A TECHAISLE WHITE PAPER

THE HCI OPPORTUNITY:
WHERE DOES HYPERCONVERGED INFRASTRUCTURE FIT IN SMB IT STRATEGY

Despite current trends, today's infrastructure decisions go well beyond "Amazon or Azure?" On-premise solutions continue to evolve, and address important business requirements. Where does hyperconverged infrastructure (HCI) fit in today's IT strategy?

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The HCI Opportunity

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The business case for "not-cloud"

If you are looking for information on information technology, you will likely see cloud computing everywhere you look. A Google search on the term "cloud computing" yields more than 80 million hits. Cloud darling Amazon graces the cover of a recent (March 25th, 2017) edition of The Economist. And a large-scale survey of small and medium businesses (SMBs) in the US conducted by Techaisle found that cloud computing is the top IT priority for 92% of US SMBs.

Cloud's popularity isn't simply a matter of it being a catch-phrase that resonates with both IT and business leaders; cloud is atop corporate to-do lists because it responds to critical organizational needs. Cloud is an efficient platform for IT service delivery. Because it is provisioned "as-a-Service," cloud embeds professional support supplied by the cloud provider – a critical issue for SMBs, who have limited internal IT staff resources; and because it allows for customers to buy capacity on an as-needed basis, cloud aligns IT costs with business benefit.

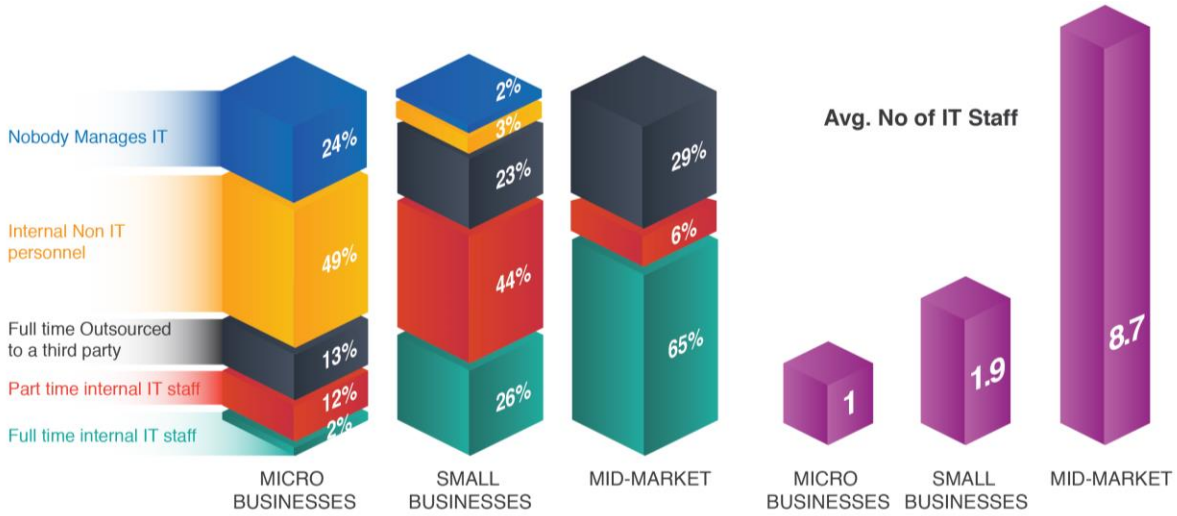
Lost in much of the cloud chatter, though, is the fact that there is a counterpoint for each of these widely-recognized cloud attributes:

- ***IT efficiency is increasing, but that isn't solely or specifically an attribute of 'cloud'***. Cloud is efficient because core delivery platforms are modern, optimized, and highly virtualized, meaning that instead of the 3%-10% utilization rates that in-house servers typically clock in at, cloud providers can obtain 25%-40% (or higher) utilization of efficient alternatives to costly, power-hungry IT assets, which improves cloud IT economics. But businesses that deploy their own efficient, virtualized modern gear are able to attain these benefits internally. Efficiency is a reflection of the compute platform, not simply whether it is housed on-premise or at a remote facility.

- ***IT service delivery isn't actually getting less complex.*** In many cases, cloud increases the overall complexity of a business's IT delivery environment. Integration of installed systems sourced from multiple manufacturers can be a time-consuming task for IT departments, especially within resource-constrained SMBs. One research project conducted by Techaisle found that in a two-year period, small businesses were expected to move from an average of 1.9 to 3.3 different *types*

of delivery platforms; the actual complexity reflected in this finding expands significantly with the addition of multiple in-house systems, multiple hosting providers – and many different cloud systems, including SaaS, PaaS and IaaS. Each of these cloud systems is supported to a substantial degree by the cloud provider – but the task of tying these systems together for corporate uses falls squarely on the internal IT staff.

HOW IS IT MANAGED WITHIN SMBs?



Source: Techaisle SMB survey, N = 1116

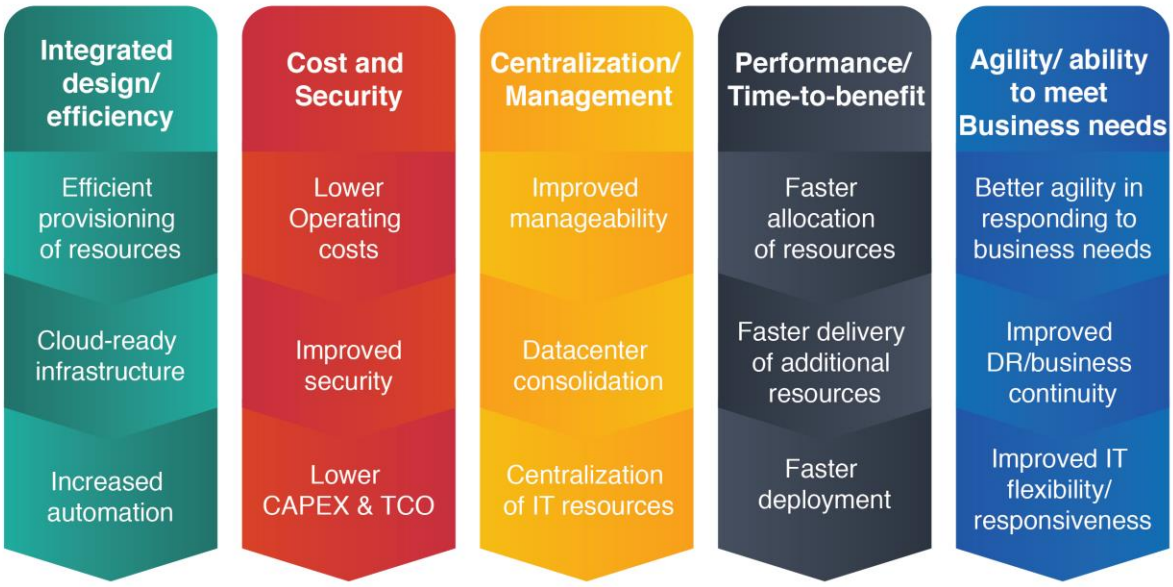
- ***Cloud is less expensive than physical systems, and better aligns IT expenditures with business benefits.*** This is a popular perspective, and it isn't without merit: cloud reduces up-front CAPEX requirements, and for some systems, especially those with limited utilization or a small number of users, it will generally provide a very cost-effective alternative to on-premise systems. Businesses may well find, though, that costs for in-house systems with high utilization rates (both hardware and software) are lower on-premise than in the cloud. This is true within the depreciation period for purchased products; the comparison is even more compelling once the systems are fully depreciated, at which point the ownership cost (net of maintenance fees) falls to $0 for on-premise equipment, vs. an ongoing 'pay per sip' fee charged by the cloud provider. As with efficiency, the 'magic' isn't in processing location, but rather, in how effective an organization is in understanding how IT is used within the business and planning appropriately. SMBs that don't understand what their needs are will be best served by an approach that minimizes fixed investments; those that spend the time needed to match process requirements with IT infrastructure can make informed decisions to optimize investment vs. return.

The business rationale for advanced on-premise solutions such as *hyperconverged infrastructure* (HCI) – systems that integrate compute, storage and networking in a highly-virtualized, software-defined, scalable solution – doesn't simply rest on this 'not-cloud' analysis, however. HCI offers real advantages to SMBs looking to optimize IT service delivery capacity and associated IT investment.

Converged Infrastructure and HCI adoption drivers

In its SMB research, Techaisle has looked closely at converged infrastructure – hardware-defined systems that integrate network, server, storage and management technology in a single package. In its survey of 1000+ US SMBs, Techaisle probed for converged infrastructure adoption drivers. As Figure 2 illustrates, lower operating costs are a significant adoption driver for SMBs as a group and (especially) for midmarket (100-999 employees) businesses. Both groups also cite reduced operating costs, efficient resource provisioning, business agility and CAPEX advantages as reasons for choosing to move ahead with converged infrastructure.

SMB TOP REASONS FOR ADOPTING CONVERGED INFRASTRUCTURE



Source: Techaisle SMB survey, N = 958

SMBs are adopting converged infrastructure for one or more of five primary reasons:

1. To benefit from integrated design and efficiency
2. To tap into its ability to enable centralization/management of resources
3. To capitalize on performance/time-to-benefit advantages

4. To improve IT agility and its ability to meet business needs
5. To respond to core requirements for cost savings and improved security.

In fact, 39% of midmarket firms said that converged infrastructure helps lower total cost of infrastructure ownership.

HCI: advanced technology, accelerated benefits

Software-defined HCI delivers even more compelling advantages (relative to conventional/siloed server, storage, networking and management technologies) than buyers obtain from converged infrastructure. Some of the important benefits that buyers realize with HCI include:

- ***Agility*** – the ability to keep pace with competitors and changes in buyer expectations; rapid time-to-value for new systems, positioning IT as an investment rather than as an expense.

- ***Scalability*** – complexity associated with next-system deployment is reduced because HCI delivers as an integrated, modular solution; IT can scale capacity without equivalent investment in new staff resources. This also avoids a key constraint of conventional on-premise systems: because HCI is scalable, there is no need to 'pre-buy' capacity, resulting in better alignment between business needs and IT expense.

- ***Efficiency*** – HCI's VM-centric management layer enables IT to realize high utilization levels, providing compelling return on investments in hardware, physical facility space and power.

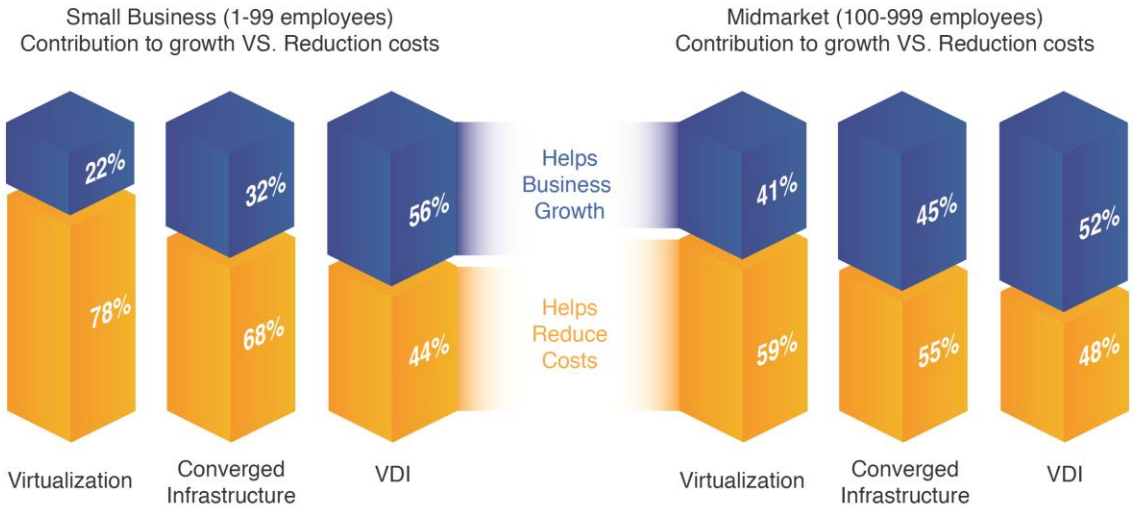
- ***Manageability*** – given the staff constraints faced by SMBs, manageability is in many ways the single most important attribute of any IT delivery platform. HCI's integrated, software-defined architecture provides SMB IT staff with an ability to deliver sophisticated capabilities without needing to maintain an elaborate web of resource connections.

- ***High availability*** – relative to cloud, which depends on the public network to connect users to corporate resources, HCI provides the promise of superior access to corporate applications and data.

- ***Cost*** – cost can be calculated in many ways: it can be driven by CAPEX or OPEX, by the expense of hardware components and/or ongoing service fees, or by the time and degree to which new IT capacity delivers tangible business benefit; it also includes the cost associated with delivery management by IT and non-IT staff. There is no one-size-fits-all answer to the question 'what is the most economical IT delivery approach?' – but there are scenarios in which HCI provides quantifiable advantages over other platform alternatives.

What is important to understand is that SMBs view technologies supporting HCI adoption as contributors to business growth as well. This comes due to agility in deployment & management, scalability and high availability.

SMBs: TECHNOLOGY CONTRIBUTION TO BUSINESS GROWTH VS. COST REDUCTION



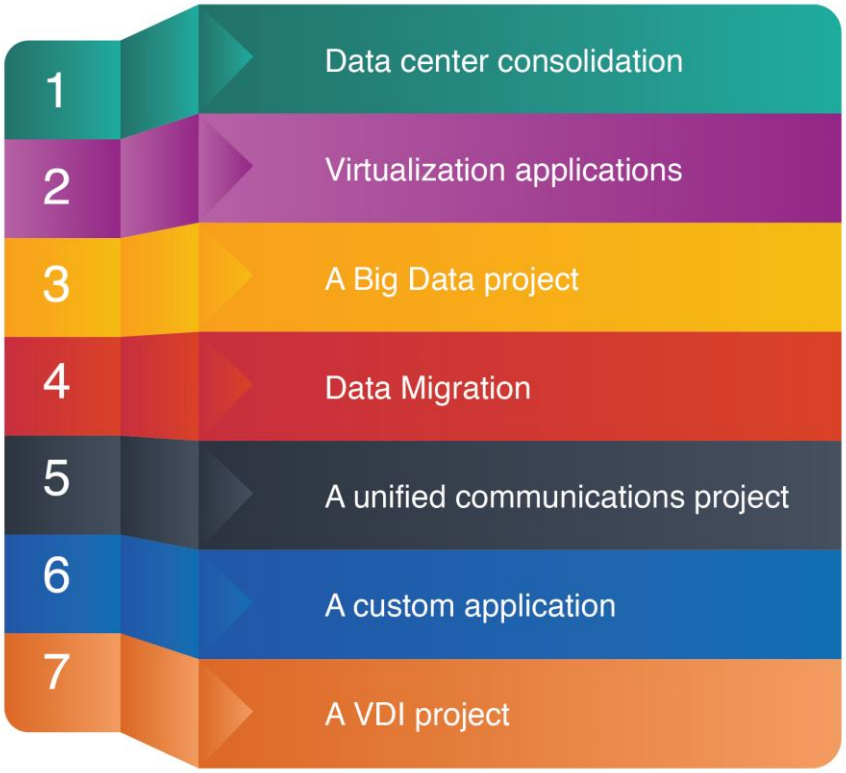
Source: Techaisle SMB survey, N = 958

Is HCI right for your business?

The cost discussion in the previous section raises an important point: the ideal delivery platform depends on an organization's priorities and requirements, and on the workloads that it is looking to support, deploy or expand.

Data collected from the Techaisle survey of US SMBs provides a fascinating view of the projects that are motivating SMBs and midmarket firms to embrace converged infrastructure. Companies that are looking to support virtualization, data center consolidation (especially in the midmarket, where firms are more likely to be supporting multiple IT locations), and/or Big Data analytics projects are the most likely to be seeking converged infrastructure solutions.

SMB TOP PROJECTS DRIVING CONVERGED INFRASTRUCTURE ADOPTION



Source: Techaisle SMB survey, N = 958

Some of the characteristics that define best-fit customer environments for HCI include:

- Smaller firms, especially those supporting remote or branch offices
- Small service providers (SPs, MSPs, etc.) who are delivering management services to multiple clients

- Firms that are looking to move from on-premise to a hybrid IT (on-premise plus cloud) approach to IT service delivery
- Companies that need (or will benefit from) an improved collaboration platform – especially one that supports secure file sharing within the business and/or with customer and partners
- Business that have stringent policies or regulatory requirements around data location and auditability
- Business that are looking to virtual desktop (VDI) technologies as a means of delivering managed support to mobile or in-office users
- Companies that require hands-on management of resources used in storage-intensive applications, including Big Data analytics or rich media.
- Firms running applications that require low-latency or always-on connections, ranging from securities trading applications to IP-based physical surveillance.
- The need to support applications that can't or should not be deployed to cloud. Applications that use and store Personally Identifiable Information (PII), such as credit card or Social Security numbers, may need to be housed within the walls of the business.

These conditions do not apply to all organizations. Those that see themselves in the description of policies/regulatory requirements and/or workloads and projects, though, should evaluate whether HCI – as a main delivery platform or as part of a broader hybrid IT environment – makes sense in their environment.

Promise Technology: HCI for the SMB

Firms that do decide that HCI is the best choice as the basis of next-gen infrastructure face an important choice: which vendor's offerings are best aligned with current and future needs? SMBs who are evaluating HCI should investigate Promise Technology.

Promise VSkyCube hyperconverged systems provide an economical infrastructure. VSkyCube systems are delivered as an integrated appliance unit containing storage, compute and networking. They are software-defined, which decreases hardware costs and enhances several 'abilities' – manageability, flexibility and scalability. And they are virtual machine (VM) centric, designed to drive high utilization rates by hosting multiple and/or parallel workloads.

VSkyCube is – by design – an optimal choice for SMBs looking to deploy cost-effective HCI. Some of the key attributes of the systems include:

- Economical infrastructure for VM-based applications
- Simplified scale-out to address growing compute and/or storage requirements

- Easy to manage – the VSkyCube can be deployed and managed by non-specialists (avoiding cost training and resource over-commitment), and incorporates a powerful, consolidated single-pane-of-glass management solution (VSkyView).
- Ideal for organizations which are in hard-to-serve segments (such as SLED, manufacturing, and small service providers) that aren't neatly addressed by mainstream cloud or product providers.
- A disaster recovery and migration utility, VSkyMotion, a tool for SMBs that cannot afford to set up a complete replica of their hardware infrastructure. Backups can be easily made in a public or private cloud.
- Purpose-built extensions to the VSkyCube line – including VSkyBox (shared storage that replaces insecure public services like Dropbox), VSkyStor (optimized for scale-out network storage) and VSkyPoint (a full VDI solution) – allow SMBs to capitalize on important IT opportunities by deploying low-cost, highly-capable appliances that integrate seamlessly with other VSkyCube platform products within a unified management portal.

For more on Promise VSkyCube systems, please visit the Promise Technology VSkyCube web page.

Concluding guidance

Decisions on IT infrastructure aren't – and shouldn't be – made strictly on the basis of cost. However, economics is (rightfully) an important part of the decision process: an optimal IT strategy delivers the capabilities needed by the business today, incorporates the agility needed to respond to future requirements, and is responsive to the budget constraints that are common (as Techaisle's research has shown) to organizations of all sizes.

HCI can provide businesses with a cost-effective means of building an advanced IT delivery platform. By using sophisticated software to harness the raw power of commodity hardware, HCI gives users both the advantages of a configurable and upgradeable management plane and the economic benefit of systems that incorporate standard component technologies. And because HCI can be sourced modularly, businesses can deploy a single appliance-type node to address a high-priority workload, and expand in lockstep with new business or customer demands.

Perhaps more importantly from an SMB perspective, HCI offers an intriguing means of reducing total cost of ownership (TCO). By eliminating many integration requirements and simplifying management and scale-up, HCI reduces time allocated to low-value tasks. This allows resource-constrained SMBs to obtain greater benefit from IT staff (typically, the highest-cost area within the IT budget), which – combined with product cost savings – yields improved TCO.

In the end, the infrastructure debate shouldn't be reduced to 'which cloud?' or even 'cloud or on-premise?'. Agile, intelligent and fiscally-responsible firms need strategies that span all aspects of hybrid infrastructure – and HCI is an important element of a future-ready, resource-sensitive IT approach.

About Techaisle

Techaisle is a global SMB IT Market Research and Industry Analyst organization. Techaisle was founded on the premise that Go-to-Market strategies require insightful research, flexible data, and deeper analysis. Understanding the value of data consistency across markets to inform strategic planning, Techaisle has remained holistic in its approach to Insights and provides globally consistent SMB and Channels analysis across geographies. To achieve its objectives Techaisle conducts surveys with SMBs and channels to understand market trends, opportunities, buying behavior, purchase intent, and IT priorities. Besides covering emerging technologies such as SMB cloud computing, managed services, mobility, social media usage, virtualization, business intelligence, big data, collaboration, networking its channel research coverage provides in-depth understanding of resellers and channel partners globally. Techaisle's insights are built on a strong data-driven foundation and its analysts are conversant with both primary research and industry knowledge, which is a rare combination. Techaisle offers its clients: Syndicated Research, Custom Primary Research, Consulting Engagement, Competitive Intelligence, Segmentation and Predictive Analytics services. For more information, visit www.techaisle.com

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