Research Report

FREEFORM DYNAMICS

The Hybrid IT Platform Imperative

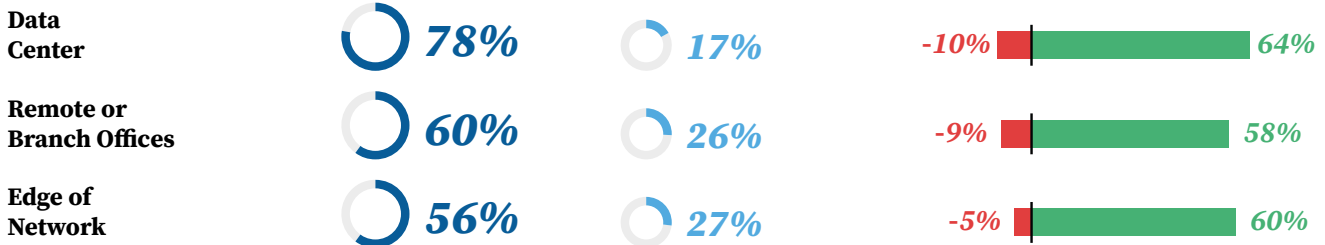Building a solid systems foundation for digital transformation

Introduction

IT infrastructures are growing more diverse, and increasingly that diversity is encouraged and preferred.
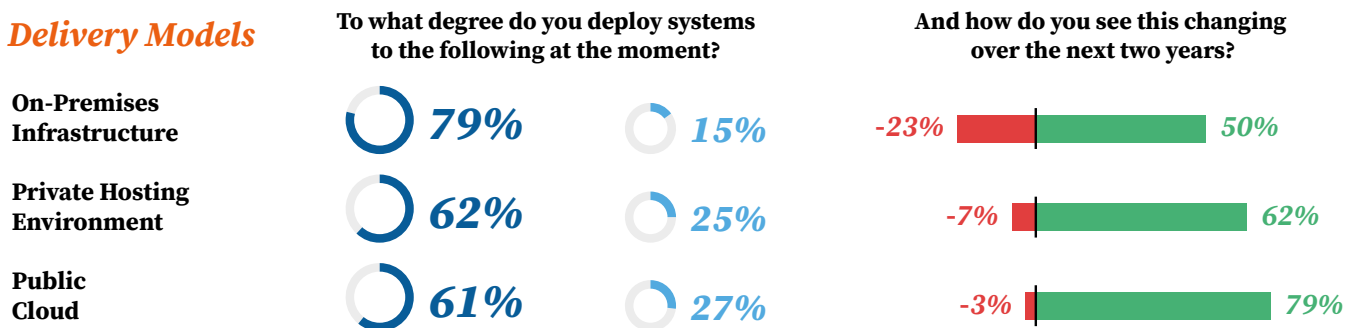
The IT systems landscape is changing. As digital transformation moves ahead, our IT infrastructures are becoming more diverse, both in type and location, and more interconnected - more hybrid, in other words.

And as a world-wide survey of over 800 IT professionals demonstrated, the rate of change will not slow down any time soon. Not only do the majority have systems of all kinds widely deployed on their own sites, they also use the full range of IT delivery models (see below).

Indeed, they welcome certain aspects of this diversity. Two-thirds see advantage in using multiple public cloud providers, say, and almost half prefer not to standardize on a single software virtualization stack.
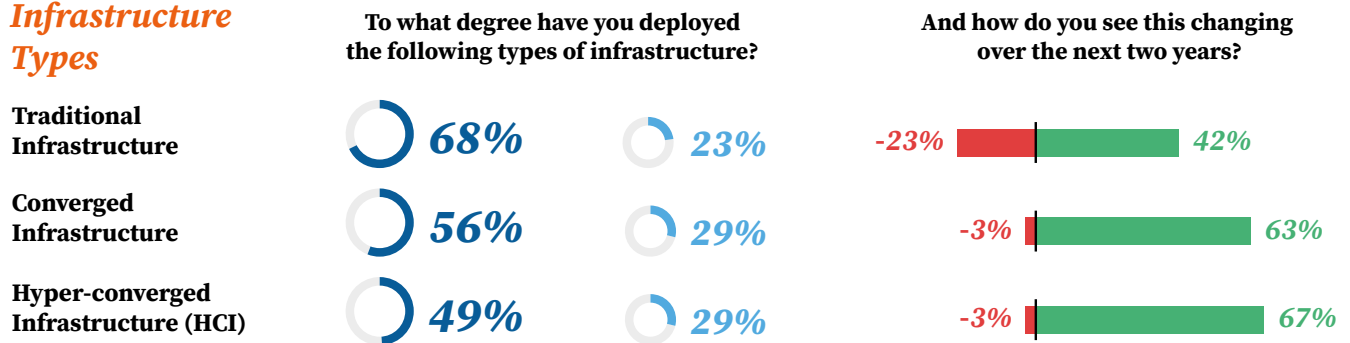
	Significant	**Some**	**Decreasing** | **Increasing**	

Infrastructure Locations

To what degree have you deployed equipment in the following locations? **And how do you see this changing over the next two years?**

	Significant	Some	Decreasing	Increasing
Data Center	78%	17%	-10%	64%
Remote or Branch Offices	60%	26%	-9%	58%
Edge of Network	56%	27%	-5%	60%

Delivery Models

To what degree do you deploy systems to the following at the moment? **And how do you see this changing over the next two years?**

	Significant	Some	Decreasing	Increasing
On-Premises Infrastructure	79%	15%	-23%	50%
Private Hosting Environment	62%	25%	-7%	62%
Public Cloud	61%	27%	-3%	79%

Infrastructure Types

To what degree have you deployed the following types of infrastructure? **And how do you see this changing over the next two years?**

	Significant	Some	Decreasing	Increasing
Traditional Infrastructure	68%	23%	-23%	42%
Converged Infrastructure	56%	29%	-3%	63%
Hyper-converged Infrastructure (HCI)	49%	29%	-3%	67%

Microsoft
vmware
NUTANIX
Regard multiple platform stacks as strategic. **43%**

Committed to multiple cloud providers. **66%**
amazon web services
Google
Microsoft

Looking for the right balance

This diversity of deployment exists right across the workload spectrum, too. For now, public cloud is less popular than the alternatives in a few areas, but when we asked respondents to look to the near future, it was clear that they are becoming more comfortable with cloud.

Indeed, the shrinkage in the "Both" category below suggests some are 'sitting on the fence' now, but are ready to commit to one or the other.
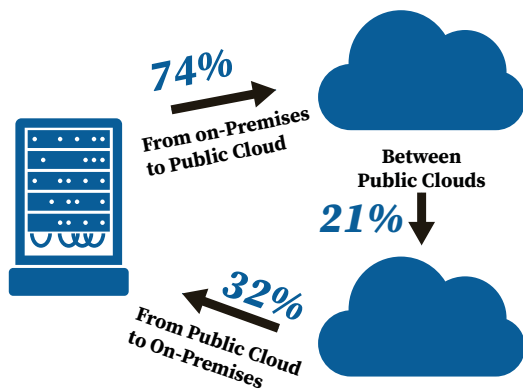
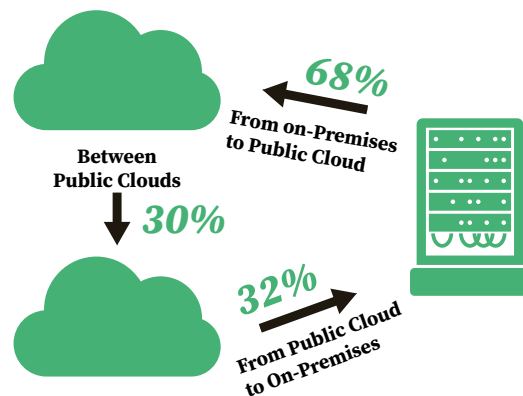**Which deployment option(s) do you currently use for these workloads?**

And what do you see as your preferred option(s) over the coming 2 years?

Workload	On-Premises (or Private Hosting)	Both Cloud and On-Prem	Public Cloud		On-Premises (or Private Hosting)	Both Cloud and On-Prem	Public Cloud
Database Management	39%	33%	24%		40%	18%	40%
Virtual Desktop Infrastructure (VDI)	30%	24%	31%		27%	22%	43%
Backup and Recovery (Target)	38%	35%	22%		35%	20%	40%
Development & Test Activity	33%	30%	26%		29%	24%	40%
Analytics (including Big Data)	30%	29%	29%		31%	21%	42%
Enterprise Applications (Core/Business Critical)	38%	28%	26%		35%	21%	36%
Digital Applications (e.g. Customer Facing)	27%	32%	31%		24%	25%	44%
Containers/Microservices	23%	29%	29%		21%	26%	41%
Internet of Things (IoT)	21%	29%	27%		21%	23%	41%

Legend:
- *On-Premises (or Private Hosting)*
- *Both Cloud and On-Prem*
- *Public Cloud*
- *Neither/Unsure*

Workload mobility

The challenge in making deployment decisions is of course that things change. An on-premises application might 'go viral' and need the cloud for extra resources, or a cloud app that sees a spike in usage might need to come back on-site before its storage costs soar. At a wider level, a new privacy law might affect where you can process personal data, or a cloud provider might alter its price structure. The ability to move workloads in any direction is therefore essential.

Have you undertaken any of the following types of migration over the past 2 years?

74% From on-Premises to Public Cloud

Between Public Clouds 21%

32% From Public Cloud to On-Premises

Are you currently undertaking or likely to do such migrations over the coming 2 years?

68% From on-Premises to Public Cloud

Between Public Clouds 30%

32% From Public Cloud to On-Premises

(The stats reflect those who said YES to the questions above)

The need for hybrid solutions

This volatility - the genuinely hybrid nature of today's IT systems infrastructure, and the workload mobility that it demands - is reflected in the many questions that you as an IT professional must answer as you determine sourcing strategies for your organization.

Fundamentally though, all the questions we heard from our survey respondents come down to a single challenge: Given the diversity of platforms and delivery models, the need for workload mobility, etc., how do we optimize sourcing in a consistent and repeatable way? The answer, it appears, is via a strategy for Hybrid IT.

Diversity

Location Tiers

Delivery Models

Infrastructure Types

Software Platforms

Cloud Services

Movement

On-Prem to Cloud

Cloud to Cloud

Cloud to On-Prem

Common Questions and Challenges

How often do these questions arise as you look to optimize your sourcing strategy

Questions ranked in order of frequency cited

1. How to minimize time to infrastructure deployment?

2. How to implement effective data protection?

3. Which infrastructure products to use on-premises?

4. How to find the best fitting cloud service provider?

5. Where to place which workload?

6. How to integrate workload placement mechanisms?

7. How to perform cloud migrations effectively?

Hybrid IT Strategy and Solutions

What's the value of Hybrid IT?

At its simplest, Hybrid IT is the notion that you operate your various IT systems, public clouds and private clouds as a single landscape - as far as possible, anyway.

We asked survey respondents what value they had experienced from Hybrid IT, or what value they anticipated from it. Their answers made the opportunity very clear: around three-quarters expected a significant or worthwhile benefit in almost every area that we asked about.

A landscape rich in opportunities

They had found (or were expecting) benefits in particular from consolidated management and operations, application portability, the ability to choose the best security and compliance model for data, and the ability to choose the best cost model for data. Cloud interoperability also rated highly.

The value of Hybrid IT in preventing vendor lock-in was not rated quite as highly as the other opportunities, perhaps because our respondents have already addressed this challenge in other ways, such as the multi-cloud and multi-platform strategies mentioned above.

How would you rate the value (or potential value) of Hybrid IT in the following areas?

75%
Significant/
Worthwhile

**Interoperability
between different
types of cloud**

73%
Significant/
Worthwhile

**Application mobility
- ability to move workloads
back and forth**

72%
Significant/
Worthwhile

**Consolidated/unified
approach to management
and operations**

71%
Significant/
Worthwhile

**Ability to burst to the
cloud, e.g. from on-
premises to public cloud**

72%
Significant/
Worthwhile

**Flexibility to choose
the right cloud for
each app to the use case**

73%
Significant/
Worthwhile

**Ability to choose
the best cost model
for each workload**

74%
Significant/
Worthwhile

**Ability to choose the best
security and compliance
model for our data**

64%
Significant/
Worthwhile

**Prevention of
vendor lock-in**

Top performers see more value in Hybrid IT

Respondents with the best service delivery metrics were also the ones who saw the most value or benefit in Hybrid IT.

To obtain greater depth here, we also asked our 819 survey respondents to rate their IT department against key service delivery metrics. We used these ratings to identify one-third of them as Top Performers, and then compared their evaluations of Hybrid IT with those of the Others.

The differences were startling. Across the board, Top Performers were significantly more positive about the benefits or value of Hybrid IT. Conversely, the Others were significantly more likely to show skepticism or say they're unsure, implying a lack of actual Hybrid IT experience.

How would you rate the value (or potential value) of Hybrid IT in the following areas?
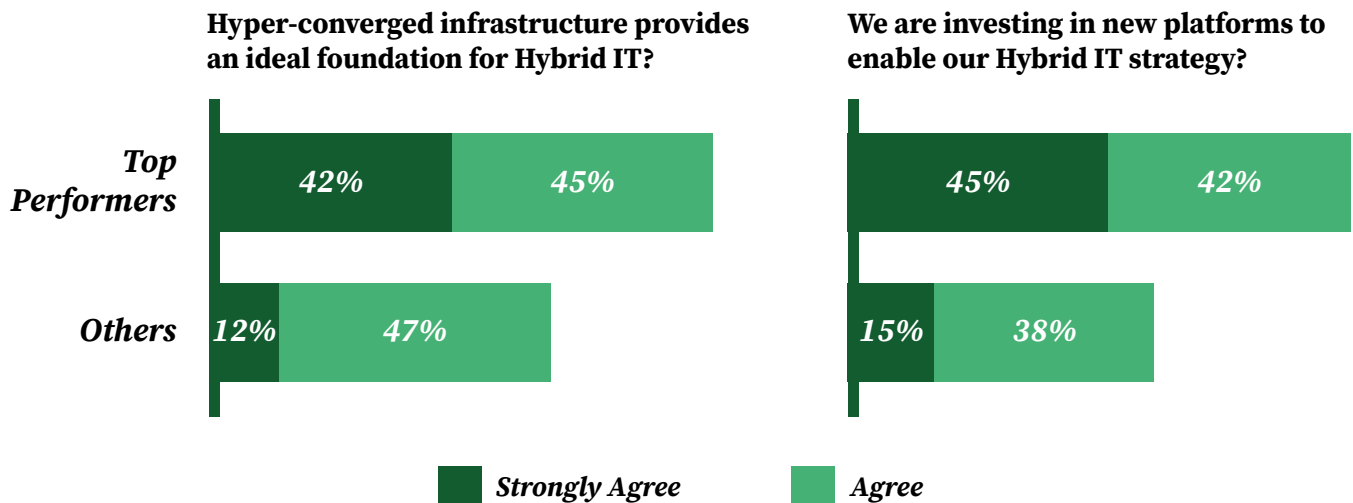**(showing results where 'Significant Benefit' was selected)**

	Top Performers	Others
Interoperability between different types of cloud	51%	17%
Flexibility to choose the right cloud for each app to the use case	46%	21%
Application mobility - ability to move workloads back and forth	46%	23%
Ability to choose the best cost model for each workload	47%	21%
Consolidated/unified approach to management and operations	49%	26%
Ability to choose the best security and compliance model for our data	53%	25%
Ability to burst to the cloud, e.g. from on-premises to public cloud	50%	21%
Prevention of vendor lock-in	36%	18%

■ *Top Performers* ■ *Others*

Converging onto Hybrid IT

Does Hybrid IT require new platforms, and if so, what kind? What else is important for success here? Fewer than one in ten of our respondents said that they are <u>not</u> investing in new platforms to enable Hybrid IT, while more than two-thirds agreed that consolidated management is critical to success, and that HCI provides the ideal platform here.

That is in part because there are many conceptual similarities between Hybrid IT and HCI, such as the extensive use of both resource sharing and software-based abstraction. Indeed, it is possible to view HCI as a miniature version of Hybrid IT, with its unified management and shared access across the elements of compute, networking and storage.

Again, we saw the Top Performers show a higher level of knowledge and activity here. Not only were they more likely than the Others to be investing in new platforms to support Hybrid IT, they were significantly more likely to identify HCI as the ideal platform for the purpose.

How much do you agree with the following statements?

Hyper-converged infrastructure provides an ideal foundation for Hybrid IT?

	Strongly Agree	Agree
Top Performers	42%	45%
Others	12%	47%

We are investing in new platforms to enable our Hybrid IT strategy?

	Strongly Agree	Agree
Top Performers	45%	42%
Others	15%	38%

■ *Strongly Agree*   ■ *Agree*

User self-service is key to success

Of course, the real point of Hybrid IT is to provide value to the business, and that means better service and easier portfolio management for the users as well as in the IT department.

The modern expectation is of easy and quick self-service, as offered by public clouds, and enterprises can replicate this via self-service portals and service catalogs. The latter draw on Hybrid IT to offer licensed or subscription-based access to a wide range of applications and services, both on-demand and in a common presentation format.

Around two-thirds of our respondents agreed that service catalogs and self-service portals are key to both service portfolio management and delivering a good user experience. Once again, there was a significant difference between the Top performers and the Others: 40% of Top performers already have catalog-driven self-service portals in place, versus just one in eight of the Others.

Do you currently have a catalog-driven self-service portal in place?

	Top Performers	Others
Yes	40%	13%
It's in the Plan	32%	35%
Possibility For the Future	20%	29%
Don't See a Need	6%	17%
Unsure	1%	6%

■ **Top Performers**   ■ **Others**

Filling the skills gap
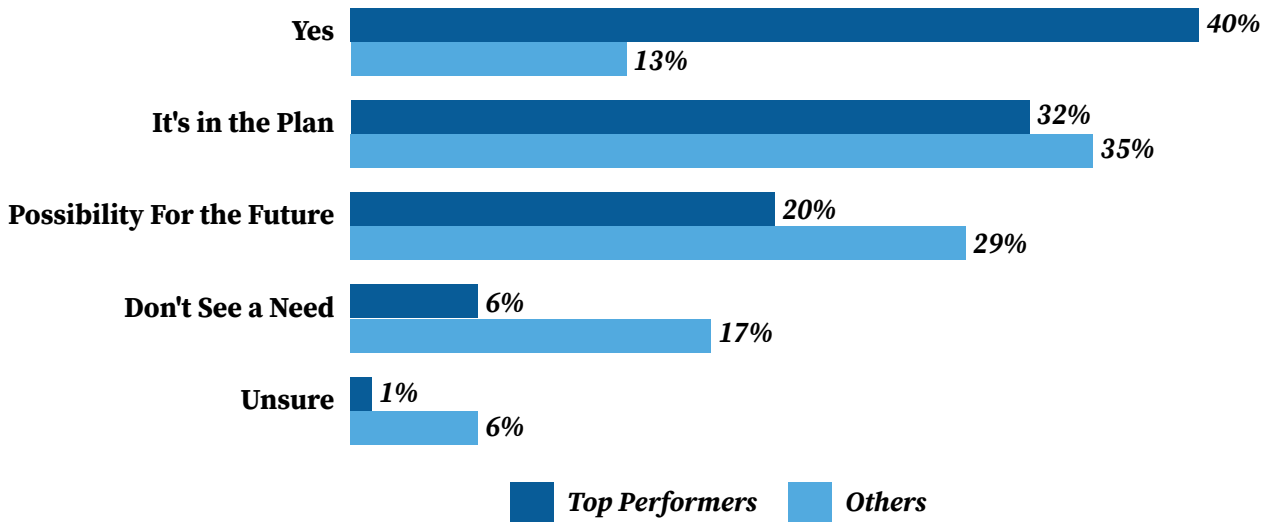
Building and operating Hybrid IT also requires existing skills to be combined into new hybrid skillsets.

Hybrid IT incorporates multiple technologies and services, so it requires all the same skills that are needed to configure, manage and operate the likes of public and private cloud, traditional on-premises IT, and so on. However, because those different technologies and services must now work together as a single infrastructure, it also requires an understanding of how they interact.

Then there are the skills needed to build and run shared storage services, to implement the necessary security, and of course to set up and maintain service catalogs and self-service portals. None of these are especially problematic, but many feel they are difficult to acquire.

It is no surprise then that the majority of survey respondents said that acquiring and retaining the necessary talent and skills was a challenge, and that they were reskilling their IT teams to cope. This is of course something that is happening across the industry, as convergence makes IT generalists more useful than IT specialists.

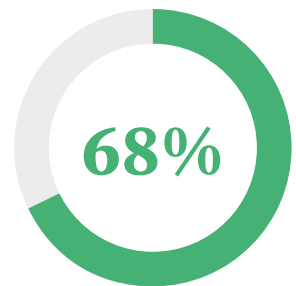**How much do you agree with the following statements?**
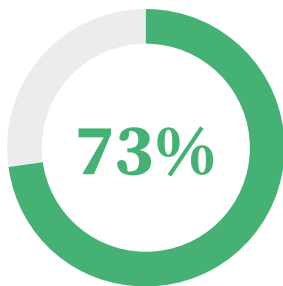
73%
Strongly agree/agree

We are reskilling our IT team to enable our Hybrid IT strategy
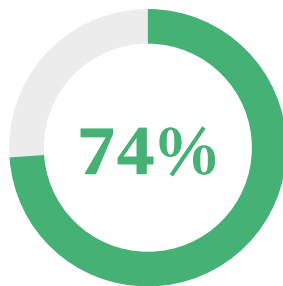
74%
Strongly agree/agree

Acquiring the necessary talent and skills for Hybrid IT is a challenge

68%
Strongly agree/agree

Retaining talent and skills to support our Hybrid IT strategy is a challenge

Fortunately, IT staff tend to be curious and eager to learn, as confirmed by other research that we have carried out. That means smart and collaborative management should be able to address many of the skills challenges by supporting IT teams as they adjust and adapt.

Learning from IT partners

The other way to plug the skills gap – especially for skills that are needed less frequently, such as those required mainly during implementation – is to bring in talent from outside, in particular from suppliers and partners. Fewer than one in sixteen of our respondents disagreed with this approach, while the majority saw it as key to their success with Hybrid IT.

How much do you agree with the following statements?

Skills from suppliers and partners are key to our success with Hybrid IT

70%

Strongly agree/ agree

This willingness to borrow or learn from suppliers and partners also extends to system design. While quite a few organizations still prefer to specify and build their Hybrid IT platforms from scratch - the do-it-yourself (DIY) approach - we found a greater preference for working with a supplier who either provides a design 'blueprint' for you to build from, or for acquiring pre-integrated, tested and ready-to-run systems. Note that this is not the same as a ready-made appliance: the blueprint and pre-integrated approaches provide much more control over configuration, sizing, the component list, and so on.

As you build out your Hybrid IT infrastructure, how much emphasis will you put on acquiring systems in the following ways?

Do it Yourself (DIY) - specify systems from scratch, then acquire and integrate the components yourself	15%	35%	28%
Reference Architecture – acquire and integrate components yourself, but in accordance with a proven design	19%	39%	30%
Integrated System – acquire a pre-integrated platform from a supplier that's supported as a total solution	27%	44%	20%

■ *5 = High emphasis* ■ *4* ■ *3* ▢ *2* ▧ *1 = Unlikely to use*

In conclusion: the Hybrid advantage

At first look, the promises of Hybrid IT – such as consolidated service management and data governance, workload mobility, and modern user self-service – might seem fanciful and hard to achieve. Yet according to our survey they are both realistic and worthwhile.

Indeed, we found that those respondents who rated their IT departments most highly on key service delivery metrics also saw the greatest value in Hybrid IT. Whether it was better management of data security and compliance, cloud interoperability, or one of several other opportunities, these 'Top Performers' consistently saw more value than did their less successful peers.

We also found evidence that the Top Performers have already done more to build out their Hybrid IT strategies. They are significantly more likely to report strong investment in new platforms to enable Hybrid IT, and three times as likely to already have a catalog-driven self-service portal in place, for example.

In summary Hybrid IT can on the one hand be considered an imperative - necessary to invest in to cope with the increasingly diverse and dynamic nature of enterprise IT landscapes. On the other hand, Hybrid IT also represents an opportunity to enhance the flexibility, responsiveness and efficiency of IT service delivery to drive higher-level business advantage.

Top Performers see more value in Hybrid IT, and are significantly more likely to invest in new platforms and portals to enable it.

About Freeform Dynamics

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