

HYPERCONVERGED

VS

CONVERGED INFRASTRUCTURE

Which IT Infrastructure Is Better?

According to Techopedia¹, IT infrastructure:

"...refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise IT environment. It allows an organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities."

In short, it's the foundation for business continuity. So, what's the best option?

It depends. IT infrastructure decisions should be made after carefully evaluating the needs and variables of each organization.

In this infographic, we will examine the benefits and disadvantages of two types of infrastructure, hyperconverged and converged. Let's find out which is best for you.

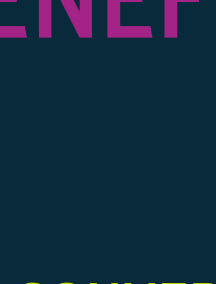
What are Converged and Hyperconverged Infrastructures?

TechTarget defines these two infrastructures as:



Converged Infrastructure:

"An approach to data center management that seeks to minimize compatibility issues between servers, storage systems and network devices while also reducing costs for cabling, cooling, power and floor space."²



Hyperconverged Infrastructure:

"A type of infrastructure system with a software-centric architecture that tightly integrates compute, storage, networking and virtualization resources and other technologies from scratch in a commodity hardware box supported by a single vendor."³

The most important difference between the two is best described by Tom's IT Pro: "...in a converged infrastructure, each of the components in the building block is a discrete component that can be used for its intended purpose - the server can be separated and used as a server, just as the storage can be separated and used as functional storage. In a hyperconverged infrastructure, the technology is software defined, so that the technology is, in essence, all integrated and cannot be broken out into separate components."⁴

The Pros and Cons of Hyperconverged vs. Converged Infrastructure

BENEFITS OF CONVERGED INFRASTRUCTURE⁶

- Consolidated option
- Components are interconnected
- Reduces data center space and cabling
- Less deployment time
- All of the architecture is tested to ensure functionality
- Faster than trying to build it yourself
- Supports "multiple hypervisors (hyper-v, vmware, kvm, Xen)"
- Could potentially work with "bare-metal Operating Systems"
- Great SAN or NAS performance

BENEFITS OF HYPERCONVERGED INFRASTRUCTURE⁶

- Cheaper to maintain and deploy
- Hardware and software are in the same server
- Increases flexibility and scalability
- Faster and easier deployment
- Improved performance with SSD Disk
- Avoid being "locked-in" by a specific hardware
- Self-service or full orchestration options
- Green IT initiative⁷
- "Allows data centers to automatically allocate resources in case of hardware failures?"

However, CHANGEaaS lists some disadvantages to consider as well:

CONVERGED INFRASTRUCTURE⁶

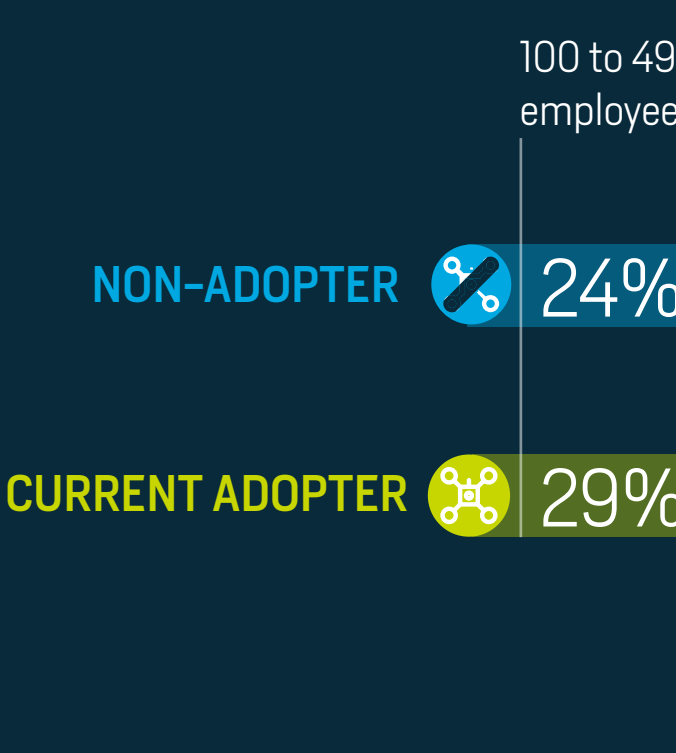
- Locked-in with hardware vendors
- "Upgrades can be very difficult to do because the interconnections between components generates a dependency"⁸
- Hard to be flexible or scalable
- Could be pricey

HYPERCONVERGED INFRASTRUCTURE⁶

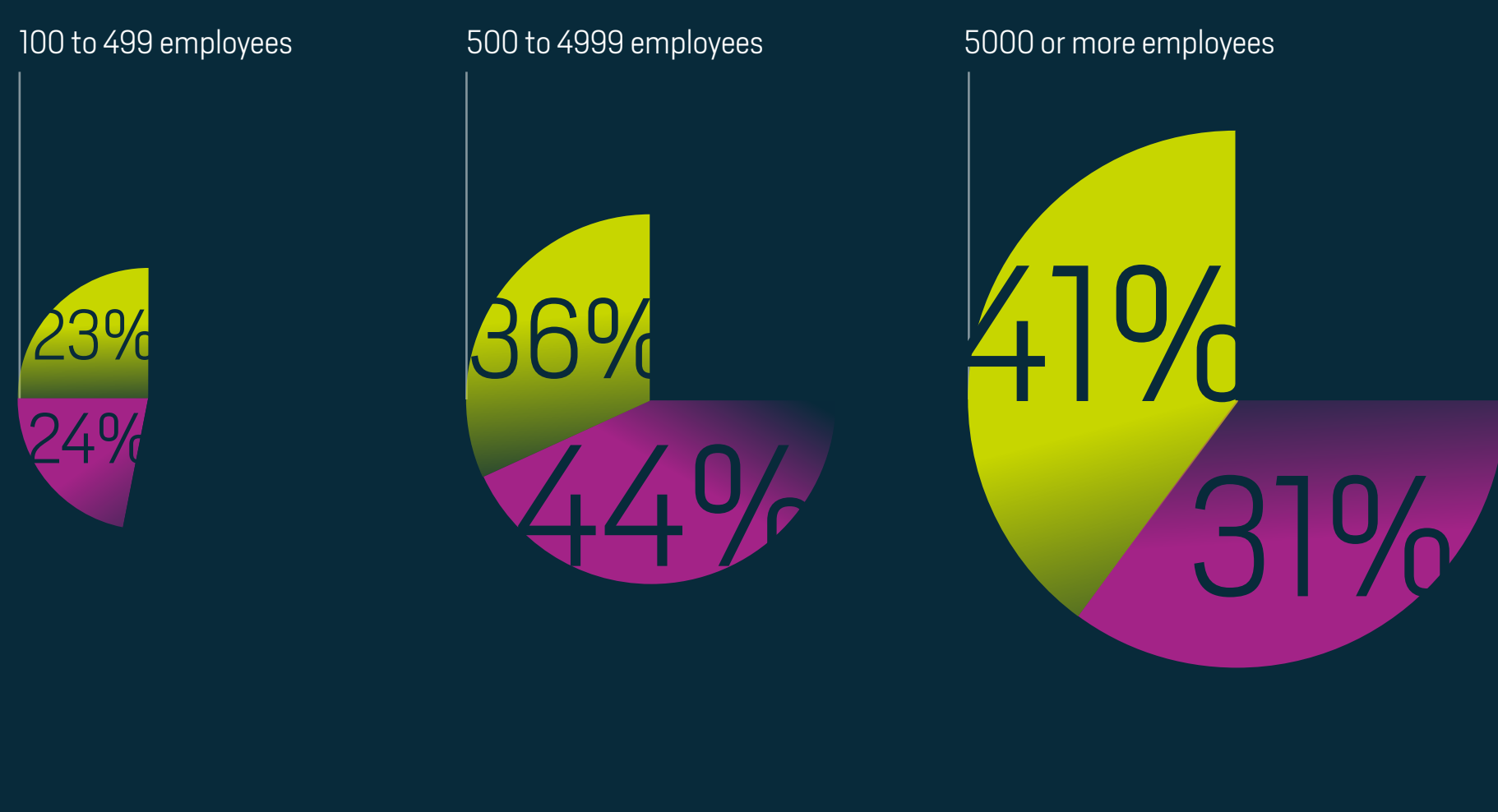
- Increased consumption of CPU and memory
- Hardware and software choices could be issues when you need support

The Current State of IT Infrastructure

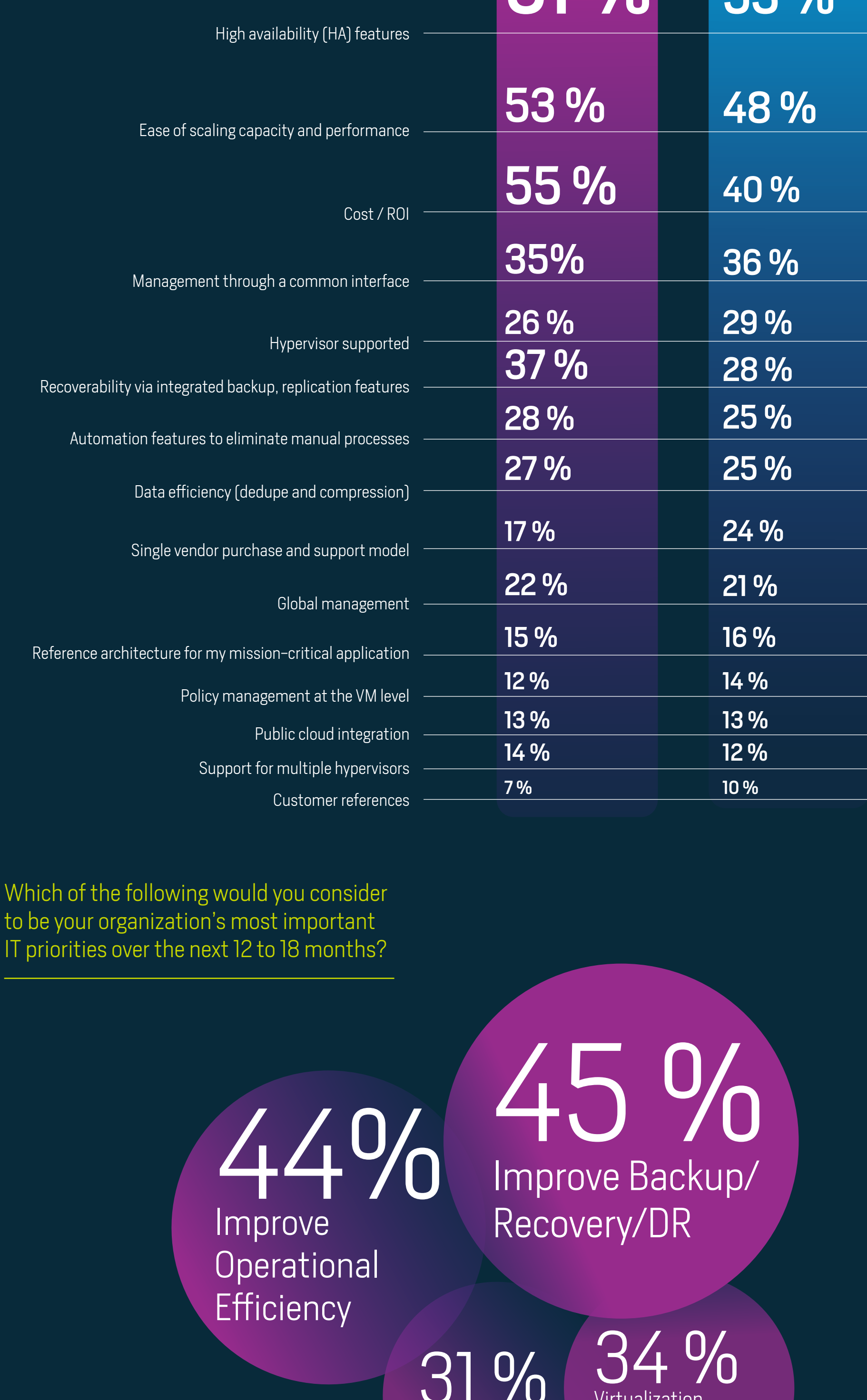
Have you already adopted hyperconverged infrastructure?



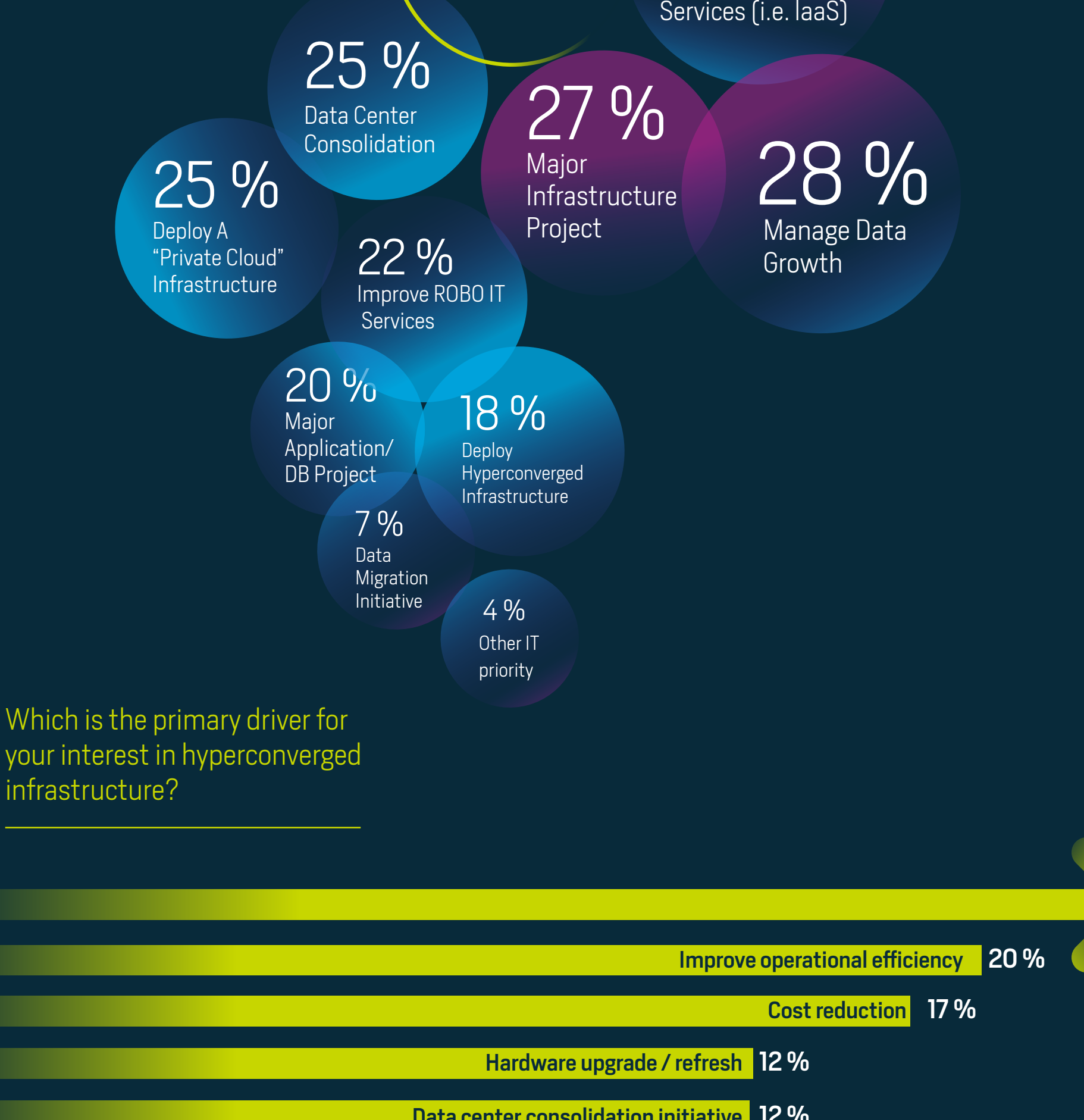
Plans to adopt Hyperconvergence within the next 24 to 36 months by company size



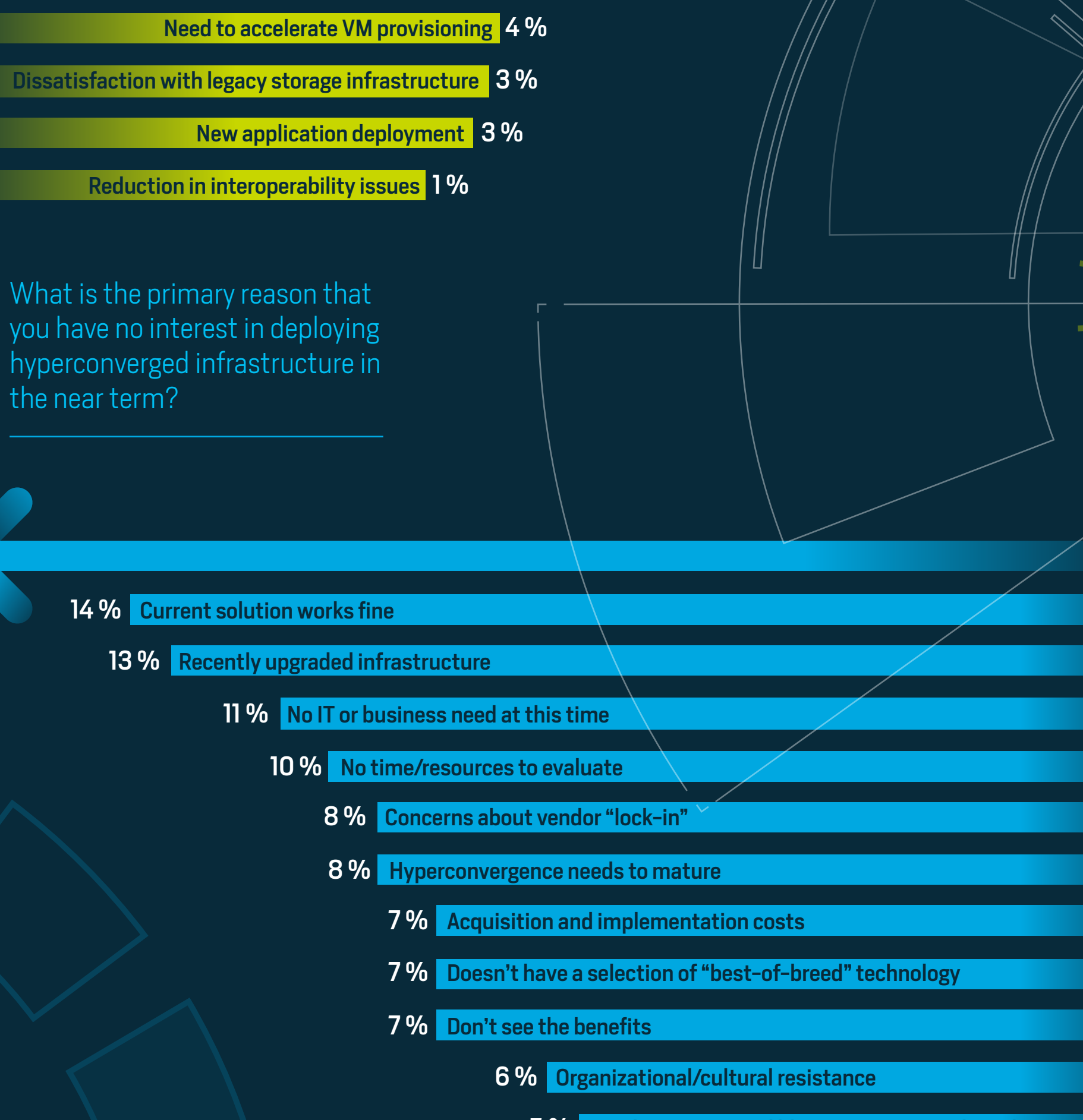
Hyperconverged Infrastructure purchase criteria by current and planned adopters



Which of the following would you consider to be your organization's most important IT priorities over the next 12 to 18 months?



Which is the primary driver for your interest in hyperconverged infrastructure?



What is the primary reason that you have no interest in deploying hyperconverged infrastructure in the near term?



So, Which One is Better?

This is all going to depend on the needs and wants of your organization.

While both can work effectively, the flexibility and scalability that hyperconverged infrastructures offer is a big selling point for companies looking to grow. Plus, this option is green and will decrease the amount of IT headaches.

Likely, you're currently on a converged infrastructure and your CIO has talked to you about switching. Review the advantages and disadvantages listed above to get an idea of what your priorities are, which will help you make an informed decision.

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Sources:
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² http://searchdatacenter.techtarget.com/definition/converged-infrastructure
³ http://searchvirtualstorage.techtarget.com/definition/hyper-convergence
⁴ http://www.tomitspro.com/articles/converged-hyper-converged-infrastructure-solutions-2-817.html
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