



Business Transformation in the Era of Unplanned Hybrid Clouds

BY ERIC HANSELMAN

Introduction

Hybrid cloud environments have become familiar to most enterprises, now that public and private clouds are a decade along in their use. But the operational efficiency that real hybrid multicloud infrastructure could deliver still eludes most enterprises. The reality is that many organizations have arrived in a hybrid configuration without a specific plan or strategy. Many became hybrid through a series of independent actions – in response to pressing business needs, mergers or acquisitions, or through the actions of independent players within enterprises. This means that many hybrid environments lack centralized planning and are not well-coordinated or optimized for efficiency.

IBM and 451 Research conducted a study to look at how users of hybrid cloud environments are putting them to work, to identify the challenges that they've faced, and to explore ways in which they can optimize how they're delivering cloud-enabled applications and resources to their constituencies.

Methodology

451 Research conducted a study in which we asked a global panel of 1,805 senior business and IT decision-makers who reported having experience in hybrid cloud infrastructure design and use about their opinions on the state of their existing IT infrastructure and their plans. The study included 11 industry vertical sectors in North America, Europe, Asia-Pacific, the Middle East and Africa, and Latin America. The study was administered as a 21-question web-based study instrument in June 2020.

Transitions in Enterprise IT Infrastructure

Businesses are making ever greater use of cloud-based infrastructure, and the urgency of that shift is creating complexity that may keep them from using these new resources effectively. In our study, more than half of the respondents (56%) said they expect to have less than 20% of their IT workloads running on traditional infrastructure in two years. That's a dramatic change and one that is fraught with risk if not managed well. While all of the respondents were using hybrid multicloud, less than 10% felt that they were doing it well. Most have stepped into these new models without a coordinated plan, leading to inefficiencies and duplication. The results of the study illustrate some of the pitfalls of unplanned hybrid deployments and point the way toward optimizations that can help to fulfill the full potential that hybrid multicloud environments offer.

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The online presence of modern enterprises offers a good example of the mix of elements that pull their operators into hybrid situations. Because web environments integrate many different functions – such as customer relationship management systems, marketing systems, analytics engines and content that may be provided by a collection of partners – they are highly likely to require components that are hosted in different locations. To provide the best customer experience, parts of the web environment may be hosted closer to the elements with which they interact. Certain video content or analytical functions may only be available with a particular provider. Data will need to be located closer to where it is used. This is just one example of how organic growth within an enterprise, even when driven by solid business reasons, can lead to unplanned hybrid environments that become complicated to manage and operate. All of these factors mean that unplanned growth will create hybrid cloud environments unless organizations strictly control the organic growth of their IT, which may unreasonably constrain their ability to respond to business needs.

If an imposed change happens, such as a merger or acquisition, a hybrid outcome would seem almost certain. And there can be more direct requirements for hybrid, such as infrastructure diversity to build resilience for disaster recovery. The unplanned aspect of many hybrid environments comes from the reactive, rather than strategic, way in which these extensions occur. It can lead to complicated infrastructures with unwieldy and inefficient management systems.

Most businesses believe that the level of transformation required to support new business strategies is significant. On a scale of one (minimal) to 10 (significant), 67% of respondents rated the anticipated level of transformation an eight or higher. This indicates that most respondents believe that upgrading their environments will require significant work to keep up with the advances necessary to support their business strategies. The requirements that businesses place on IT infrastructure continue to advance as markets and customer expectations continue to grow. An inability to support strategic business requirements could erode competitive positions.

Initiatives to improve IT infrastructure face many hurdles in addressing the needs of today's businesses. Successful organizations routinely task IT teams with imperatives that are difficult to fulfill or are outside of their traditional responsibilities. Over half (54%) of respondents said in the coming 6-12 months, they will task their IT teams to develop new digital business/revenue streams or improve product or service competitiveness. However, the leading initiative respondents identified was to increase innovation. It was the highest ranked across all industry verticals except financial services and telecom, where it ranked second.

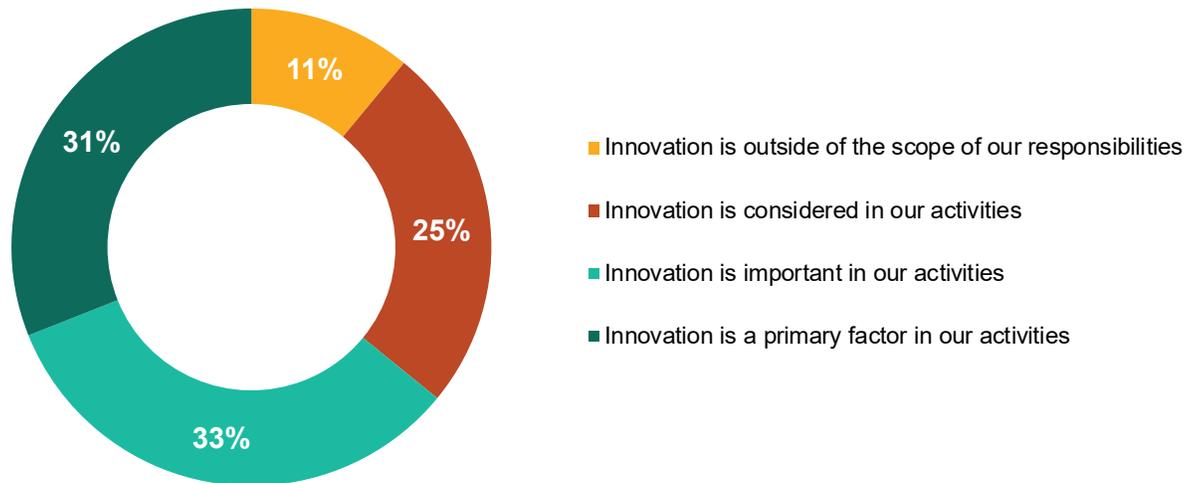
With innovation scoring so high as a business imperative, it is important to understand the relationship between innovation and IT operations. We asked our panel to describe the role that innovation plays in IT decision-making in their organizations. The direct answer was not surprising, but the correlation with other data in the study provides some important insight.

Figure 1: Role of IT in enabling innovation

Source: 451 Research custom study

Q: Which statement best describes the role IT plays in enabling innovation in your organization?
(Single-select response)

Base: All respondents (n=1,805)



Just under a third of respondents said that innovation is a primary factor in their activities. Some 11% said that innovation is outside the scope of their responsibilities. While innovation is often a priority, IT teams in some organizations aren't engaged to foster its enhancement.

The important insight in this data came from correlating innovation with the perceived readiness of IT infrastructure to support modern business needs. For those that reported their infrastructure was ready to support all of their business needs, innovation was a primary factor in their activities. Granted, this was only 6% of all respondents, but it's an indicator that considering innovation in IT operations could lead to creating a better foundation for the future of the business.

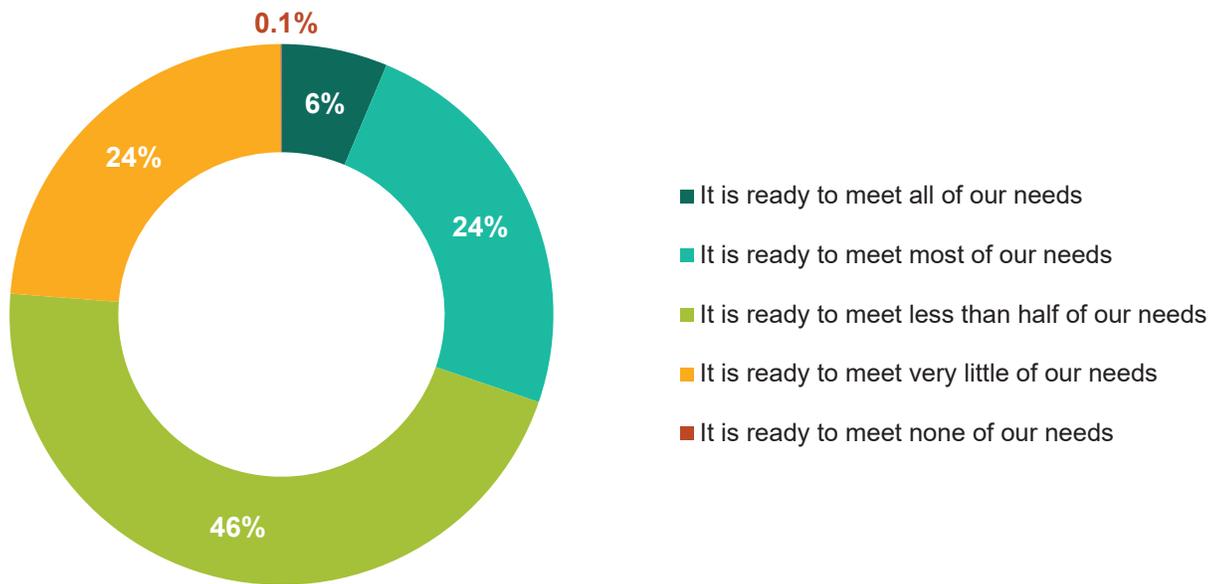
And better foundations are needed. Most respondents don't believe their existing IT infrastructure is ready to meet modern-day business needs. This response reinforces the expectation that current infrastructure isn't capable of doing what's being asked of it – 70% of respondents reported that current infrastructure is able to address less than half of modern needs (see Figure 2 below).

Figure 2: The ability of IT infrastructure to meet modern-day business needs

Source: 451 Research custom study

Q: To what extent is your IT infrastructure ready to meet modern-day business needs (Single-select response)

Base: All respondents (n=1,805)



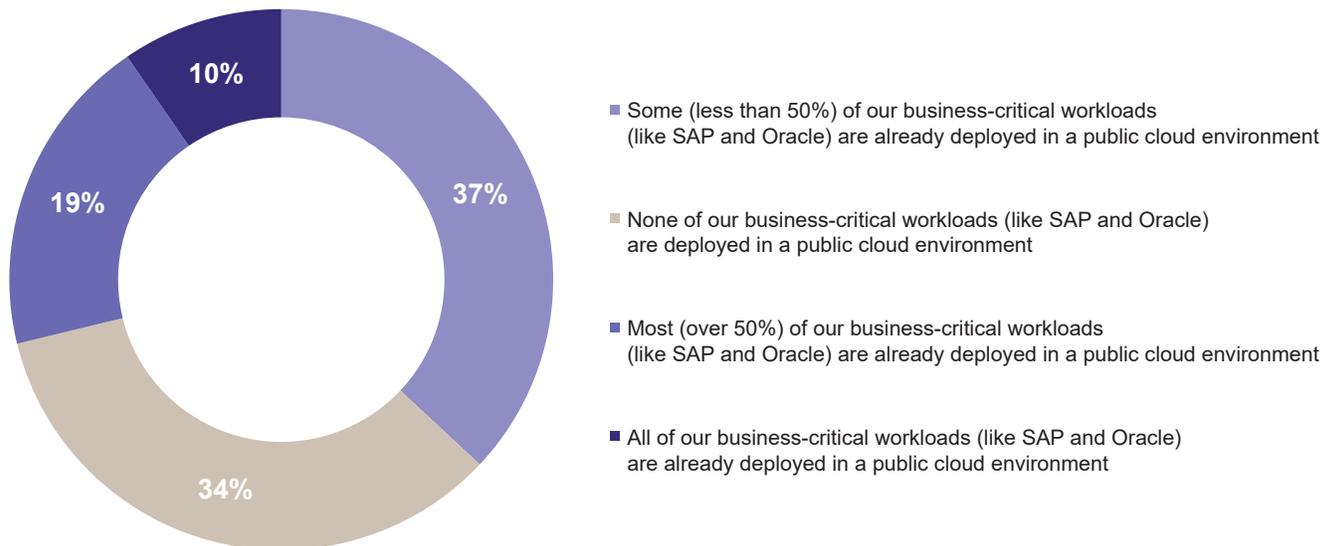
When we probed about the progress being made in moving business-critical components out of traditional infrastructure environments, the respondents were more cautious. As many as 71% said that less than half of their business-critical workloads (like SAP and Oracle) exist in public clouds (see Figure 3 below).

Figure 3: Business-critical legacy workload deployment in specific public cloud instances

Source: 451 Research custom study

Q: To what extent are your business-critical legacy workloads (such as SAP or Oracle applications) already deployed in specific public cloud instances? (Do NOT include transitions to new databases or to SaaS-based applications such as Salesforce or Workday.) (Single-select response)

Base: All respondents (n=1,555)



The data shows that IT departments are being tasked to contribute more than ever to their businesses and act as centers of innovation with infrastructure that isn't ready to meet their needs and core business applications that have yet to migrate to the cloud.

So How to Move Forward?

Two principal difficulties that organizations face with transitions to new technology are understanding how it will best be used by their business and then assessing the skills needed to support it. Because most organizations have already begun using hybrid multicloud, they have made some progress on both these points. They've done initial deployments and, based on the readiness answers discussed earlier, are beginning to understand where gaps exist in their infrastructure and skills. This means that they've typically formed thoughts about hybrid multicloud's benefits to their business and determined what skills are necessary to support this new technology. For our study, we asked respondents about their plans for improving their environments in two areas: management and application and workload modernization.

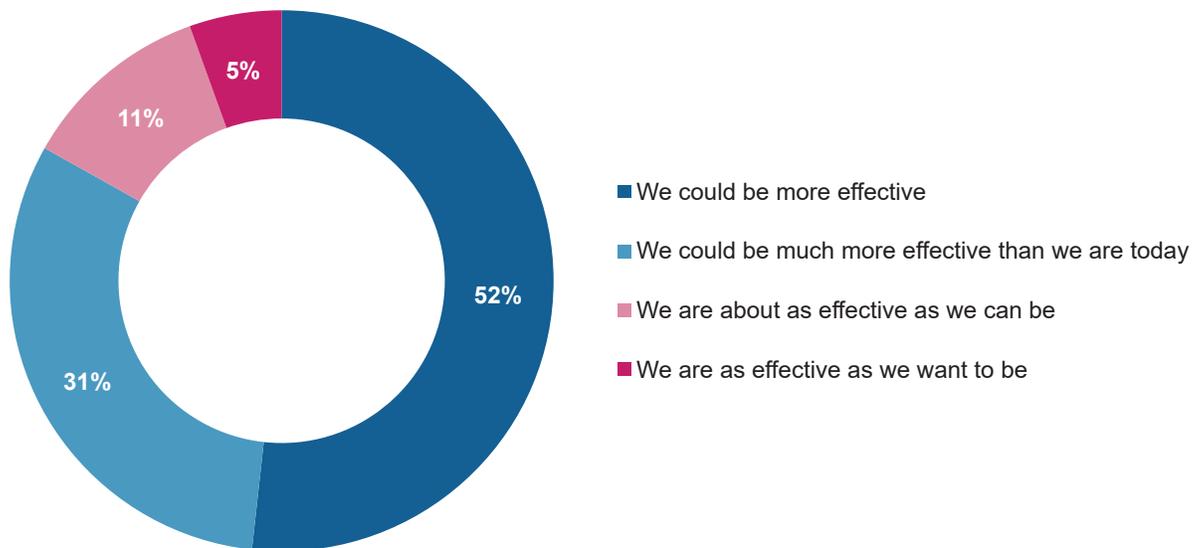
We first benchmarked perceptions about their infrastructure management effectiveness to understand the extent to which they need to change. A hearty 83% said they could be more effective, with 31% saying that they could be much more effective. This indicates an understanding of the challenges referenced in the earlier statistics on the relatively poor readiness of their existing infrastructure. In another interesting data point, 11% said that they were as effective as they could be (as opposed to as effective as they want to be) managing infrastructure. Behind this could be the limitations of staff skills and business processes identified in this study. Just 5% have achieved a level of effectiveness that satisfies them.

Figure 4: Effectiveness of IT infrastructure management

Source: 451 Research custom study

Q: How effectively do you feel that your IT infrastructure is managed today? (Single-select response)

Base: All respondents (n=1,805)



We asked respondents to comment on the path forward for migrating existing workloads and applications and for managing their increasingly complex infrastructure. The data suggests that most businesses are seeking help from third parties to help manage their business transformation. For management of infrastructure, 76% of respondents indicated they would use partners or rely on hosted, managed or SaaS implementation (see Figure 5 below).

The popularity of SaaS-based CRM and ERP applications could have influenced this result, but those options wouldn't be possible for more customized or complex application environments and would displace existing management systems.

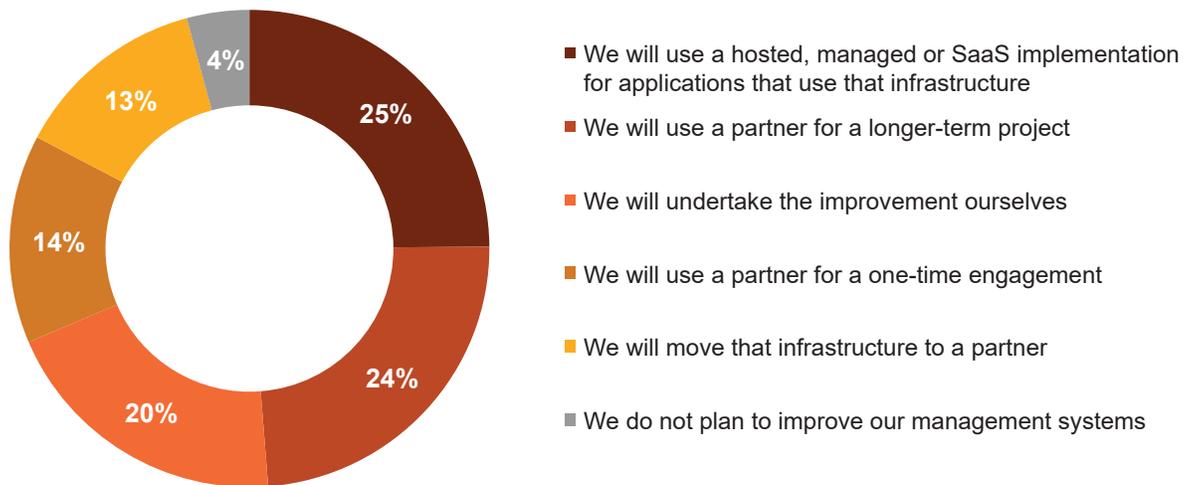
The second path for both, working with a partner in a longer-term project, makes sense in a much broader range of situations. This is a path that can have the double benefit of delivering skills that are lacking and providing an external perspective on process improvements that can be difficult to catalyze internally.

Figure 5: IT infrastructure management improvement plans

Source: 451 Research custom study

Q: What are your plans to improve the management of our IT infrastructure? (Single-select response)

Base: All respondents (n=1,805)



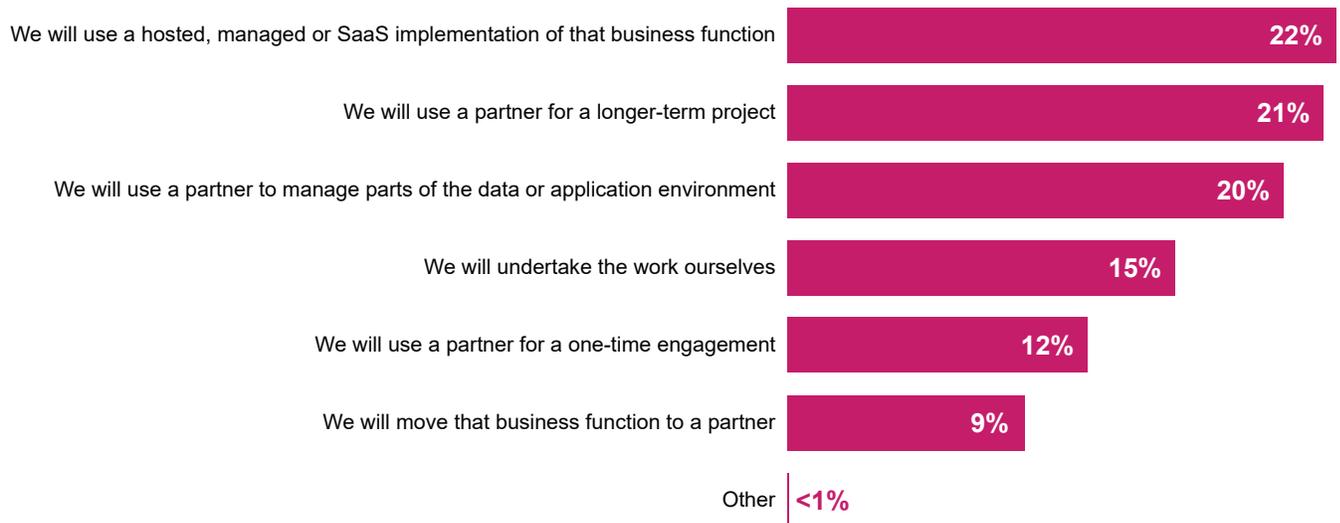
Respondents showed a similar reliance on third parties regarding their plans for migrating existing workloads and applications (see Figure 6 below); 84% said they would use partners in some capacity or employ hosted, managed or SaaS implementation. Although only 15% indicated they would do the work themselves, fully transferring infrastructure or business functions to a service provider partner is a much more dramatic step and, in both cases, received lower preference. This would generally be a much more significant undertaking and could involve the transfer of job responsibilities.

Figure 6: Optimize IT plans when migrating existing workload and modernizing existing applications

Source: 451 Research custom study

Q: What are your plans to optimize your IT when migrating your existing workload and modernizing existing applications? (Single-select response)

Base: All respondents (n=1,805)



Organizations have an opportunity to dramatically optimize and transform IT and improve their operational efficiency while building a foundation that can empower them to compete successfully. If they plan wisely and select service provider partners that understand their business and effectively address their needs, they can accelerate their journey to a more optimized, agile and capable infrastructure that can amplify the skills of their existing teams.

To reach greater levels of efficiency, organizations can take some concrete steps:

- *Review and revise processes and procedures* – operating methodologies that work in on-premises environments will need to be adapted to the realities of hybrid multicloud worlds.
- *Evaluate infrastructure performance* – only 33% of respondents reported a regular review process for optimization; 28% wait until performance problems crop up.
- *Assess and align skills* – expecting to hire personnel to fill skills gaps is becoming a less viable strategy. Understand where team strengths are and leverage partners or services to fill gaps.
- *Engage skilled partners* – putting partner experience to work is a clear preference for study respondents and should be a path to greater efficiency.



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