



# How a Hybrid IT Strategy can Drive Business Growth

The evolution of IT infrastructure and the  
impact on Irish businesses



Written by Jason Walsh, Irish journalist





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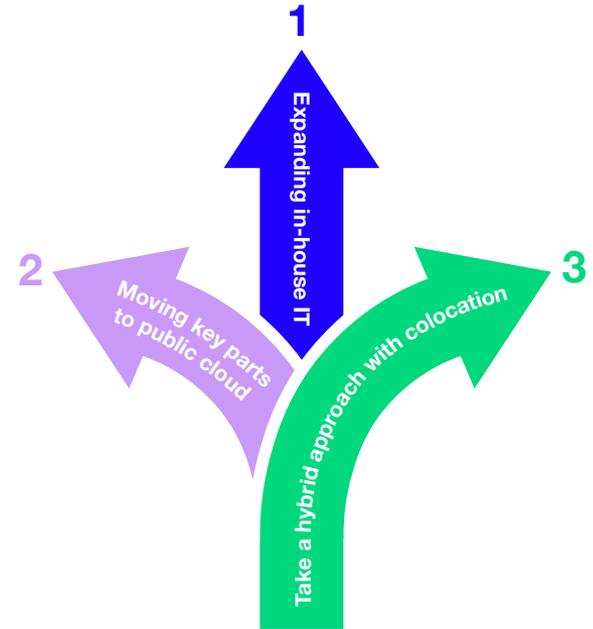
# Executive Summary

It's no exaggeration to say that in today's always-on digital world, data is at the centre of business operations but many businesses find it difficult to choose a strategy to meet the organisation's data needs. Buyers seeking to meet growing computer and storage demands are met by a wide range of options, each with competing goals and cost structure. The modern data centre can cut through the noise, working in tandem with existing on-premise systems, including supporting legacy IT refreshes, and interconnecting to cloud compute assets. This approach allows businesses to unlock value with flexible, converged infrastructure giving the ability to develop and deploy applications without the drag factor of slow and complex provisioning or vendor lock-in.

Faced with the challenge of meeting their organisational IT needs and growing customer expectations, businesses have in recent years typically considered two different paths to

success: expanding their in-house IT by growing their on-premise IT stack, or moving key parts of the business to the public cloud. Both strategies have advantages and disadvantages. While an on-premise IT stack promises control, it can lack in scalability and also demand excessive capital expenditure. For the public cloud, it requires little up-front investment, but data policies are often opaque and operational costs can be high.

A third option exists, and increasingly it is the option of choice for businesses around the world. This is a hybrid approach, with data residing in private cloud within colocation environments. This includes moving on-premise systems, along with interconnections into co-location where it is deemed appropriate either on a cost or compliance basis. Colocation is the foundation on which forward-looking businesses build their data strategy.



Paths to organisational IT success

## Driving new business with the right IT stack

It is clear that with the growing reliance on technology to drive business, not least in terms of meeting customers where they are, that businesses and other large organisations need to modernise their IT infrastructure. However, simply moving from legacy on-premise systems to public cloud is rarely an appropriate solution either in terms of compliance or cost control. Organisations know that they need to get more from their IT, but with little desire to increase spending on complex internal systems, the cloud is no longer viewed as a viable one-size-fits-all solution. The problem may seem at first glance to be insoluble. Luckily, this is not at all the case.

Today Irish businesses are faced with the demand for digital transformation and find themselves not only with a challenge ahead but also with a great opportunity to take advantage of world-class infrastructure.

Connected, scalable and flexible, colocation has served the IT needs of major multinationals and is the ideal starting point. Hybrid cloud strategies take the strain out of running an on-premise data centre while also allowing for full control over sensitive enterprise data.



# The data is the business

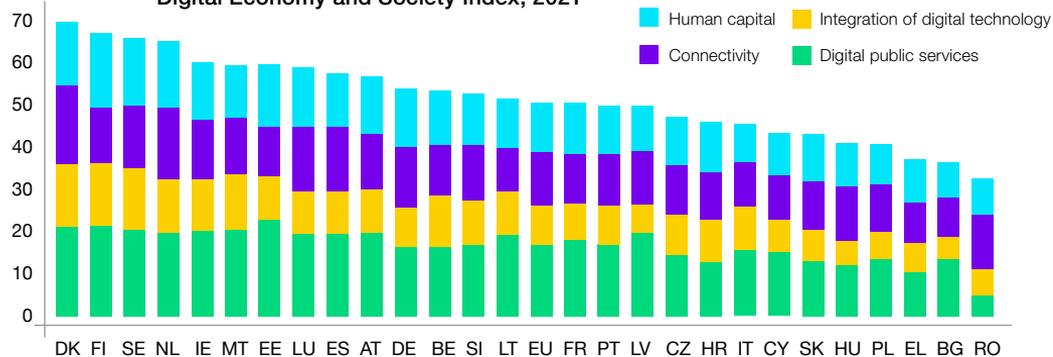
The idea that every business today is a technology business is neatly encapsulated in the sentiment that the data is the business. We are currently living in a world where even convenience stores are developing their e-commerce to offer click-and-collect. The internet is nothing short of essential for doing business and is something that only increases as you move up the scale to medium-sized enterprises, government departments, local authorities and Ireland's native multinationals.

Public expectations of technology have been raised with Ireland ranking fifth in the 2021 EU Digital Economy and Society Index (DESI)<sup>1</sup>, placing it among the leading ranks of EU Member States for use of digital technologies.

Clearly, Irish consumers, as well as B2B buyers, have come to see the online world as not only the primary channel for research but also for communication and commerce. This reality calls for a sophisticated approach to the IT infrastructure that runs the services consumed both internally and externally. The ideal endpoint is a flexible infrastructure that can grow to meet the demands of security and connectivity, provides opportunities for developing new revenue streams and even business models, but also does not spiral into uncontrollable costs while respecting the ever-increasing compliance demands businesses and other organisations face. The true foundation for this is connectivity and security.

<sup>1</sup>See The Digital Economy and Society Index (DESI): <https://digital-strategy.ec.europa.eu/en/policies/desi>

Digital Economy and Society Index, 2021



## Connectivity

Connectivity is the key transformative benefit of colocation. Traditional selling points such as reduced power needs, cooling and lower maintenance costs still apply, but with data at the heart of the business, connectivity has become the central proposition. Being carrier-neutral by nature, colocation means having the ability to connect to any service, anywhere and crucially, at any time. More than this, it acts as a cloud on-ramp without requiring the re-architecting of business systems that a full cloud migration entails. In addition, colocation does not mean losing control of data, nor leaving businesses at the mercy of cloud provider uptime.

At the same time, business operations are facilitated by fast connectivity, while end-to-end integrity ensures large volumes of users can be supported simultaneously. In the longer term, colocation promotes flexibility as building a network with a carrier-neutral data centre means colocation customers are not constrained by either internal or external resources.

## Security

Security is a core strength. Describing today's network landscape as something like a Wild West is to label the gunslingers of the nineteenth century. None of us can fail to have noticed the increase in cybercrime over the last few years, from widely reported breaches of large enterprise and government IT systems, right down to spam calling and phishing attempts. With a hybrid workplace now in place, security is more important than

ever, and colocation means that data can be transferred with confidence from the network edge, such as a home office, or from business premises to the data centre and, if necessary, onwards, all the time overseen by network security professionals and less at risk than data that spends all of its time on the public internet.

There is a physical side to security, too, with data centres effectively fortresses denying access to unauthorised personnel and strong internal policies about who can go where. Despite the clear benefits, anecdotal evidence suggests native Irish business as a whole has been slow to engage with the idea that data is at the centre of their business. Changes have certainly been forced by the Covid-19 pandemic and its lockdowns, most notably in the shift to remote working and the need to engage with e-commerce. But measures once taken to keep businesses running in adverse circumstances, such as the rapid adoption of simple public cloud technologies like software as a service (SaaS), do not equate to a strategic plan for engaging with digital transformation. However, there are some signs of hope. In one recent survey of Irish IT leaders 73% of respondents said their company's board is now more likely to approve new IT strategies and spending while 80% plan to increase investment in digital transformation.<sup>2</sup>

Getting out of survival mode means taking a programmatic approach that starts with the question of what the business is seeking to deliver and works from there to deploy a coherent strategy to do it. Long term storage, archival for example, demands a different approach to live internet-based customer interactions. The chosen approach should also be achievable.

<sup>2</sup>See Expleo Business Transformation Index 2021: <https://expleogroup.com/bti/>

# 73%

73% said their company's board is now likely to approve new IT strategies and spending

# 80%

80% plan to increase investment in digital transformation

'Big bang' IT projects have a, frankly well-deserved, reputation for failure, but this is no reason to let a business wither on the vine of outdated or unsuitable legacy equipment. Any infrastructure to be deployed should be deployed on a programmatic basis, such as, based on a business unit at a time, rather than switching over to a completely alien system one fine day.

### The data centre in a nutshell

The key functions of a connected data centre have long been three-fold: compute, storage and networking. Today, however, they have evolved to become digital hubs that sit at the core of the network, and hence business, activity.

Compute refers to the CPU and GPU processing power used to run the applications in the form of high-end servers mounted in racks. Storage refers to the disks, or more likely these days solid-state devices (SSDs) that hold crucial enterprise data and replicate it for backup purposes. Networking means simply interconnections, whether between components in the data centre or out to the world at large, either through private connections or via the public internet and telecommunications networks. Typical network hardware includes routers, switches and more.

Connectivity is the real key, however, as it puts an end to information siloing that can slow or even halt business development. With colocation as the strategic core of enterprise IT, businesses can streamline processes as well as experiment and develop, safe in the knowledge that applications and data are accessible.



## The on-premise dilemma

Traditional IT infrastructure relied exclusively on the on-premise data centre. In essence, a collection of servers and storage and networking devices, connecting business users to the applications they needed for their day to day work. Where external capacity came into the picture, it tended to be in the case of less critical 'edge' services, such as shared hosting platforms used to deploy websites to customers.

Of course, today, web services are far from peripheral to business, but few other than the very largest of global organisations have ever had the appetite to bring web serving back into the on-premise IT infrastructure. Connectivity alone acts as a brake on any such ideas, let alone the very real operational difficulties.

At the same time, businesses have responded to new internal needs and external opportunities by recognising that new technologies need to be deployed to increase efficiencies and meet customers where they are: from self-service portals to remote access to data on the go, expectations have been raised to the point where serious investment is required to keep a business online 24/7.

Refreshed on-premise infrastructure has been one answer, but the capital expenditure of constant hardware refreshes, not to mention operational and development costs, long lead-in times and staffing shortages have made it unattractive. In addition, on-premise data centres lack connectivity at an appropriate scale, resulting in latency that has a direct and negative impact on business operations.

Another has been the public cloud, but any business that has been around for a while will have some legacy applications that were designed before the cloud became a software delivery model. Migrating such apps to the cloud typically requires significant redevelopment, taking up precious resources.

The correct answer is straightforward enough. Colocation can provide the same simplicity of provisioning alongside the connectivity and flexibility required. Migration can be either an application installation on shared resources or privately-leased resources or a 'lift-and-shift' operation, moving hardware to the data centre. But the modern approach goes further, and the data centre should be thought of as significantly more than merely a shed full of servers and switches.



Freed from maintenance and upgrade work



Remove capital expenditure



Focus on core business activity



Availability of in-house IT staff



Colocation offers infrastructure flexibility plus unrivalled connectivity

Just as cloud has driven a new understanding of both the ownership of infrastructure and the economics of running a data centre, the rise of cloud-based Infrastructure as a Service (IaaS) and Data Centre as a Service (DCaaS) has meant a virtual data centre can be provisioned by colocation users with just a few mouse clicks, putting an end to the long lead times required to deploy and manage on-premise IT.

Colocation should be thought of as the strategic nexus of a private cloud installation, offering all of the flexibility of a highly virtualised and scalable infrastructure, while at the same time delivering unrivalled connectivity. As such, colocation forms the lynchpin of any serious hybrid cloud approach to enterprise IT, bridging the gap between users and data with effective connectivity to public cloud services, functioning as a low latency on-ramp to major public cloud providers, as well as interconnecting back to any remaining on-premise infrastructure.

Indeed, the fact is that for now the transition from on-premise to colocation facilities is still very slow at 58% of IT and data centre managers globally (including 25% in Europe) admitting to processing IT workloads on an in-house basis with this averaging at around 69% of their total IT workload.<sup>3</sup> It may not be a growth area, but it remains home to business-critical services and data. As a result, enterprises are struggling to

maintain existing infrastructure and so are losing out on the growth possibilities that come with a digital-first approach to business. Given this context, colocation is the clear route to modernisation as it both simplifies operations and affords crucial space for rapid experimentation and scaling-up of services.

In the same survey, respondents cited a lack of visibility into public clouds and responsibility for uptime as a reason to resist the switch to the public cloud. Here, colocation provides the answer either by replicating and so replacing on-premise infrastructure, or routing back into it, while at the same time avoiding the potential for spiralling costs.

<sup>3</sup>See Uptime Institute 2020 Global Data Center Survey  
<https://www.maincubes.com/en/blog/concerns-about-colocation-and-why-they-are-often-misplaced/>



## Because one size doesn't fit all

For those businesses already making use of the public cloud, making a move to colocation does not mean abandoning established development or production environments. Colocation providers offer the ability to connect to any of the international cloud providers, be that Oracle, IBM, Google, or even Alibaba. Direct cross-connection via Azure ExpressRoute and AWS Direct Connect routes data from the data centre to the cloud and back entirely bypassing external public networks. In addition, if desired, SaaS applications running in the public cloud can be replaced with hosting in colocation.

In this way, the reason analysts have said time and again that public cloud will not replace dedicated data centres – because one size doesn't fit all – becomes the very reason for adopting a hybrid approach with colocation as the foundation: because one size really doesn't fit all.

### New tech

The first place that businesses usually engage with colocation services are data-intensive, yet inert services such as backup and disaster recovery. Key enterprise data, no matter how much of it there is, can be easily and rapidly transferred to colocation facilities, where power backup systems and physical security mean that even if disaster strikes at your key location the business can resume operations immediately.

Enterprise applications, largely database-driven, are next on the agenda. Whether lifted-and-shifted or migrated to new platforms, colocation facilities provide wide, deep and fast connectivity that breathes new life into core applications such as customer relationship management (CRM), enterprise resource planning (ERP) or accounting and payroll.

Beyond that, there is an opportunity for making even more of an engagement with new technologies. Colocation services are about more than storage and connectivity, they are also an opportunity to leverage new compute- and storage-hungry technologies such as data analytics, artificial intelligence (AI) and machine learning (ML), or to simply develop new applications in a flexible and scalable environment to support new revenue streams or business operations.

Unlike traditional on-premise infrastructure, colocation is inherently scalable with new CPUs and storage able to be turned on at the click of a button, and unlike with public cloud, data can be held privately and costs kept under tight control. This gives developers the chance to experiment with new applications in custom environments entirely under their control, reaping the benefit of typical cloud infrastructure as a service (IaaS) and platform as a service (PaaS) without worrying about loss of control, spiralling costs or vendor lock-in.



## Colocation at Digital Realty

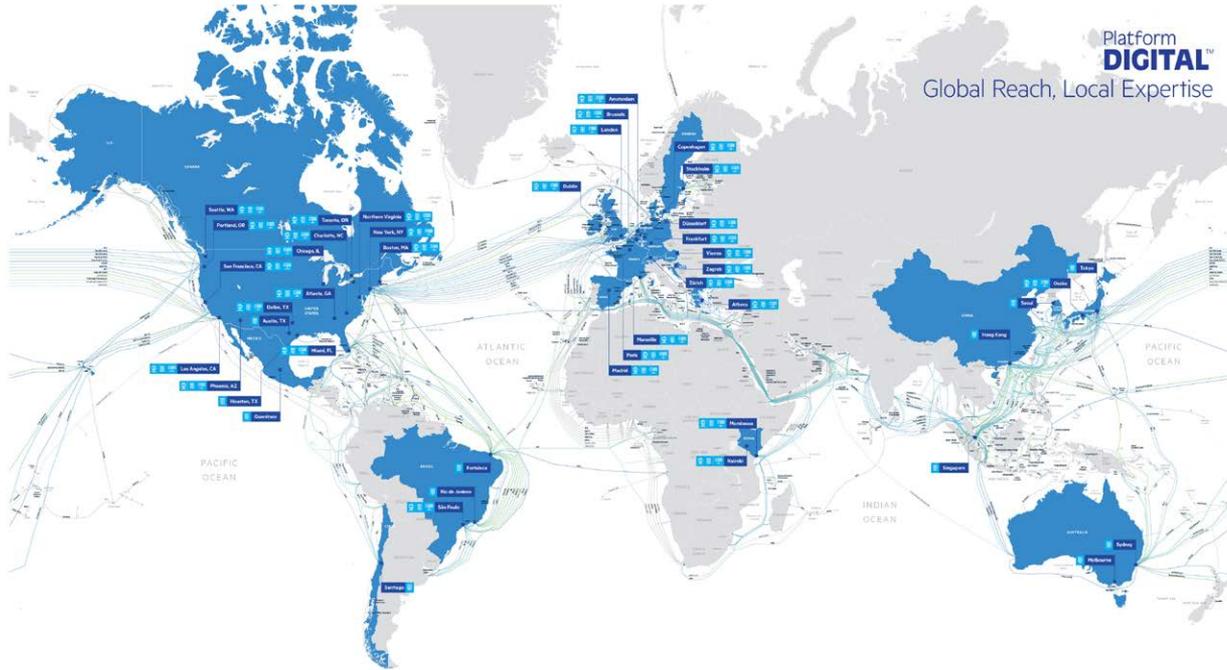
**Digital Realty** is a leading provider of carrier and cloud neutral data centre services across EMEA. As part of Digital Realty, customers have access to 49 metros across six continents. With 4 dedicated colocation data centre facilities around the Dublin area, Digital Realty tailors solutions around customer's specific requirements from an entire data hall, to secure private cages to single cabinets. With access to over 45 network carriers, 3 local fibre routes, 7 subsea cable networks, and as the only colocation provider in Dublin with both AWS Direct Connect and Azure ExpressRoute locally deployed, Digital Realty Dublin is the ideal home for your IT infrastructure.



### About Jason Walsh

Jason Walsh is an Irish journalist based in France. A former foreign correspondent, he now writes about technology, communications and research, and has contributed to a wide range of newspapers and magazines in Europe and the United States.





## About Digital Realty

Digital Realty brings companies, data and technologies together by delivering the full spectrum of data center, colocation and interconnection solutions. PlatformDIGITAL®, the company's global data center platform, provides customers with a secure meeting place for their data. A place where businesses power innovation, can go faster and further, invent the unseen, and expand across the globe. Digital Realty's global data center footprint gives customers access to the connected data communities that matter to them with 290+ facilities in 50+ metros across 26 countries on six continents. To learn more about Digital Realty, please visit [digitalrealty.com](https://digitalrealty.com) or follow us on [LinkedIn](#) and [Twitter](#).

## Contact

00353 1434 4900

[SalesIE@digitalrealty.com](mailto:SalesIE@digitalrealty.com)

[digitalrealty.com](https://digitalrealty.com)

