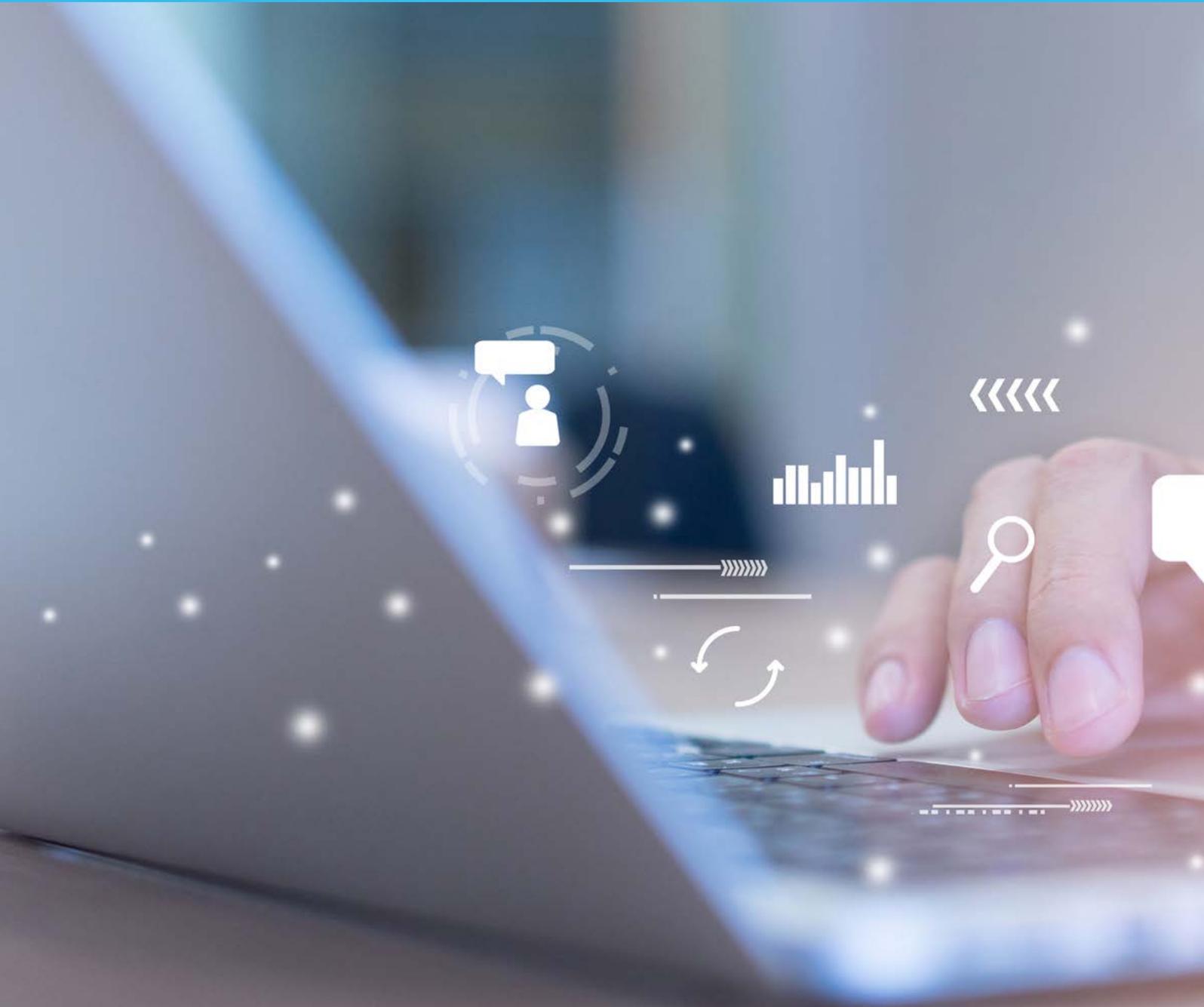




## Digital Transformation

Everything-as-a-Service approach to Digital Technology





## INTRODUCTION

Strong forces are driving a move to Everything-as-a-Service (XaaS), and it will present Enterprises with 3 must solve challenges.

According to IDC, in the next two years the share of applications running in public cloud environments will grow from 65% to 75% and cloud's share of infrastructure spending will grow from 36% to 48%.

We outline the primary forces driving this change and give you 7 actionable insights that will help you deal with the significant change happening as we speak.





## TRENDS DRIVING X-A-A-S

We have selected two of the most influential trends driving the rapid adoption of the Everything-as-a-Service approach to Digital Technology.

Trends tend to fall into two categories – Pull and Push.

Pull trends are the attractors – we follow these because they promise something we desire.

Push trends are trends we need to deal with, and where we have little choice in the matter. Both are powerful, and while you can – in theory – shy away from following the shiny pull-trends, the push trends are coming for you.

## DIGITAL TRANSFORMATION

Driving business forward using digital technology is the must win agenda in every enterprise.

Businesses are working as fast as humanly possible to become digital. There is a virtual army of consultants, solution providers, marketers, internet giants, and other assorted players working extremely hard to promote and further this agenda.

You can basically split digital transformation into two:

1. Digitalisation of a company's product/services
2. Increase effectiveness through consumption of digital services.

On top of this already existing trend COVID-19 has acted as an accelerant, greatly increasing the focus and adoption of some short term technologies like work-from-home and collaboration tools, and accelerating digitalisation projects focused on enhancing or replacing staff with technology.

## 1. Digitalisation of Companies (Pull)

This is a pull-trend, but indeed a very forceful one.

It is hard not to find a company with some focus on digitalisation. This should ensure future growth on the top-line. And it should happen quickly. Words like agile, prototyping, sprints etc are being used in connection with digitalisation. DevOps teams prototyping in public clouds shows a speed in time-to-market not seen before.

However, following the early successes comes a time for integration with the legacy infrastructure and ensuring a scalable cost structure.

In many larger companies we see multiple public clouds being used (AWS, Azure, Google etc) because of varying needs, to speed up development, or simply because of lack of coordination.

## 2. Increase effectiveness (Push)

As companies seek fast solutions, they turn to purpose-built single-purpose solutions for more and more applications. Every department buys their own solutions from a broad range of providers.

To illustrate this: in a recent mapping exercise, Martech identified more than 8,000 solutions targeting marketing alone. A similar selection exists for every box on the organisation chart.

Furthermore, these solutions are almost exclusively provided as XaaS-solutions. Even large companies like Adobe have completely transformed themselves into a SaaS-company.

The result is an unprecedented diversity of multiple cloud solutions.

## The future: Multi-cloud Environments

The consequence is undoubtedly that you have to manage a true multi-cloud environment, where you need to ensure integration, connectivity, data backup, cost optimisation etc. across multiple SaaS-vendors, public clouds, private clouds and other XaaS. Add to this the veritable data explosion that will follow with the increase in digital solutions. Storing and moving that data round will be a massive undertaking in itself. More on that later.



## MOORE'S LAW (PUSH)

If you are unfamiliar with Moore's law, it is worth just touching on. Wikipedia defines Moore's law as "the observation that the number of transistors in a dense integrated circuit (IC) doubles about every two years". What this means in practice, is that every two years, compute power doubles – and importantly, the cost is cut roughly in half of each compute unit.

This is what has meant that even despite the massive growth of companies' use of technology, over the past decade, IT budgets have been roughly constant.

However, for costs to remain constant your organisation must be able to benefit from this ever-increasing scale. As servers become ever-more powerful, more and more companies no longer have sufficient workloads to benefit from the advances. This is true both in terms of hardware, and in terms of operations.

So, what are the implications as it relates to the moving to XaaS?

### **Lack of Economy of Scale**

Moore's Law in practicality also means that you can run more IT in less physical space every year. Need for space is declining faster than the average company growth – not many companies double every two years. This means that the threshold for when economies of scale kick in is getting ever higher. Today, that threshold is around 250 VMs. In two years from now it will be 500.



## Lack of Critical Mass of People

Typically, you need three of any specific technical resource (storage, virtualisation etc) to reliably run operations with coverage for vacation, illness etc. Due to improvements in automation and management one person can manage more resources every year. The scope of what one person can handle is increasing faster than the companies grow. We see customers requiring a cloud-like experience for the entire IT environment as a result.

## The future: Use of Managed Infrastructure Services

Datacenter-as-a-Service, Storage-as-a-Service, Back-Up-as-a-Service, Network-as-a-Service. These are terms nearly all companies will know – and use – in the near future.

From a business perspective, we often see these consumption based infrastructure services offered at rates much lower than those smaller companies can present. This is primarily due to economy of scale in the human- and management software side of producing an infrastructure service. These services also offer what many customers are still requiring: dedicated hardware at the control of the customer.

The trends above have described two overwhelming reasons for why the adoption to X-a-a-S is happening, now it is time to take a look at what that means for you as an Enterprise IT organisation.

# MUST-SOLVE CHALLENGES



In the wake of this megatrend, three distinct must-solve challenges are taking shape. These are three areas that each have immense influence on the ability of any company to not just buy digital technology, but to use it to be truly, fundamentally successful.

## Must Solve Challenge Number 1: Connectivity and Access to Services

Solving Network and physical infrastructure and connectivity. How to actually make all the digital technologies work, get those e-mails delivered, carry the weight of the zoom meetings traffic, connecting to Azure, AWS, Google and all the rest. The size of this infrastructure challenge is immense – so is the opportunity for those employees who rise up to meet it.

## Managed Infrastructure Services

Standardised services that include both the physical objects and professional services needed for end-to-end operation of the infrastructure component. Available in both dedicated and shared form.

## Co-Connection Centre

A co-connection centre is typically a co-location datacentre provider that has pre-existing internet backbone access and high-speed fibre connections to major public cloud providers like AWS, Azure, Google, and often to major private cloud- or managed infrastructure services providers.



## Actionable Insight #1: Co-Connection Centres

Increase your speed in creating managed and safe connections to cloud- and service providers by utilising existing co-connection centres.

Remember, there are two cost drivers for each cloud connection when connecting from on-premises;

1. The cost of the cloud providers' service – that is AWS Direct Connect or Azure ExpressRoute etc.
2. The cost of the fibre connection itself. For most customers, the cost of the fibre is much higher than the traffic passing through it, so if you can remove this cost by using a co-connection centre, that will mean large savings.



## Actionable Insight #2: Managed Infrastructure Services

We already see managed infrastructure services show up in our analyses. And we continually discuss these opportunities with our customers. One of the challenges is having access to an array of services without the need to host them in your own facility. Some of the first services you are likely to need to connect to are Back-Up-as-a-Service and Storage-as-a-Service and here connectivity is key. As we already see these services at 5-10% of customers, we expect most customers to have one or more managed infrastructure service in use in the next 12-18 months.

## Must Solve Challenge Number 2: Basic Operations

When everyone is responsible, no one is responsible. This old quote is more true than ever in a multi-cloud scenario. One of the services we see requested is Single Point of Contact (SPOC). Whether that is an external vendor, or an internal team, business users generally don't care that internet connectivity, vpn, cloud storage etc. isn't your responsibility – they care about using these services to create business value, and they want one number to call when things aren't working.

So how do you manage Security, Identity and Access Management, Back-Up and Business Continuity, and Data Governance across literally hundreds of software and infrastructure services from dozens of vendors?

## Actionable Insight #3: XaaS Overview

Establish a way of getting an overview of what systems are actually in use, whether network scanning, pc sniffer agents, or similar, you cannot manage what you cannot see.

## Actionable Insight #4: Access to 2nd/3rd line support

With a much broader range of services in use, improving your access to service, support, and/or management is vital. Lack of scale of staffing means you will need to look outside the organisation for many of these competencies, and if the services run on your hardware, you will need a third party with easy access to the location.

## Actionable Insight #5: Business Continuity

Business continuity will be ever more important, and you might be surprised that this task is often not part of what you are buying as-a-service. Building out both the infrastructure (or services) and connectivity to achieve this is a must.





## Must Solve Challenge Number 3: Financial Management

Managing the Costs of Digital Technology.

Here is a bold prediction: Spend on Digital Technology will QUADRUPLE in the next 5-8 years.

As companies adopt digital technology at an ever-increasing pace, and as on-premises buy-and-operate solutions are migrated to Everything-as-a-Service, the costs of digital technology will grow on three primary axes;

1. Existing solutions changing to as-a-service are decoupled from the automatic benefits of Moore's law – means prices are likely to fall less than consumption increases, and some unit prices will even go up – all leading to higher costs.
2. Existing processes being automated (chatbots, RPA etc.). This moves cost from People to Technology – increasing technology costs.
3. New digital technology (IOT, digital marketing, online conferencing etc.) all these add new seemingly small costs that grow to material scale as they are fully implemented.

Successfully controlling and managing these costs will determine the financial success of your company.

### Actionable Insight #6: Optimise Cost Frequently

The ability to choose the right services and manage your consumption is now the primary way of keeping costs in check. Large negotiated deals like hardware purchases or Enterprise Agreements are no longer the primary way to save. This means you need to establish a regular pattern of analysing and optimising costs at frequent intervals.

To help customers save continuously, Kostner offers Savings-as-a-Service for major cost categories like Public Cloud (Azure, AWS, Google) and major user-based services like Office 365

### Actionable Insight #7: Manage Costs across the Business

Responsibility for cost management is unclear in the Everything-as-a-Service world, so it is important to work with Finance and Procurement to establish clear responsibilities for managing which parts of spend. Who manages unit prices, and who is responsible for consumption. If all costs come out of IT's budget, overruns can come quickly even when IT has done nothing to influence costs.

Understanding which business process is driving costs, and ensuring investments and costs are managed well, companies need to establish FinOps (Financial Operations) capabilities. Some large enterprises are doing this to some extent, yet it is far from common.

# A FINAL NOTE ON CHANGE

Change is the new constant, and the pace of change is accelerating. We hope this paper has given you some insight into what is going on, and what challenges you need to meet and actions you can take to meet them.

As we move into the X-a-a-S world, have agility, flexibility, and speed in mind – not as buzzwords, but as modes of operation.

The old world of multi-year agreements and large capital investments will only rarely be a useful paradigm.





## About Kostner

Kostner is innovating the way Cloud services are bought.

Cost Efficiency and Speed and Agility rarely go hand in hand, but with Kostner's "Savings-as-a-Service" you have assurance you are buying and consuming Cloud services in the most cost efficient way possible. This sets the IT department free to focus on powering the digital business – not slowing it down by old-fashioned optimisation projects.

Kostner customers spend 3 hours every 3 months and get an assessment of their cost efficiency, and actionable insights to improve it – with no impact on business operations or digitalisation speed.

Visit [resources.kostner.com/interxion](https://resources.kostner.com/interxion) for your free trial.