



Cloud's next leap

How to create transformational
business value

South Africa PoV

IBM Institute for Business Value



Key takeaways

1.

Untapped potential remains

77% of stakeholders in *South Africa* in enterprise cloud adoption require comprehensive, advanced cloud capabilities to power their highest- priority digital plays. But they have yet to fully realize cloud's full transformational power.

Q26.6: Extent cloud capabilities required for successful execution of following digital initiatives in your portfolio - Digitizing existing products and services

Q29.3: Extent your current business/IT/digital operating environment delivering improvements in the following areas - Improvements in cycle time/delivery speed/release frequency

2.

Hybrid cloud/multicloud comes out on top

The percentage of respondents claiming a single public cloud as their primary archetype dropped from 16% in 2019 to 2% in 2021 *globally*, setting the stage for the next wave of innovation in cloud-driven business transformation.

3.

The soft stuff matters

61% of respondents in *South Africa* attribute “sustained improvements at enterprise scale” and “material and accelerating improvements at enterprise scale” to their digital/ business/IT operating environment.

Research focus: Testing a common narrative of cloud adoption and digital transformation

A common business story has emerged over the course of the pandemic:

COVID-19 has provided a burning platform to accelerate digital transformation.

Our global research indicates the pandemic has accelerated digital transformation at **59%** of surveyed organizations.

To test this narrative, we set out to answer a few key questions:

- *Are enterprises accelerating their digital transformation agendas along with their adoption of cloud computing?*
- *Are those investments returning the business value enterprises expected?*
- *What is the current state of cloud-powered digital transformation?*



Research approach

- The IBM Institute for Business Value (IBV), in collaboration with Oxford Economics, surveyed 179 stakeholders in *South Africa* (7,164 in 44 countries) in enterprise cloud adoption across 29 industries.
- Respondents included a wide variety of job roles related to cloud enterprise adoption: CEOs, CIOs, CTOs, COOs, CFOs, and IT professionals in infrastructure, software development, operations, digital transformation, design/UX, and the like.
- All respondents were screened based on their ability to answer questions about enterprise IT investments and cloud adoption.
- The survey targeted enterprises with revenue greater than \$500M USD; the mean level of revenue across all enterprises surveyed in *South Africa* was nearly \$7B.

What we found and why it matters

The expected

Many things that our direct experience with organizations making the cloud journey had suggested were confirmed.

The surprising

However, in many instances, the data did not support some of our hypotheses.

Our findings can help your organization take stock of its cloud adoption strategies and investments:

- If you are achieving the business benefits you expected, should you consider your cloud adoption efforts complete?
- On the other hand, if you're struggling to realize your cloud vision, are you on the wrong path, or are just on a more ambitious journey?

*Cloud's Next
Leap*
research: the
big question

**How strong is the connection between
an enterprise's cloud adoption journey
and the success of its highest-priority
digital “plays?”**

Evidence of advanced cloud adoption. Some hypotheses confirmed by survey data, others challenged.

Our hypothesis	Did the data support this?
Enterprises are using cloud to drive their highest-priority digital investments, moving past cloud value propositions focused on reducing the cost of IT infrastructure.	✓
Hybrid cloud/multicloud won and has become the dominant architecture for enterprise cloud estates.	✓
Enterprises are breaking through the 20% barrier of low-hanging fruit workload migration.	✓
Enterprises are increasing levels of IT spending, especially based on the many reports that enterprises have been doubling down on digital investments during the pandemic.	✗
Most enterprises are about midway—but not further—on their cloud adoption journeys.	✗
Work on cloud operating model design—approaching cloud not just as a technology but as a way of operating more like a software-driven enterprise—is generating positive returns, and is a marker of higher performance.	✓
Cultural openness to both new ways of working and growth mindsets is yielding positive outcomes, and is a marker of higher performance.	✓

Where will the growth come from?

The global cloud computing market is projected to register a CAGR of **17.9%** between 2021 and 2028 ¹

But...

30%

of executives in *South Africa* say they are “almost done” with their planned cloud adoption

And...

27%

of executives in *South Africa* say their cloud adoption efforts are “stalled”

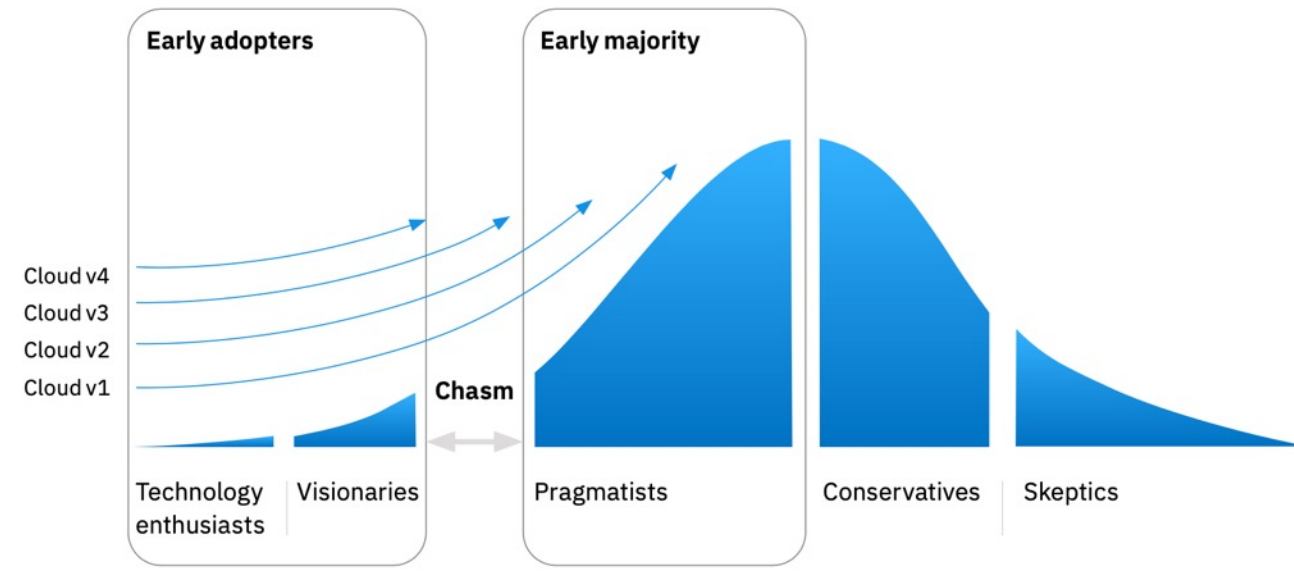
This begins to make sense when you consider that not all cloud adoption journeys are created equal

Our experience with organizations adopting cloud reveals that, while they are all moving to the cloud, they are often moving to different versions of it. From work with clients around the world and across industries, we are discerning 4 versions of cloud, each of which presents distinct value propositions and involves distinct types of stakeholders:

- Cloud v1: Buying infrastructure as a service, paying only for services actually consumed.
- Cloud v2: Purchasing cloud services with a credit card swipe from hyperscale cloud providers.
- Cloud v3: The current enterprise movement to cloud as the default model for application, compute, and networking infrastructure.
- Cloud v4: An emerging version that becomes the default operational infrastructure for business transformation.

Cloud versions cross the chasm

Cloud v1 and v2 have already crossed from early adopters to early majority.
Cloud v3 is crossing the chasm, while cloud v4 is emerging



Source: Adapted from Moore, Geoffrey A. *Crossing the Chasm: Marketing and Selling High-Tech Products to Mainstream Customers*. Collins Business Essentials. August 2006.

Our findings can help organizations take stock of their cloud adoption strategies and investments

- **The shift from IT cost reduction to top-line revenue growth and business performance improvement**
- **Using cloud to execute digital plays can yield excellent results**
- **Hybrid cloud/multicloud—a dominant architecture for cloud estates**
- **Success isn't all about the technology— operating model design and the “soft stuff” are critical factors**
- **Enterprise spending on IT—still stuck at pre-pandemic levels**
- **Stakeholders don't report skills gaps as a major obstacle**
- **The most transformational digital plays cloud could be delivering are the least preferred**

The shift from IT cost reduction to top-line revenue growth and business performance

The initiatives ranged from more tactical, here-and-now, easily measurable plays, such as digitizing existing products and services, to more abstract, strategic, harder- to- measure plays, such as improving business agility. They were designed to be industry agnostic in the sense that they could be applied in any industry to good effect.

In early versions of cloud, there was only a weak connection between cloud adoption and the enterprise's highest- investment, highest-priority digital plays. Did that change during the pandemic? If so, that would be evidence that cloud v3 is crossing over to the mainstream.

To better understand which plays are enterprises' highest priorities, we specified 13 types of digital initiatives designed to employ software to improve business performance

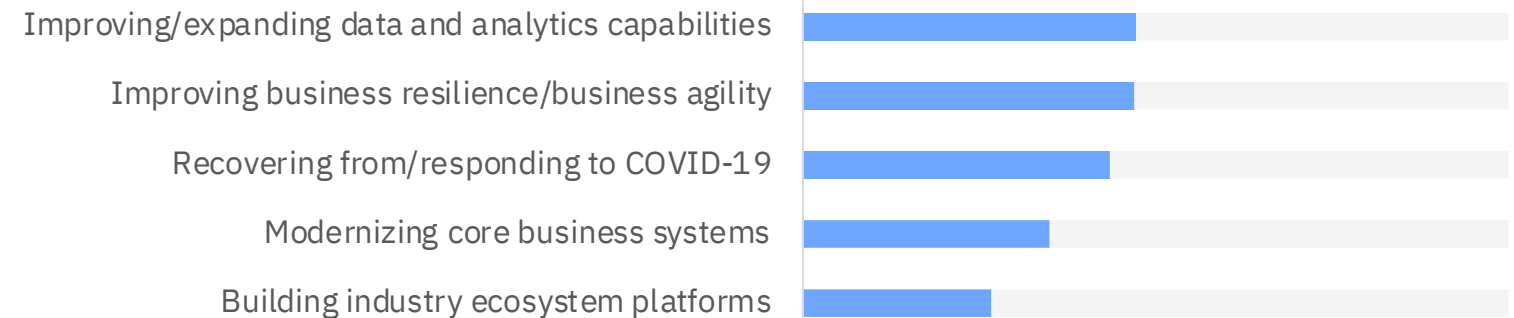
Highest-priority digital plays for *South Africa*

Enterprise preferences among 13 digital business performance improvement investments

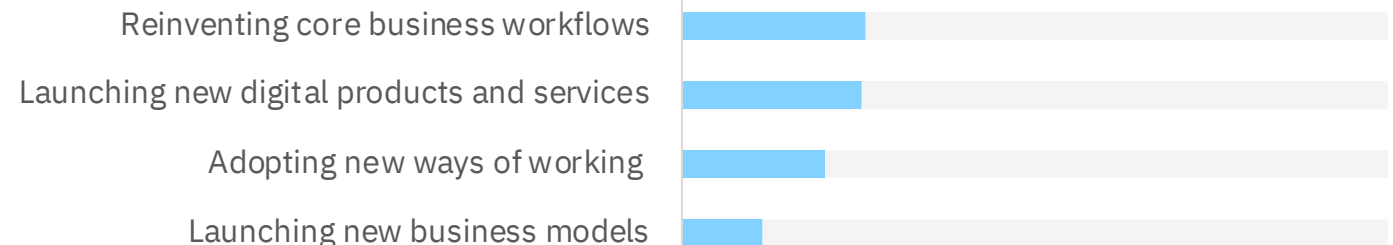
Top 4 preferences



Middle 5 preferences



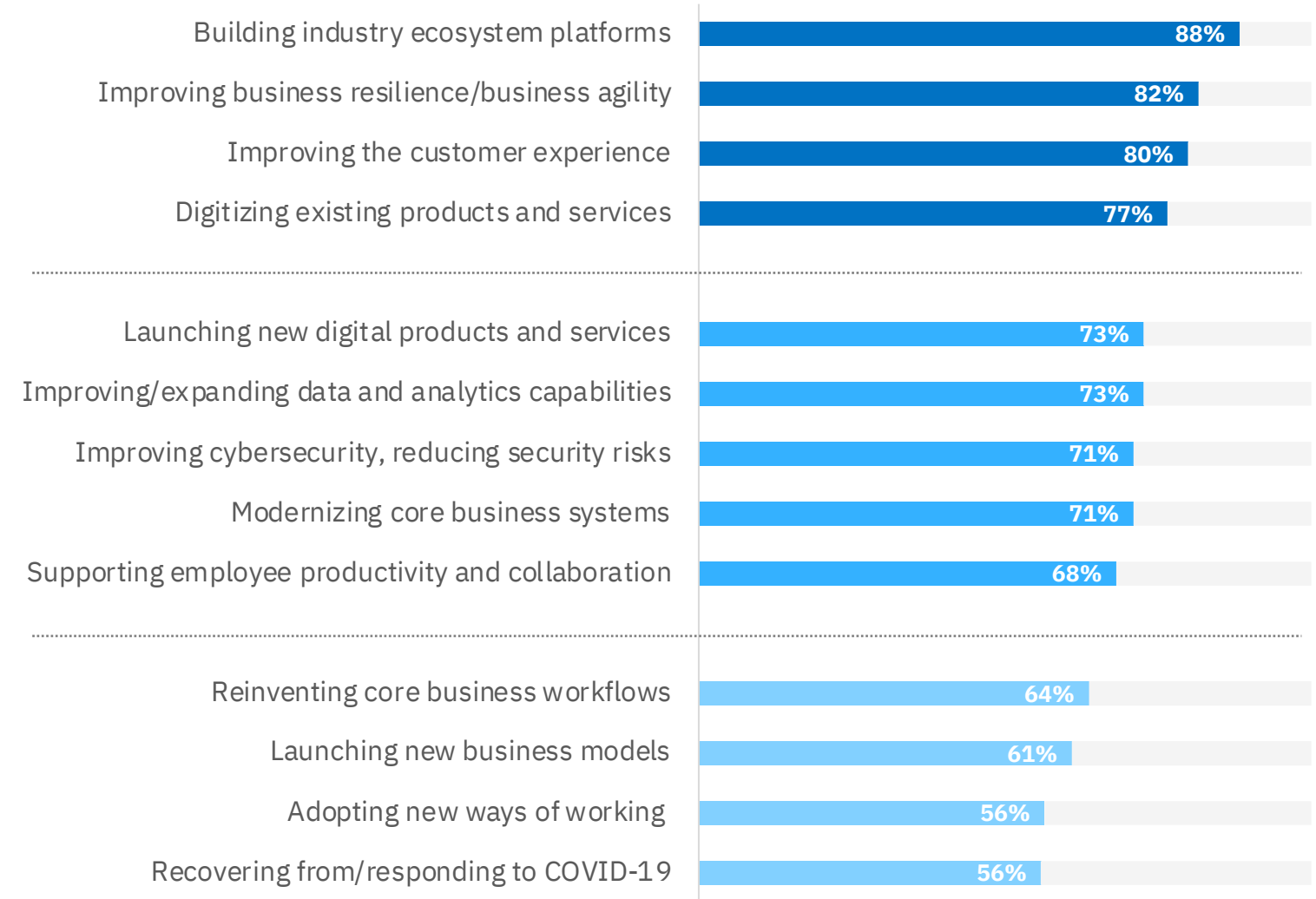
Bottom 4 preferences



Respondents reported that across their highest-priority digital investments, successful execution requires either *more comprehensive* or *the most advanced available* cloud capabilities.

Advanced cloud capabilities needed for enterprises in *South Africa*

Successful execution of digital plays requires comprehensive, advanced cloud capabilities



Q26: To what extent are cloud capabilities required for successful execution of following digital initiatives in your portfolio?

Using cloud to execute digital plays can yield excellent results

Is this cloud v3 connection—combining digital plays with cloud as the development and delivery infrastructure—paying off? Yes.

Respondents' highest-priority digital plays require advanced cloud v3 capabilities and are returning a mix of “positive improvements at enterprise scale” and “transformational improvements at enterprise scale.”

Clearly, they feel very bullish about the returns they are getting, and that confirmation of productivity is what's required to pull cloud v3 over the chasm.

Cloud-driven digital plays get results—Top plays are delivering positive, transformational performance improvements in organizations in *South Africa*

Digitizing existing products and services



Supporting employee productivity and collaboration



Improving the customer experience



Improving cybersecurity, reducing security risks



**Transformational
improvements at
enterprise scale**

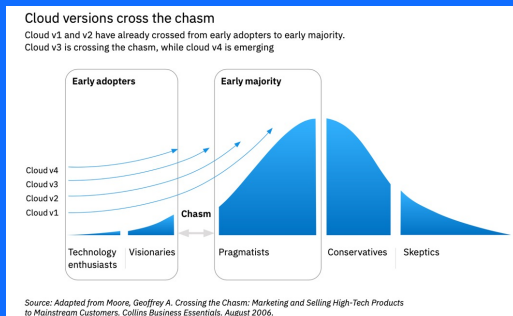
**Positive improvements
at enterprise scale**

**Positive improvements
at business unit/
project scale**

**Positive improvements
in pockets and pilots**

**No positive
improvements**

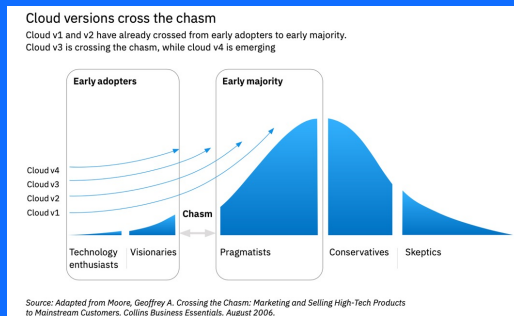
Hybrid cloud/multicloud— the dominant architecture for cloud estates



Cloud v3 requires a dominant architecture to cross the chasm because mainstream enterprises need to be confident that their investments in cloud won't become obsolete or overtaken by a fundamentally different technology before they can recoup those investments.

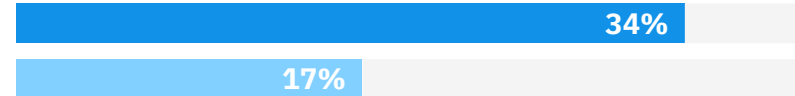
Entering the pandemic there were two competing architectures for cloud: a single-cloud architecture and a multicloud/hybrid cloud architecture. Now, a clear winner has emerged.

Hybrid/multicloud won: Enterprises in *South Africa* have weaned themselves off single public clouds

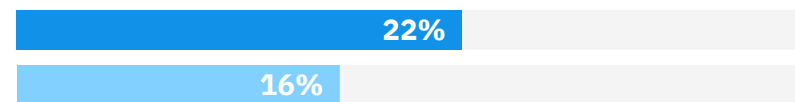


Q11.1: Your organization's archetype for cloud service delivery in 2019 (pre-COVID); Q11.2: in 2021

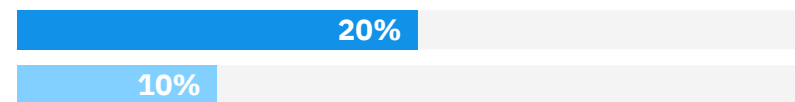
Multiple public clouds and multiple private clouds



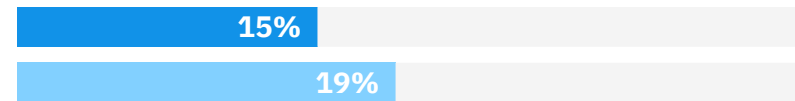
Multiple public clouds and one private cloud



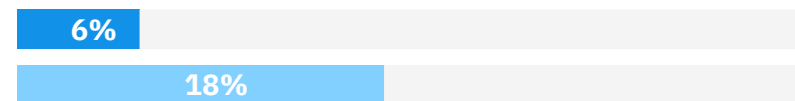
One public cloud and multiple private clouds



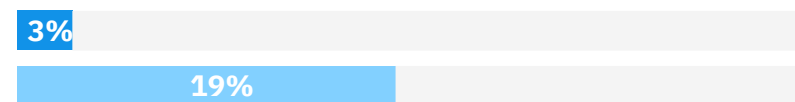
One public cloud and one private cloud



One public cloud



One private cloud

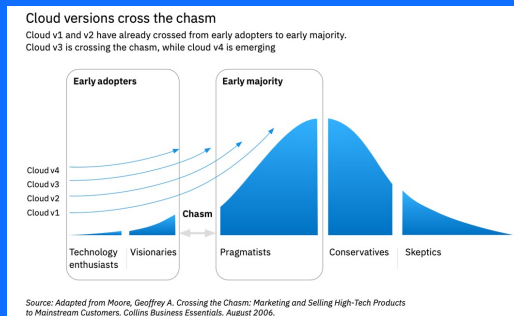


Multicloud, multiprovider, hybrid cloud is becoming the “dominant architecture” for cloud service delivery

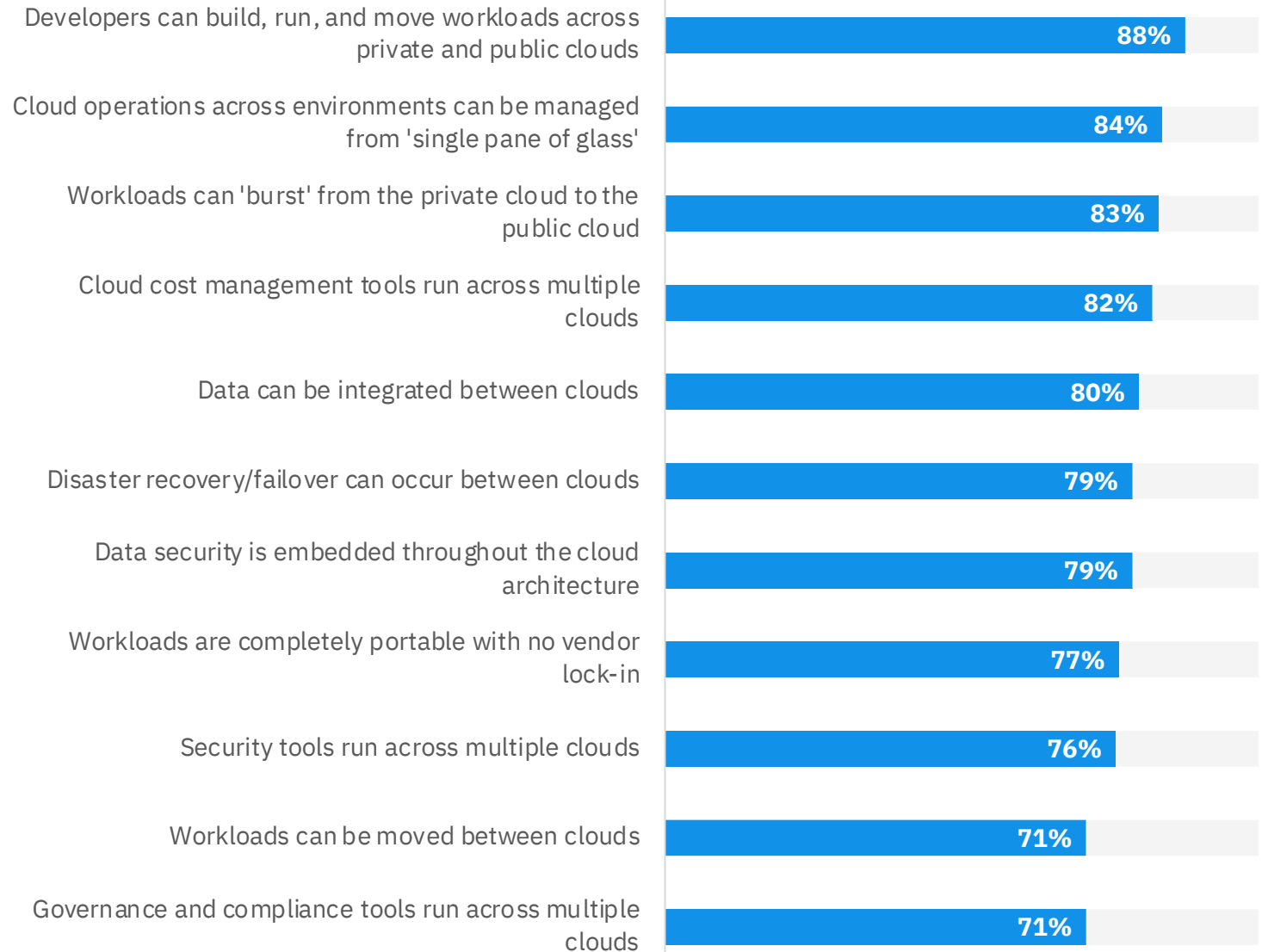
During the pandemic, large enterprises have moved beyond single public clouds

2021 | 2019 (pre-COVID-19)

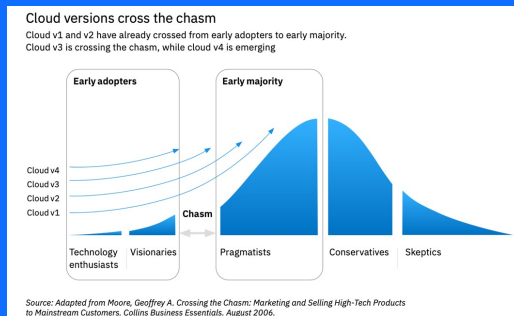
Essential hybrid/multicloud capabilities—Cloud capabilities ranked “important” or “extremely important” to most use cases by executives in *South Africa*



Q21: What is the importance of following factors to the success of your digital initiatives?



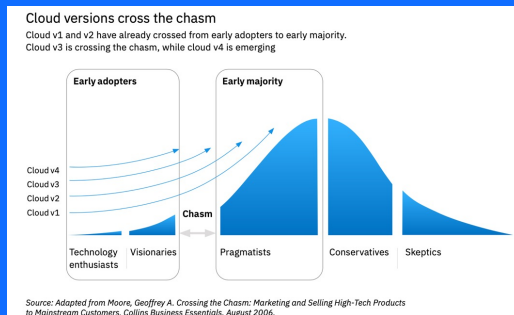
Success isn't all about the technology— operating model design and the “soft stuff” are critical factors



Cloud v3 is distinct because it incorporates other technologies and practices. No longer a stand-alone technology, it's part of a larger system or “whole product,” especially as platform as a service (PaaS) and hybrid cloud platforms have matured. In cloud v3, cloud, software development, data engineering, and a host of modern practices such as design thinking, agile, SecDevOps, and site reliability engineering (SRE) are meshed together.

We expected to see enterprises paying more attention to operating model design—the bigger-picture context for cloud—as evidence that they are crossing over to cloud v3. We also expected to see some markers of high-performance culture beginning to take root in higher-performing enterprises. Our findings confirmed those expectations. The non-technical “soft stuff” matters a great deal to the cloud-powered execution of digital plays.

Better operating model,
better performance—
Better operating model
design strongly associated
with better business
performance outcomes



Q29: To what extent your current business/IT/digital operating environment delivering improvements in the following areas?

Improvements in software/digital product quality (reducing defects, rework)



Improvements in customer outcomes (delivery success rate, customer satisfaction)



Improvements in cycle time/delivery speed/release frequency



Improvements in security/safety of operation (reducing outages, security breaches)

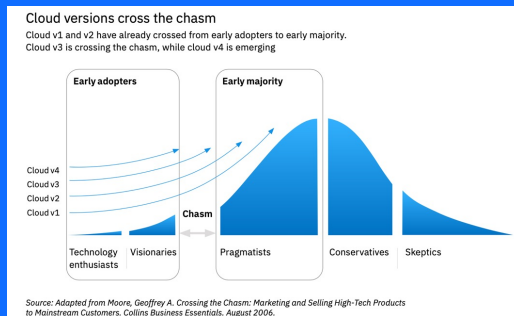


Improvements in product and service delivery productivity



Material/accelerating Improvements at enterprise scale | Sustained Improvements at enterprise scale

Better development practices, better performance— Better software development practices strongly associated with better business performance outcomes



Q30: To what extent are your current software development practices delivering the following improvements?

Reducing dependencies between teams and components of software

79%

Improving developer productivity by automating repetitive tasks

67%

Working with a high degree of psychological safety

60%

Continuously improving workflow performance and paying down technology debt

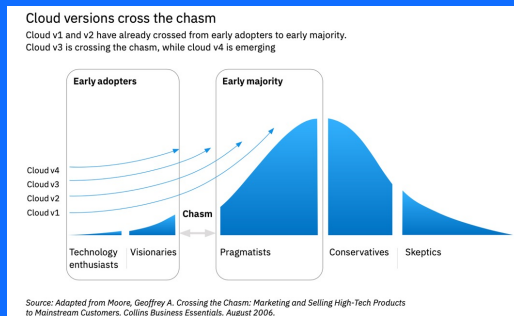
58%

Optimizing for a smooth flow of work

50%

Data shows percentage of respondents reporting that improvements to software development practices were delivering improvements in the success of digital initiatives.

Ready for transformation— Digital-enterprise management innovations are beginning to take root



Q34: To what extent are leaders at your organization open to the following management innovations?

Eliminating leadership incentives to build, enlarge, and protect organizational silos

50%

Rewarding self-directing teams with a significant compensation upside for improving business outcomes

42%

Breaking down barriers among the business, digital transformation programs, and conventional IT organizations

41%

Moving from 'the pyramid' to alternative organizational structures that optimize responsiveness to customers, partners, and the marketplace

30%

Reinventing how digital initiatives are selected, designed, and funded

25%

Enterprise spending on IT— still stuck at pre-pandemic levels

If enterprises are indeed accelerating digital transformation during the pandemic, it would be reasonable to expect to see increases in IT spending. Considering the successes reported by respondents—including very strong returns on their biggest digital investments, some of which were specified as “among the largest investments anywhere in the enterprise”—wouldn’t enterprises take full advantage of the value available by expanding their IT investments?

That's not what we saw happening

Respondents in *South Africa* reported IT spending equal to

3.6%

of enterprise revenues, a level consistent with pre-pandemic spending history in the EMEA region.

When you've found an excellent source of high-return investment opportunities, shouldn't you invest more, especially in a business environment where capital is cheap? There's a disconnect here.

One possibility is that spending within the IT budget shifted away from the business-as-usual, keep-the-lights-on portion of the budget to the digital / cloud / business performance improvement portion of the budget. But that would be unsustainable over time.

Another is that enterprises may be willing to expand IT spending beyond a conventional and arbitrary limit, but the budget cycle has just not caught up with the business environment. A third hypothesis is that cloud-driven cost savings are being reinvested in business improvement plays without raising the total level of IT spending.

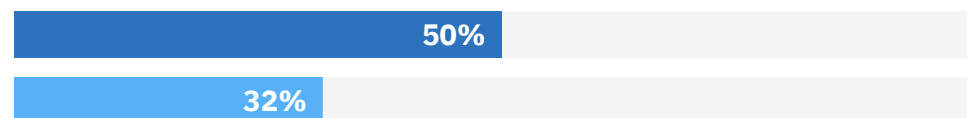
Stakeholders don't report skills gaps as a major obstacle

Cloud v3 dramatically expands and deepens the need for “T-shaped” and “comb-shaped” people who can work in small, cross-disciplinary teams to develop and deliver digital products on cloud platforms. Shouldn't we expect to see lots of difficulty related to talent shortages?

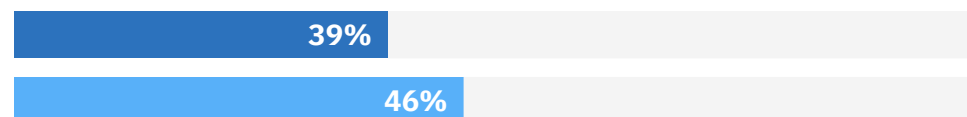
We found that talent gaps are not as formidable an obstacle as expected. In fact, among all the obstacles listed in the survey, talent gaps were among the weakest: 50% of respondents reported that leadership talent is “not a significant obstacle” anywhere in the cloud estate, and 32% reported that the availability of “people with the right skills and experience” is “not a significant obstacle” anywhere in the cloud estate. High levels of SaaS adoption may be making talent shortages less acute.

Cloud adoption skills and leadership— Significant skills or leadership gaps not reported as obstacles to cloud adoption

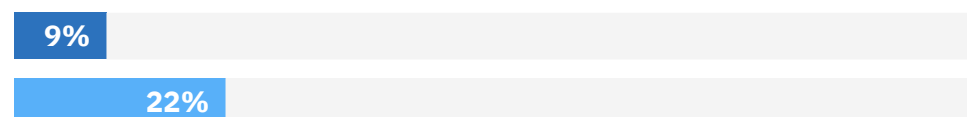
Not a significant obstacle in our cloud estate



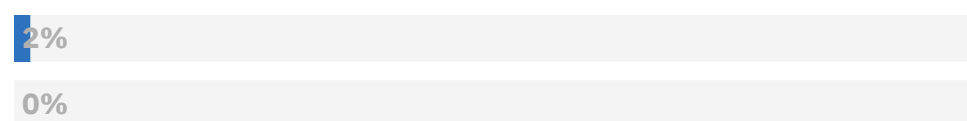
Significant obstacle in some parts of our cloud estate



An obstacle in most parts of our cloud estate



A significant obstacle everywhere in cloud estate

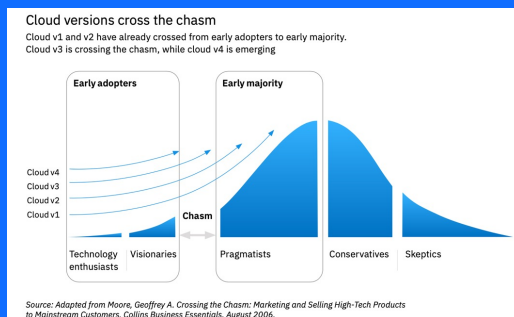


Scarcity of the right leadership to drive cloud adoption
Scarcity of people with the right skills and experience

The most transformational digital plays cloud could be delivering are the least preferred

The digital initiatives that are today the least preferred are those that best describe cloud v4. Cloud v4 emerges as enterprises come to terms with the essential paradox of digital transformation: while it has never been more critical to employ digital technology across the enterprise, it has never been more difficult to create a sustainable competitive advantage based on technology alone. That difficulty has less to do with the limits of technology than with the limits of enterprise management innovation and a willingness to adopt new behaviors.

As a strategy for early adopters, cloud v4-powered business transformation offers a built-in, durable barrier to would-be copycats: the need to abandon decades of conventional thinking about how the business, IT, customers, suppliers, and partners collaborate in a purposeful way.



Action Guide



For the late majority: Get on board the cloud v3 bus

Enterprises that have not yet adopted cloud v3 have 2 options:

Resolve quickly to be part of the late majority.

These enterprises are likely to be outsourcing IT already, so the goal would be to upgrade their contracts' KPIs to reflect more cloud v3-like levels of delivery performance.

-OR-

Catch up to the early majority.

The bad news is that these organizations are probably further behind than they may think, given the organic work that needs to accompany tech adoption in a cloud v3 model. The good news is that, if they are willing, a leapfrog strategy can get them back in the game.

A leapfrog strategy means doubling down on removing the blind spots that got them there in the first place. If you find your organization in need of such a strategy, consider the following 5 actions:

1. Check to see if your cloud strategy is really a workload migration plan.
2. Don't be tempted to settle.
3. Build a "fishbowl" environment.
4. Start small, learn fast, but make a dent.
5. Save time with "industry cloud."

For the early adopters: Get on the path to cloud v4

Enterprise leaders considering cloud v4 should take the following actions:

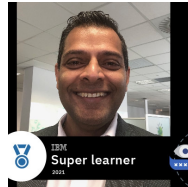
1. Use end-to-end workflow redesign as an entry point to cloud v4

2. Take advantage of your existing assets.

3. Fund cloud v4 as products, not as projects.

4. Resist employing the usual suspects as transformation catalysts.

Key contacts



Hiren Bhoola
SA Hybrid Cloud Services Leader
IBM Consulting
Hirenbho@za.ibm.com



Howard Boville
Senior Vice President, IBM Cloud Platform
CHQ, Executive Offices



Lisa-Giane Fisher
Global Benchmark Research Leader, IT and Security
IBM Institute for Business Value
LFISHER@za.ibm.com



Hillery Hunter
VP & CTO IBM Cloud; IBM Fellow Cloud



Richard Warrick
Global Research Leader, Cloud Computing
IBM Institute for Business Value

