologies such as cloud, big data and AI to enable new processes, and extract value from the corporate data mountain. Above all, DX implies a cultural transformation that works on the basis of a digital-first mindset when planning and delivering new products and services.

A good example of DX is the Starbucks mobile app, which allows customers to pre-order online and pick up their order at the store later; this application now contributes 20 percent of overall Starbucks revenue.

Looking more specifically at three vertical sectors—finance, manufacturing and service provision—we can see that spending on DX is growing hugely, driven by a range of factors.

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Financial Services

The financial sector is spearheading the DX movement, as one executive in the UK's financial sector reports: "We are fully digital, which has provided massive efficiency gains." However, the sector is still investing in DX, with IDC predicting that spending between 2016 and 2021 in the financial and clinical risk management sectors is forecast to grow by 31.8% annually.[2]

Manufacturing

DX in manufacturing is growing, driven by consumer preference for customised rather than mass produced products, and by the growth of connected devices. According to IDC, worldwide expenditure on digital transformation is set to reach almost $2 trillion by 2020, led by manufacturing and process industries, whose spend was predicted to be $365 billion.[3]

Service Providers

Service providers (SPs) too are undergoing digital transformations, with cloud and Software-as-a-Service (SaaS) the top two emerging technologies, followed by software-defined anything and the Internet of Things.[4]

This is driven by the need to compete in a very competitive market, especially since SPs' customers are themselves undergoing digital transformations. Consequently, finds an IDC study, 64 per cent of cloud SPs will increase spending on their own IT infrastructure to improve their competitive posture. The key finding of this study was that digital transformation will help 85% of cloud service providers achieve a 19% increase in revenue.[5]

Next:
Digital transformation: making it happen

Now that instant information about products and services that employees, partners, customers and potential customers want to research and purchase is ubiquitous, shouldn't it be your company's products and services they reach for first? ■

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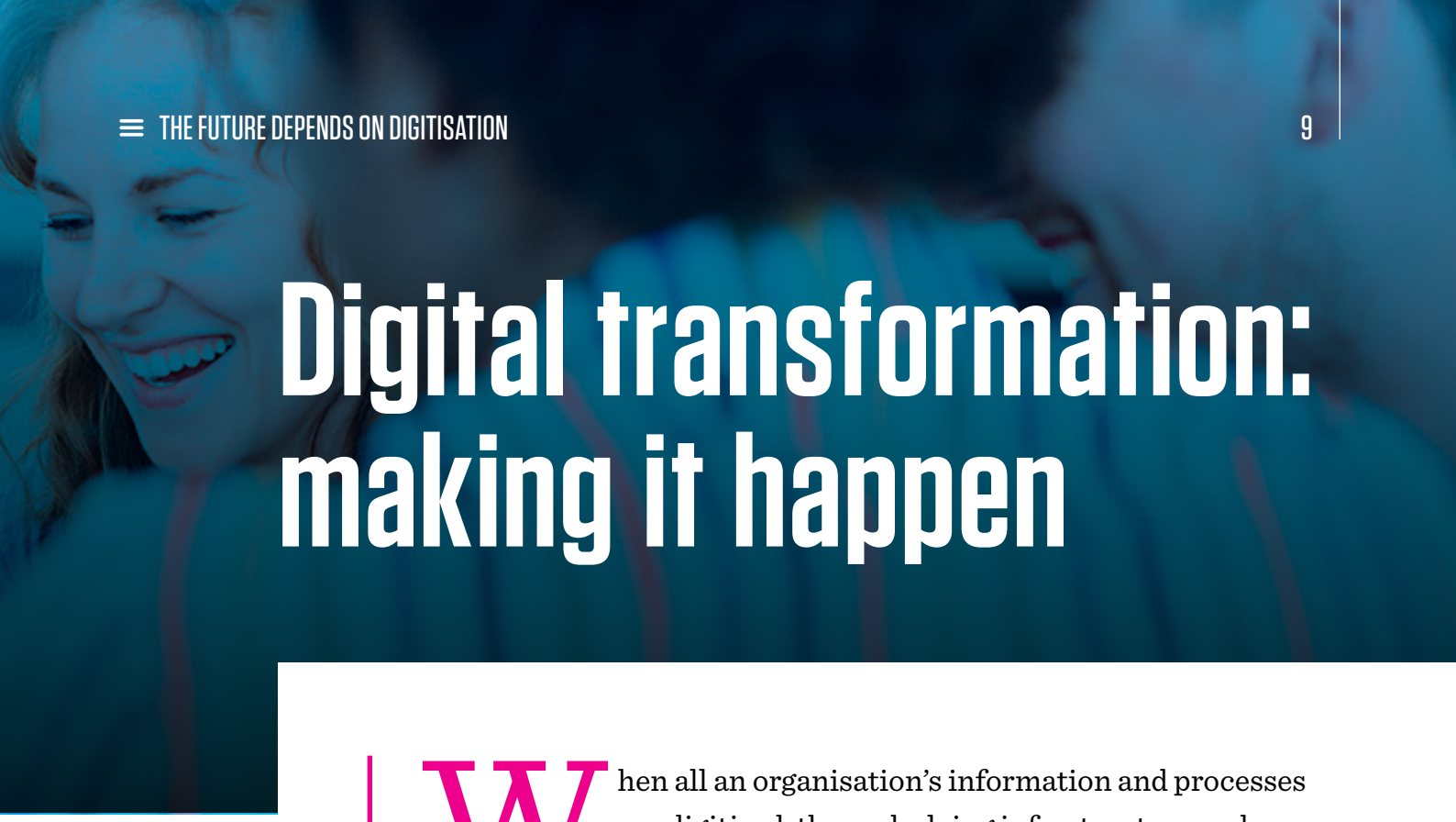

Digital transformation: making it happen

When all an organisation's information and processes are digitised, the underlying infrastructure and the processes involved in managing both the infrastructure and the data it houses become critical to the success of the business. That infrastructure is what makes a digital enterprise competitive, so IT becomes pivotal to the success or otherwise of the digital transformation process. Those digital foundations need to be secure, utterly reliable and highly performant, and be able both to deliver business insights and be simple to audit.

These criteria present a number of challenges, not least of which is knowing where to start, as the IT director at one Dutch manufacturer points out: "We have plenty of challenges, the main challenge being digitalisation of all manufacturing processes and logistics. However we are confident that we can overcome them." [6]

Another challenge cited by many interviewed for this study was incorrect data and the need to re-process it. This results in lost time and efficiency, a point addressed by an executive in the financial industry: "The biggest nightmare is incorrect data from sources, which creates major problems when analysing that data, as it does not makes sense. Consequently, we waste time in informing data suppliers about incorrect data, so they need to improve their quality assurance." [7]

Data management, vision, leadership, culture

A key pre-requisite for DX is data management. Understanding where data resides, how and when it is processed, and how it delivers value to the business are core to being able to execute on existing and new projects, speed time to market, and increase agility and flexibility.

"Transformation also requires vision and leadership. Driven by strategy developed and overseen from the top of the organisation."

Transformation also requires vision and leadership. Driven by strategy developed and overseen from the top of the organisation, the plan needs to be clear, with business benefits at the top of the agenda.

Change brings challenges: as execution of the plan progresses, constant monitoring helps ensure that tactics can be adjusted in response to events without fear of failure. Feedback, iteration and fast learning will help to speed the process.

A cultural shift helps to facilitate changing processes, so fostering an entrepreneurial spirit where risk-taking is allowed, and ideas are permitted to be expressed and where appropriate, executed upon, enhances the digital transformation. Communication is essential of course, both across as well as within business units, and presents challenges, as another Dutch manufacturer agrees: "We do have challenges regarding how various departments can work together, so it may be that digital transformation will help us meet that need."

Technology selection

Making the right technology choices is another key pre-requisite for a successful DX project. Note that technology needs to enable the ability to re-imagine your processes so they become more effective and efficient. Note that DX is not just about digitisation but also improvement of existing manual processes. Key criteria for successful DX infrastructure deployment include high performance storage, and effective multi-cloud, data and storage management tools and processes.

Described by an IT executive working for a French manufacturer as "completely mandatory", high-performance storage enables the quickly growing data mountain to become a core business asset, as the enterprise can use that data to increase its understanding of underlying trends and correlations. This knowledge is likely to be hidden as the data exists in multiple formats, usually unstructured, and in multiple locations, including your own datacentre, private and public clouds. Using big data analytics to extract the business value from that data in the form of actionable knowledge is a major business benefit of DX.

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As an example of how actionable data can be extracted from mountains of the stuff, one motor insurance company has exploited weather data to help evaluate driving skills, so that those who drive most safely benefit from the lowest premiums. Using telematics technology yoked to GPS technology for collecting journey information, each trip can be evaluated according to factors such as speed, braking and acceleration. When correlated with highly localised weather data, the insurer can evaluate changes in driving behaviour in the rain, for example. This then allows them to calculate a safety score for each insured driver and adjust premia accordingly.

Multi-cloud management

Cloud computing is a crucial component of DX. As Forrester points out, more than half of global enterprises are relying on at least one public cloud platform for digital transformation[8]. So today's enterprises are multi-cloud users, and many of them have deployed and make use of both private and public cloud infrastructures, or in other words, hybrid cloud.[9]

Management of data within multiple cloud systems is therefore imperative, as an IT executive from one Danish service provider has found: "Data storage and management are primary keys to digital transformation, especially when it comes to the management of data within a multi-cloud environment."

This means making full use of the management interfaces offered by cloud vendors to enable orchestration—building up expertise with one vendor in order to leverage that knowledge for the remaining vendors. Once that is achieved, an over-arching management system needs to be developed to unify cloud governance.

Not all businesses are investing in hybrid cloud but manufacturing enterprises are investing the most, according to an IDC study.[10]

Data management and storage

Data management and storage are naturally at the heart of any cloud-based DX strategy. An IT executive from a Dutch manufacturer explains they are: "Completely game-changing. They help in the decision-making process and are going to stimulate new approaches and channels."[11]

From a Dutch service provider, this IT executive agrees: "Storage is one factor that will underpin digital transformation. NetApp and IBM are the types of storage that we see mostly used by our customers. Customers are very interested in cutting costs, so the price is the major factor in our technology choice."[12]

"Data management essentially entails the practice and principles of understanding and maintaining all the data resources owned by the business."

Data management essentially entails the practice and principles of understanding and maintaining all the data resources owned by the business. Data has a lifecycle; usually frequently accessed and altered after initial creation, (during which time it will be stored on fast, high performance storage media, such as SSD), and eventually less so once the project of which it was a part draws to a close. Soon after this point, it can be archived onto more cost-effective, lower performance media, such as tape. Throughout its lifecycle, it also needs to be backed up and remain accessible.

The implication here is that the enterprise will require different types of storage to suit different data types and data usage. This last point is key, as when making technology selections, the business case must be placed first and foremost.

That said, any solution will need a combination of security, scalability, capacity, access controls, compliance and a range of other criteria, likely to be more specific to the enterprise or sector.

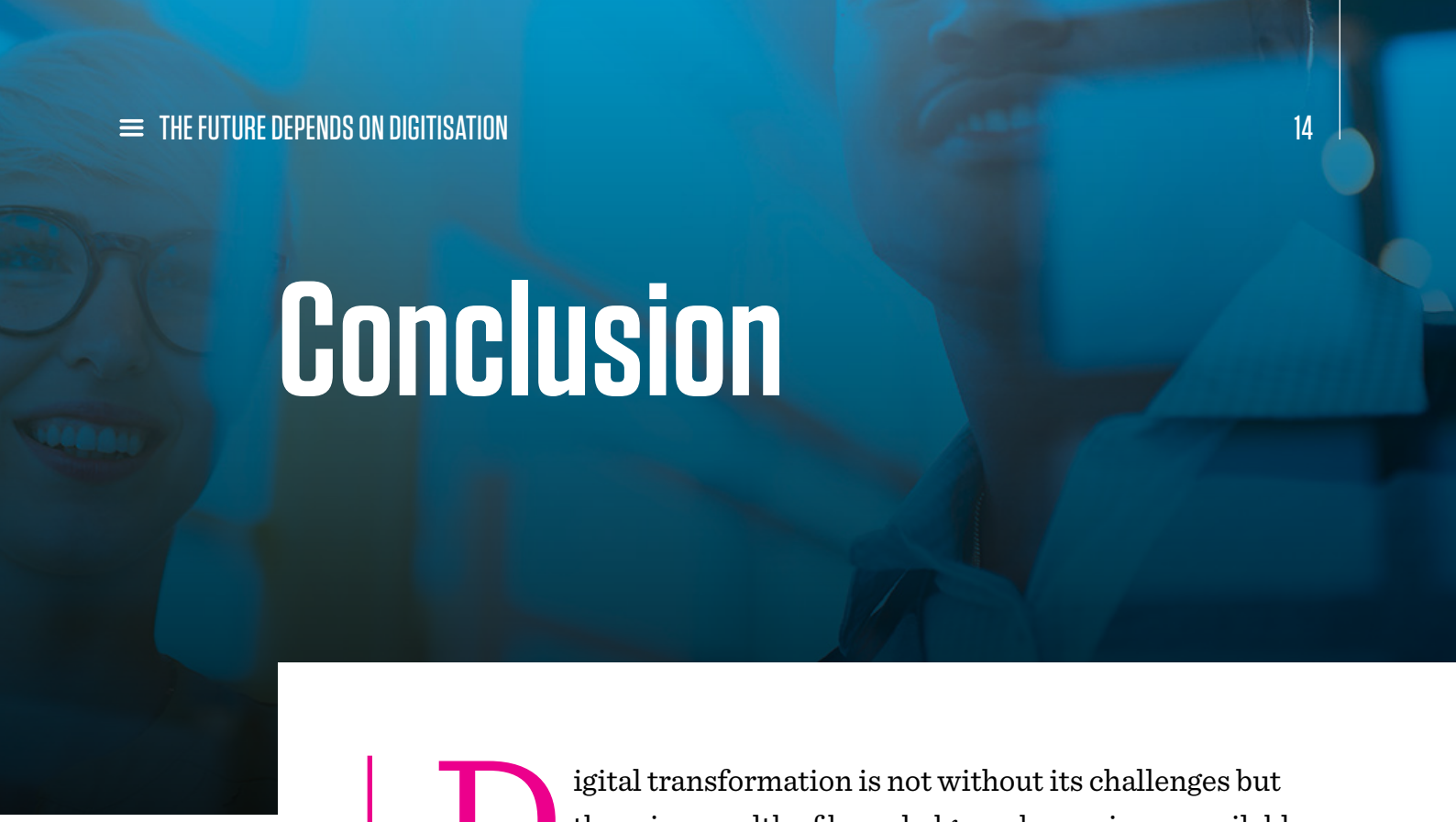
Vendor selection

Once the criteria for a storage system have been developed, a vendor selection needs to be made. This consists of a complex matrix, as one IT executive points out: "Elements that we think are important include price, performance, reliability, technology, media coverage, and vendor meetings — although there are plenty of others." For another IT executive, capacity and performance are key: "Storage should have enough capacity, be accessible, and performance should be high priority. For us, security too is a big criterion."[13]

The exact specifications and features of a storage solution will depend on your needs, but the storage vendor you select will ideally be able to guide you through the digital transformation process, offering appropriate consultancy, products and services. These will include fundamental important features such as backup and disaster recovery, as well as more advanced features, such as multi-cloud capability, analytics to deliver actionable insights, and integration with your existing infrastructure and cloud and database services such as SAP and Oracle. And as our survey of IT managers shows, cost-effectiveness remains a key attribute for any storage solution. ■

Next:
Conclusion

> ...a DX project requires a clear vision, leadership, and a vendor who will take you step by step through the processes...



Conclusion

Digital transformation is not without its challenges but there is a wealth of knowledge and experience available for organisations wanting to exploit the added value that this exercise can bring to the bottom line. A multi-disciplinary team will be able to pull together resources, both internal and external, to help initiate the changes that DX requires, and so incentivise business units to do their part in making the project successful.

Above all, a DX project requires a clear vision, leadership and a vendor who will take you step by step through the processes and procedures required. The end result will be the integration of your company with the digital world that your customers, partners and suppliers already enjoy, as well as added efficiencies within the enterprise itself. ■

Next:
Find out more

For more information, visit: www.netapp.com
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About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organisations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation and optimise their operations. www.netapp.com

1 IDC Forecasts Worldwide Spending on Digital Transformation Technologies to Reach $1.3 Trillion in 2018. https://www.idc.com/getdoc.jsp?containerId=prUS43381817
2 IDC Worldwide Semiannual Digital Transformation Spending Guide: https://www.idc.com/getdoc.jsp?containerId=prUS43979618
3 IDC Worldwide Semiannual Digital Transformation Spending Guide: https://www.idc.com/getdoc.jsp?containerId=prUS44440318
4 IDC A Pulse on the Service Provider Industry: Digital Transformation and Security Services. https://www.cisco.com/c/dam/en/us/products/se/2018/5/Services/idc-service-provider-brief.pdf?CCID=cc000369&DTID=esootr000515&OID=srwsc009900
5 IDC Service Provider Pulse 1Q18 Quarterly Summary. https://www.idc.com/getdoc.jsp?containerId=prUS44139618
6 NetApp private study, 2018.
7 ibid.
8 Predictions 2018: Cloud Computing Accelerates Enterprise Transformation Everywhere. https://www.forrester.com/report/Predictions+2018+Cloud+Computing+Accelerates+Enterprise+Transformation+Everywhere/-/E-RES139611
9 IT hardware gets a second life. https://www.morganstanley.com/ideas/it-hardware-2018
10 IDC Worldwide Public Cloud Services Spending Forecast to Reach $160 Billion This Year. https://www.idc.com/getdoc.jsp?containerId=prUS43511618
11 NetApp, op.cit.
12 ibid.
13 ibid.

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