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Why Private Cloud and Private Virtual Data centres could be right for your business?

Dispelling myths, unlocking cost savings, enabling flexibility, and maintaining control of your IT hosting

Executive Summary

In this whitepaper, we use non-technical language to describe the challenge associated with choosing the most appropriate place to host your IT services. We objectively look at the differences between “Clouds”, making the case for Private Cloud as a compelling option for organisations looking to lower their IT operating complexity and costs, enhance flexibility and maintaining control of their IT estate.

We also dispel the myths around moving to cloud, in that many organisations are already there, or have been for some time, and that it’s perfectly acceptable to say “public cloud isn’t right for our organisation”. Believe it or not, despite how long “Cloud” has been around, organisations still face confusion around that term when deploying modern IT services. For organisations whose first language isn’t IT, it can be challenging to differentiate between “Clouds”, with many organisation leadership teams following a “Cloud first” trend, without knowing it’s wide-ranging implications.

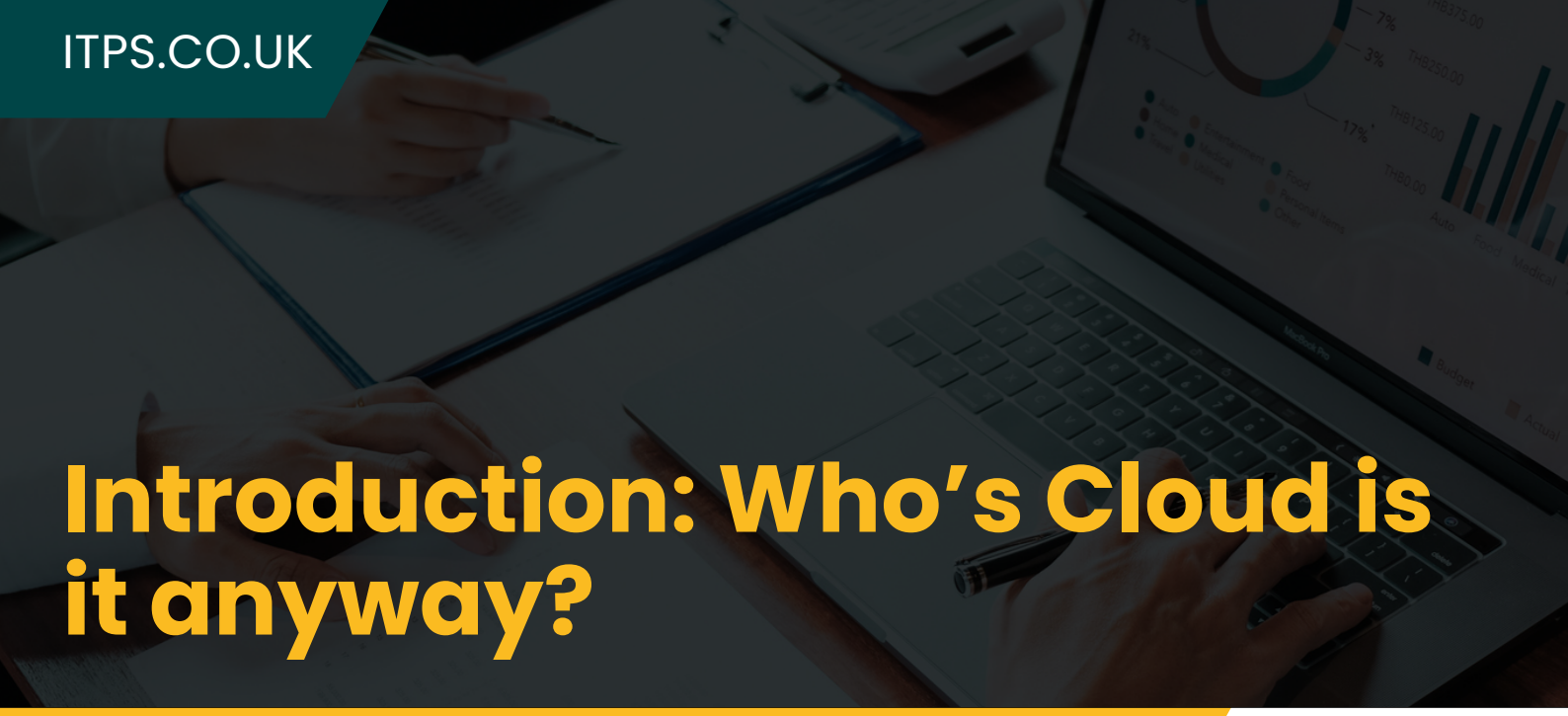
ITPS

We’re experts at delivering complex, future-proof IT projects that help our clients do business better.

Using best in class tools and technologies, we deliver innovative IT solutions and keep our customers safe, while giving anytime, anywhere access to systems and data to those stakeholders who need it.

You’ll find us top tier partners when it comes to delivering Cloud, Cyber Security, Managed Services, Professional Services, Communications, and Data and Analytics services to household names in the public, private and not-for-profit sectors across the UK.

With a team of people who have an unrivalled depth and breadth of expertise and knowledge, we have the right skills and capabilities to work with you as technology evolves. Many of our clients have been with us for 20 years, and regard us as a trusted technology partner, supporting their changing business, delivering tailored IT solutions and adding stability and value across their organisations.



Introduction: Who's Cloud is it anyway?

Dispelling the myths

Put simply, Cloud is a term used to generalise IT application or server hosting, wherever it may be. For the purposes of this whitepaper, we use the following terminology:

Public/Hyperscale Cloud

Public or Hyperscale Cloud refers to resources which are provided by a 3rd party, accessed via the internet, and are shared by multiple organisations. Examples include Microsoft Azure, Amazon Web Services, Oracle Cloud and Google Cloud Platform. There are a far more comprehensive number of services available from these providers, although there are more limitations on customisability when it comes to server hosting.

Public Cloud services are always OpEx based, where services run on shared infrastructure (multi-tenant) which is not owned by you. Some providers call everything "as-a-service" such as Software-as-a-Service, Platform-as-a-service, or Infrastructure-as-a-service.

Private Cloud

Private Cloud is typically used to describe applications or servers hosted in a 3rd party data centre. The server hosting resources can be shared or dedicated to your use, have been set up specifically customised for your organisation's needs, and are accessed only by your organisation. Private Cloud is different from Co-Location (CoLo – which is simply your own servers in someone else's server room) in that it features a management layer, where the infrastructure is managed and monitored by your IT provider – this might be called Infrastructure-as-a-Service (IaaS), or Platform-as-a-Service (PaaS). Some Private Cloud providers, including ITPS, offer "co-managed" options, where we take control of "feeding and watering" your services, and your own IT teams can still manage them too.

Some organisations with large, virtualised, on-premise server hosting, consider themselves to have a Private Cloud. This is a completely acceptable definition and can be a big green tick in the box for businesses who want to have cloud-based IT but who rightly do not want to force another cloud upon their business.

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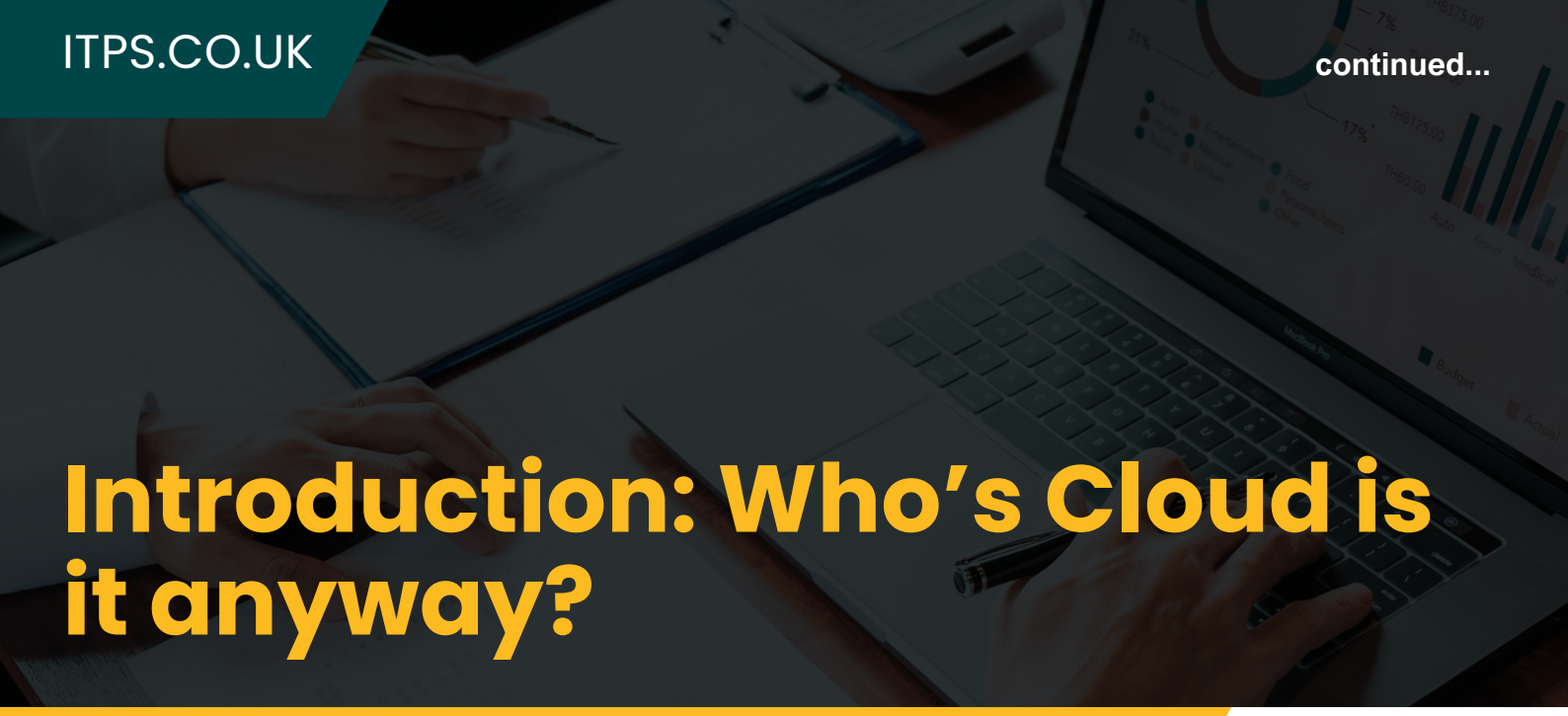

Introduction: Who's Cloud is it anyway?

Private Cloud services can be purchased as OpEx or CapEx depending on the solution. OpEx-based services can be paid for as "reserved up-front" or "pay as you go/consumption based". This CapEx option can be hugely import for businesses or departments that are required to spend some of their budget in as CapEx.

Private Virtual Data Centre (PVDC)

A Private Virtual Data Centre is simply your own dedicated "data centre within a data centre", and is fully managed by your IT provider.

YImportantly, you get the same features of a public cloud provider's server hosting capability (and even some features that those don't have) but customised to your organisation's specific needs.

For example, theOur ITPS Private Virtual Data centre is underpinned by VMware technology, with all of the market leading features it brings, coupled with the lower licensing costs offered by the economies of scale of a service provider such as ITPS.

Hybrid Cloud

This is an IT design concept which seeks to use the best of all worlds to enable the right combination of services for an organisation's need. Most medium/large organisations use a combination of private and public cloud services, both shared and dedicated.

Should I leap forward?

The challenges of adopting Public Cloud

Around 70% of Cloud/Digital Transformation projects fail to realise their business case (McKinsey & Company). Many factors drive this statistic.

Some are a result of a management team drive to pursue the trend of Cloud, as a "**what" they must do**, without being fully informed of the "**why" they should do it** – i.e. a solution looking for a problem. Other factors include poor implementation of Agile and DevOps practices, resulting in a **"we'll find out if it works, if we ever get there, whether it was worth it or not"** approach to transformation - this is a great approach for Innovation Lab environments, but not so great for fixed time, fixed cost, fixed outcome projects.

Many large organisations have legacy or "traditional" IT applications which may either;
a) be unsupported on public/private cloud platforms, and/or
b) the business case to remediate those application onto public/private cloud doesn't stack up.

In both cases, standing still is also not an option. Large organisations are also concerned about unpredictable variable costs of public cloud, or the inflexibility of locking-in to proprietary technologies used by public cloud vendors.

The answer to addressing these challenges is a simple one - **competent Architecture design**, aligned to your organisation's needs, that has measurable and tangible outcomes. This includes not only technical design, but the economics of adopting cloud services, which are somewhat different from traditional models. Much of our work is in the business-case phase, iterating a set of authentic and believable outcomes that benefit the business with a tangible ROI.

70% of Cloud/Digital Transformation projects fail to realise their business case.

McKinsey & Company

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Should I stay where I am?

The challenge of maintaining an on-premise data centre

High operational costs, including those from market forces, such as the recent VMWare licensing costs increase, can quickly become a headache for a CIO or CFO trying to budget.

The lack of scalability and flexibility, without large CapEx investment, can hamper an organisation's ability to quickly respond to changing demands. E.g. outdated infrastructure can impact innovation, where compute power for new business services is not readily available or is contended.

On-going management and maintenance of an on-premise IT estate is becoming increasingly more complex and challenging, especially driven by more complex infrastructures, the security landscape, and advanced IT services such as AI, machine learning and quantum computing. This complexity in turn drives up costs due to the skills needed to support them.

Did you know...

Since Broadcom's acquisition of VMware, some clients are seeing a **cost increase ranging from 150% to 1,250%** for the same services. *(DXC Technology)*

IDC estimates that private/hybrid cloud migrations deliver **20–40% reductions in infrastructure and operational costs**

DC/VMware study noted **53%** improved **infrastructure team efficiency** and **52%** improvement in **security team efficiency**

Despite adoption of public cloud, **81%** of global organisations expect some **workload repatriation in the next 12 months** *(Broadcom)*

IDC (Q4 2023) shows **59% of cloud buyers overspent**, and ~50% expect cost overruns on future cloud spen

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Should I make an incremental move forward?

The typical use-cases for Private Cloud

For those organisations who want to move forward from where they are now, and understand that public cloud is not the right choice for them, a Private Virtual Data Centre can be a compelling next step in their technology roadmap. It may be that the organisation will be ready to move to public cloud within a 3-5 year horizon, but there may be a drive to do something now in the interim. The typical use cases for Private Cloud we hear from our customers are:

- Public Cloud usage costs are increasingly out-of-control
- Business applications not ready to move to public cloud, either due to cost of running in cloud, or software vendor constraints
- IT service availability requirements cannot be met by public cloud hosting
- The organisation prefers CapEx over OpEx
- Complex use-cases, such as custom AI/ML workloads
- Security or data sovereignty concerns
- Organisation wants to outsource “back room” IT functions and re-prioritise IT team focus at the front-end of the business, or downsize the IT team
- IT management overhead is becoming too complex for internal teams, e.g. Security
- A desire to retire on-premise IT room/data centre

Private Cloud Economics (Case Study)

Our client needed to modernise its ageing infrastructure while controlling rising IT costs.

Public cloud was considered but ruled out due to concerns over pricing complexity and hidden fees.

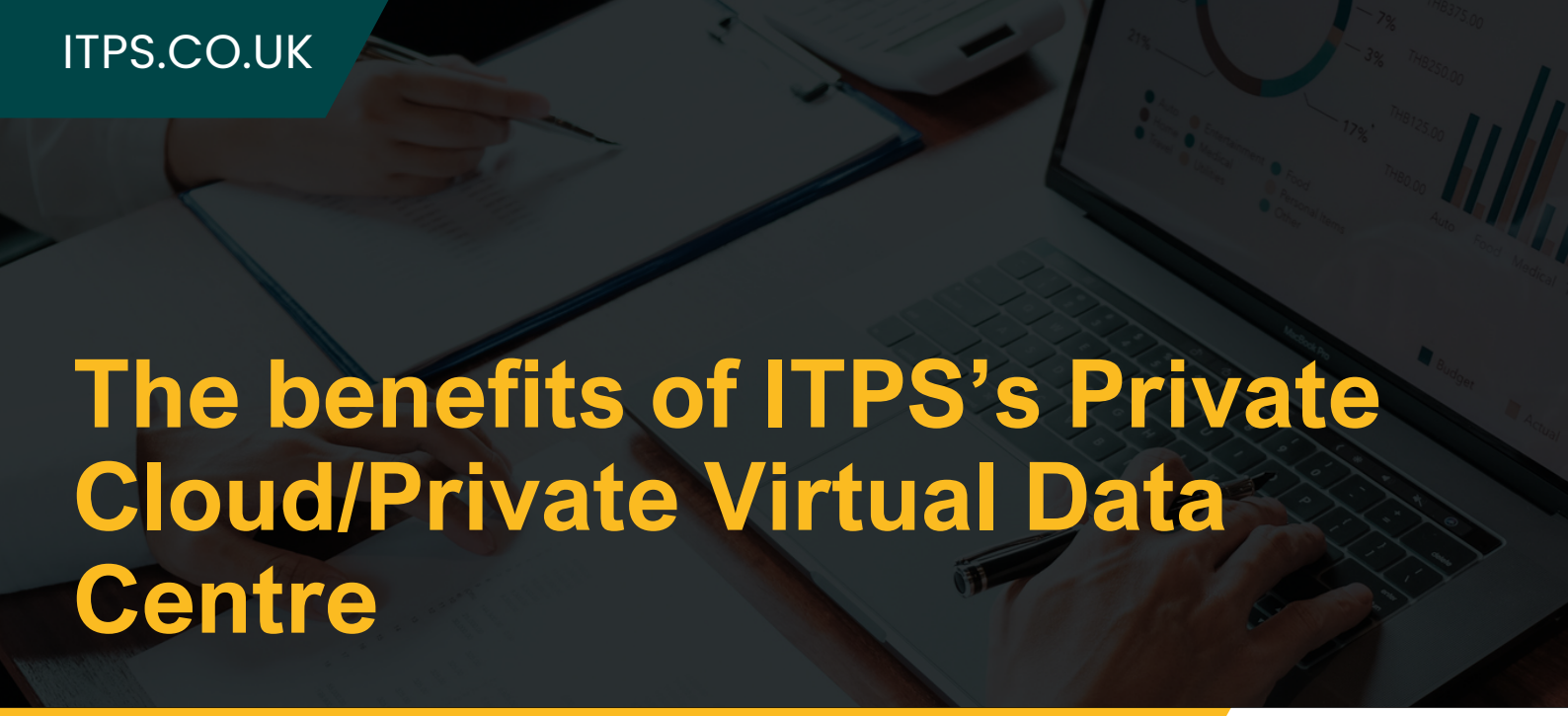
We delivered a bespoke private cloud using VMware VCloud and PVDC, hosted on its IaaS platform. The solution included integrated security, disaster recovery, and flexible scaling through our "FlexCloud" model, with transparent, fixed-cost billing.

Migration was completed over a single weekend with zero disruption.

Results

- **75% cost savings** vs. public cloud
- Faster deployment with **zero downtime**
- Predictable billing and improved **financial control**
- **Future-ready** IT infrastructure supporting expansion

More cases studies can be found **here**



The benefits of ITPS's Private Cloud/Private Virtual Data Centre

Let's look at some of the benefits of PVDC:

Cost Savings and Control

- Predictable costs with either fixed or "pay per use" pricing models, as you prefer
- OpEx and CapEx options to suit your budget requirements
- Lower IT operating costs due to outsourced management
- Access to extended technical skills base via your IT hosting partner
- Reduction in your energy bills
- Simplified and lower cost software licensing

Flexibility and Scalability

- No technology lock-in – using industry standard VMware technology, easily portable to another provider should you choose in the future
- A solution tailored to your organisation's specific needs, rather than conforming to a "t-shirt size"
- Better high-availability and resilience options than some public cloud providers
- Shared or Dedicated resources depending on your needs
- Elastic resources to handle peaks in business demand (e.g., flu season, pandemic response, natural disasters)
- High-performance compute available

Sustainability

- Reduced carbon footprint through consolidation of IT services in our energy efficient data centre. ITPS' data centre Power Usage Effectiveness rating (the industry standard by which Data centres are measured) is 1.2 – the global industry average is 1.56.

Improved Security Posture

- Enhanced cyber resilience through private and hybrid cloud models
- Role-based access controls and data sovereignty aligned with UK regulations and government guidance (e.g., GDPR, NHS DSP Toolkit, CDDO)
- Proactive threat detection and mitigation with advanced security tools
- Full-stack Cyber Security offering with independent Penetration Testing
- Data Sovereignty assurance with all services being resident and managed within the UK

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Partner with ITPS for a Tailored Cloud Solution

As your trusted partner, and with our Cloud-agnostic approach, you can always count on ITPS to deliver the right solution for your organisation, ensuring alignment with your specific needs and goals.

Ready to take the next step?

Reach out to us today to discover how we can support your cloud journey on **0191 442 8300** or email **enquiries@itps.co.uk**