

THE MULTI-CLOUD MATURITY INDEX

A report analysing triumphs and challenges on the multi-cloud journey for organisations in APJ and around the globe







Table of Contents

The Multi-Cloud Tipping Point	3
Key Findings from the Survey	4
Survey Demographics	5
Increase in Public Cloud Usage	7
The Journey to Multi-Cloud Maturity	10
Commonalities of Cloud-Smart Organizations	11
Multi-Cloud Challenges	14
The 'Clouds Lift' on Multi-Cloud	15

The Multi-Cloud Tipping Point

Over the past several years, organisations across every industry, sector, and region of the world have begun using multiple public clouds to drive their business operations.

Sometimes this is an accidental outgrowth resulting from different teams preferring to run apps or workloads on different clouds. And sometimes it's a strategic decision designed to increase flexibility, control costs, monetize data, and navigate data residency requirements. In every case, organisations are striving to gain maximum value from their multi-cloud environment, while contending with the increased complexity that comes with managing multiple clouds.

Our survey of more than 1,900 organisations throughout APJ reveals that only about one in five has reached the tipping point, where the strategic advantages of multi-cloud outweigh the inherent complexities. These 'cloud-smart' organisations have achieved a more sophisticated and mature approach to multi-cloud, which enables them to gain strategic business advantages. By contrast, the majority (**79%**) of organisations report that they haven't yet embarked on the multi-cloud journey or are struggling with various aspects of 'cloud chaos' — everything from talent gaps to governance to security risks.

Note: All survey data is for APJ respondents only unless otherwise specified.

Key Findings from the Research

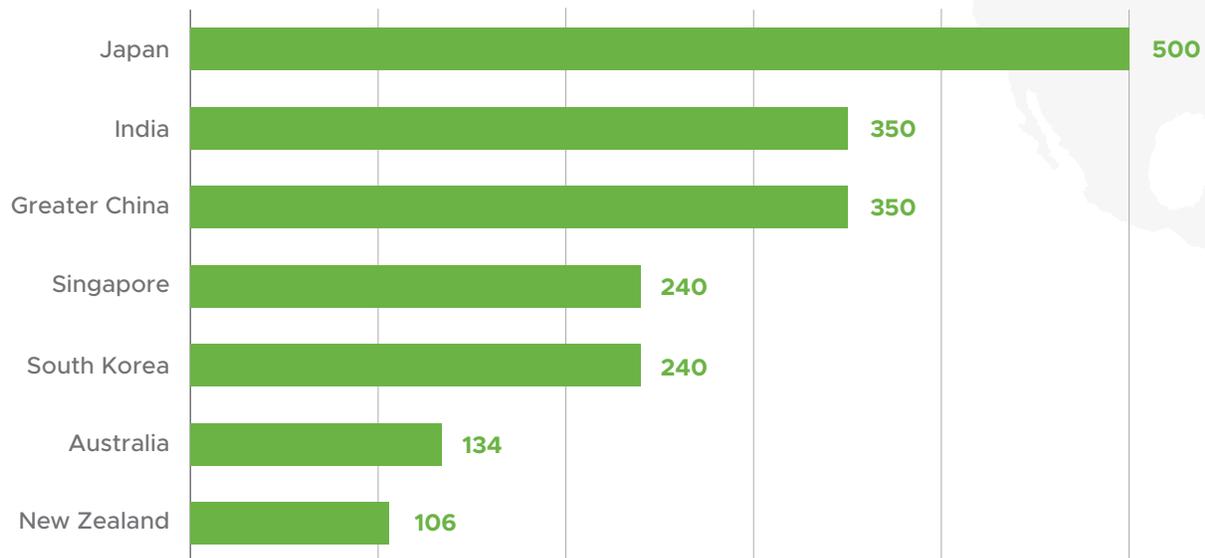
- ① The embrace of multi-cloud has spiked in the last two years, as organisations have navigated the impact of the global pandemic. While **43%** of organisations reported using multiple public clouds two years ago, that number has increased to **70%** and is expected to grow to **80%** over the next five years. These figures are well above the global average, which currently sits at **64%** and is expected to grow to **72%** over the next five years.
- ② Respondent organisations currently use an average of **2.2** public clouds, and this number is expected to increase to **3.2** over the next five years.
- ③ **95%** of all organisations surveyed believe a multi-cloud approach is critical to business success, and **56%** go even further, saying that organisations that do not adopt a multi-cloud approach risk failure. These percentages are even higher (**96%** and **66%**, respectively) for organisations that have achieved the highest level of multi-cloud maturity. This indicates that the more advanced an organisation is in its multi-cloud approach, the more benefit it gains.
- ④ **90%** of respondents from multi-cloud organisations say that their organisation uses apps that were built to run across multiple public clouds.



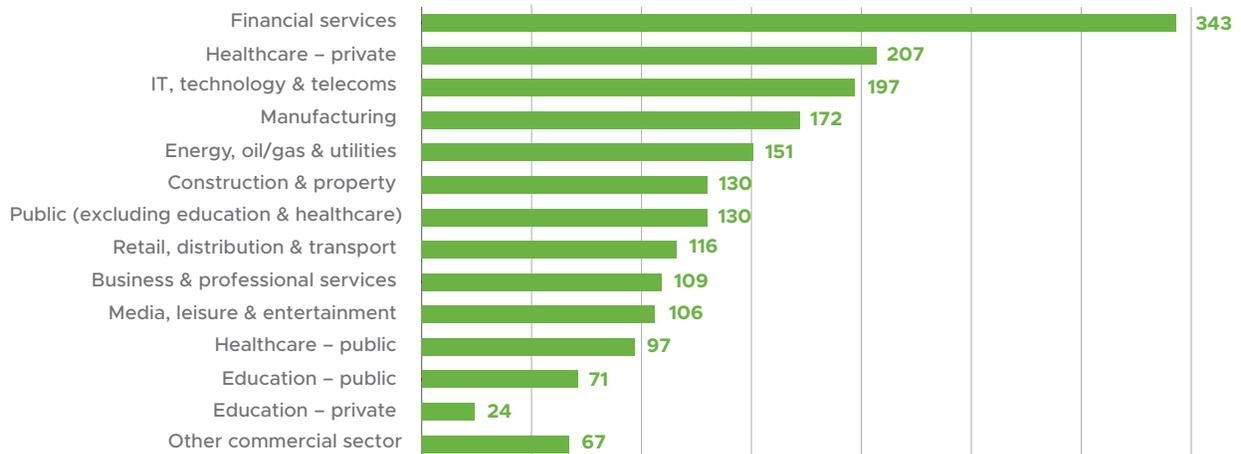
Survey Demographics

The survey — conducted by Vanson Bourne and commissioned by VMware — collected global data from 5,790 respondents, including 1,920 from APJ. The respondents, who were surveyed between April and June of 2022, consisted of CIOs, CISOs & CTOs, cloud architects & DevOps professionals, app developers, and business decision makers split across the following dimensions:

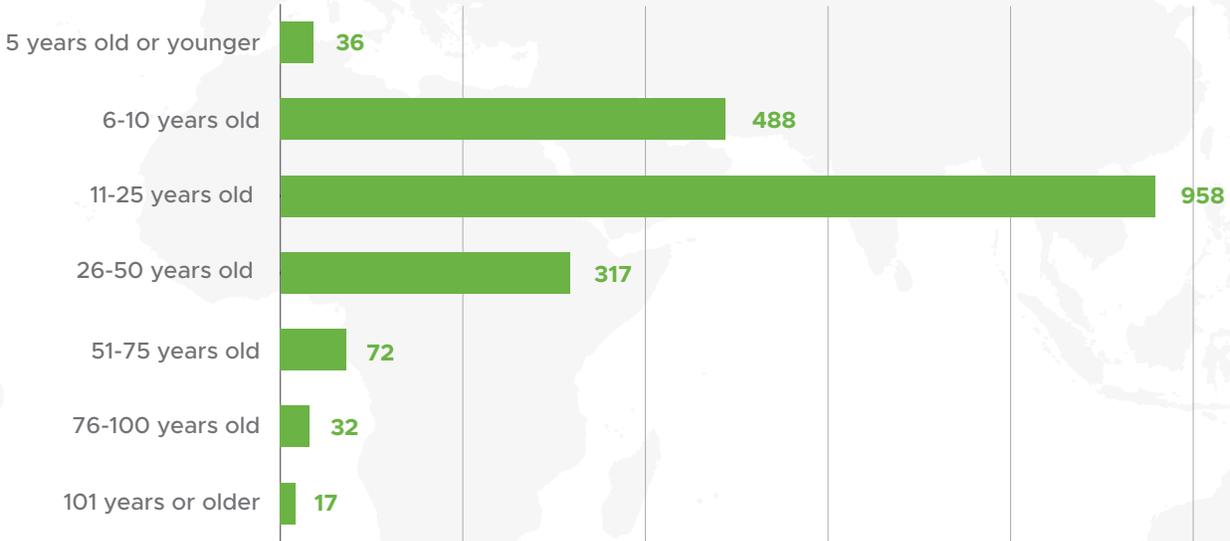
COUNTRY



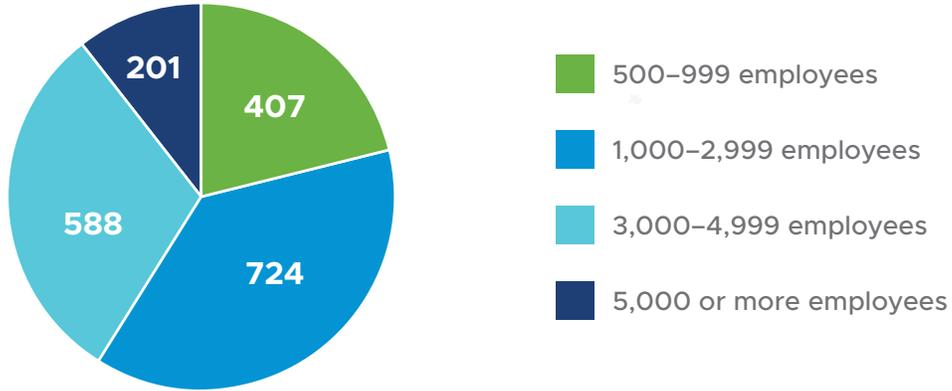
INDUSTRY

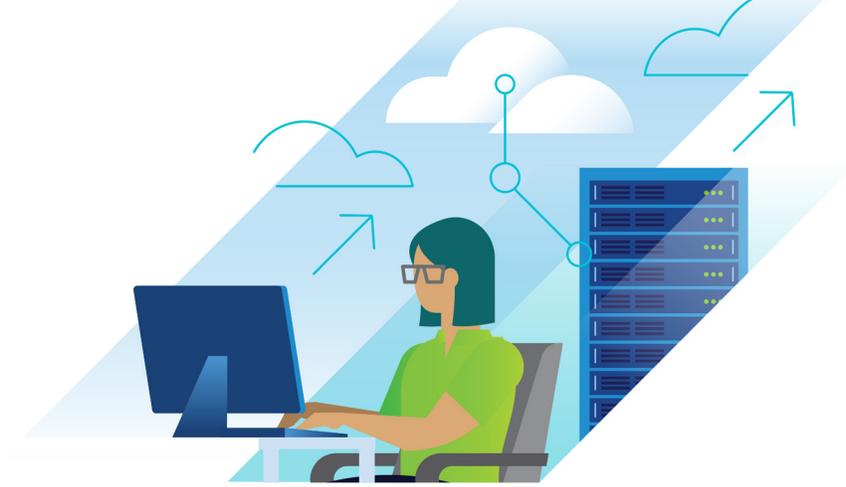


AGE OF ORGANIZATION



ORGANIZATION SIZE

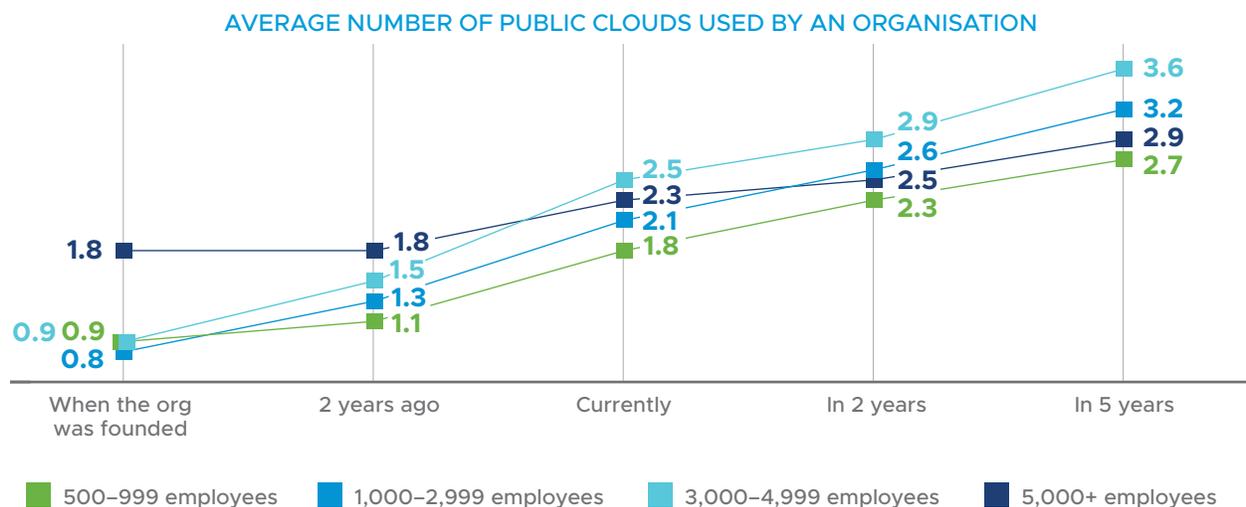
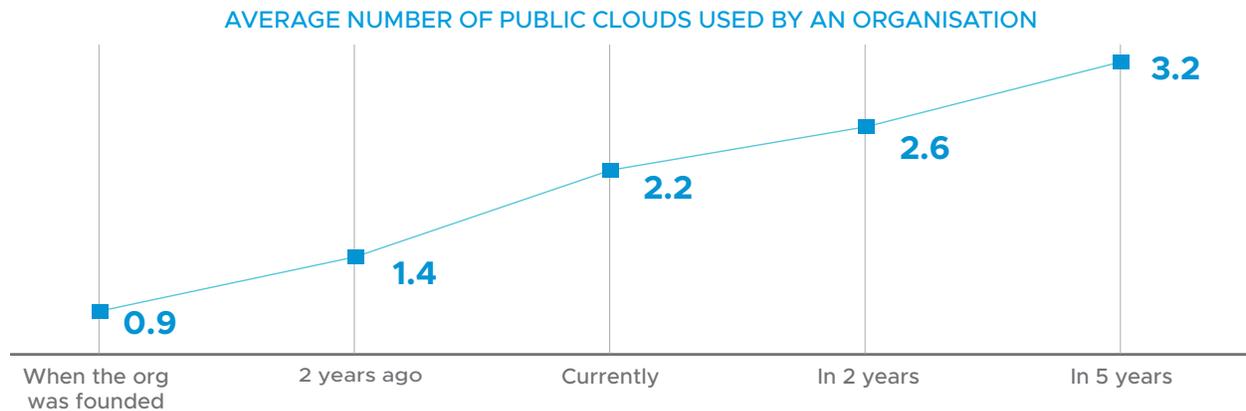




1 The number of public clouds in use is on the rise. But more isn't always better.

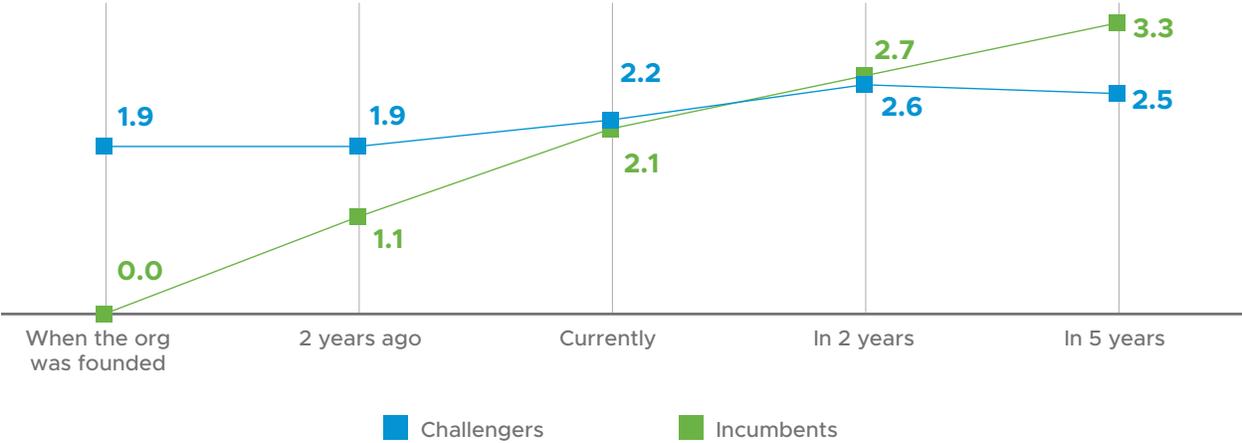
Ballooning Clouds

Public cloud usage is expanding at a rapid rate, especially among medium-sized organisations with 1,000-4,999 employees.



'Incumbent' organisations (defined as those that are 11 years old or older, not 'born in the cloud,' and have annual revenue growth of 15% or less) are also seeing a proliferation of public clouds compared to 'challenger' organisations (defined as those that are 10 years old or younger, were 'born in the cloud,' and have annual revenue growth of 15% or more). This marks a noteworthy change from when these organisations were founded. This reversal indicates that incumbent organisations are recognizing the value of multi-cloud and are now playing catch-up.

AVERAGE NUMBER OF PUBLIC CLOUDS USED BY AN ORGANISATION



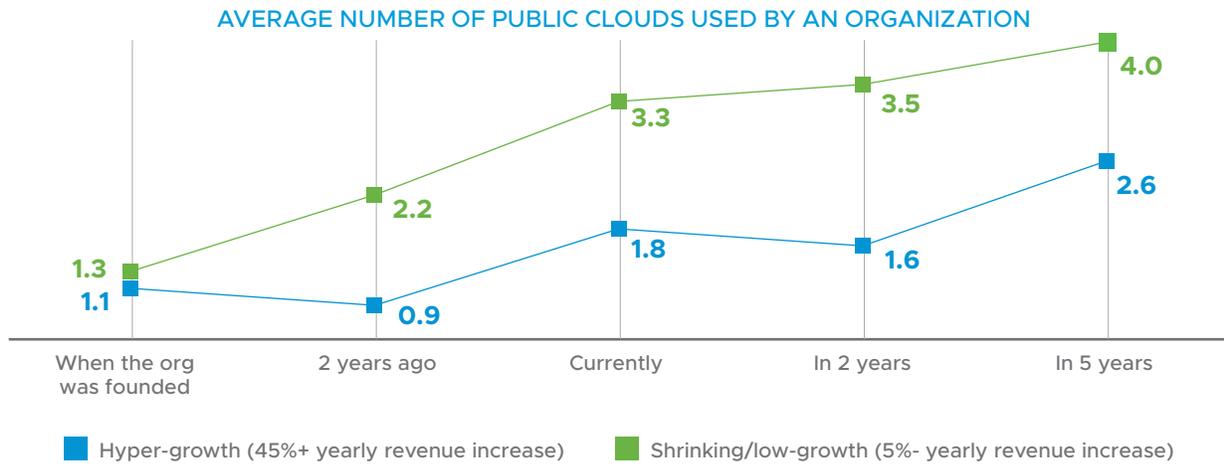
It's noteworthy that incumbent organisations in APJ appear to be taking an even more aggressive approach to the number of public clouds they plan to use than their North America and EMEA counterparts. While APJ incumbents expect to use an average of **3.3** public clouds in five years' time, incumbents in North America expect to use an average of **3.1**, and those in EMEA expect to use an average of **2.9**.

But APJ organisations should be cautious, as having 'too much of a good thing' can cause management, cost, and security complexities, to name a few.

Finding the Multi-Cloud Sweet Spot

While **99.8%** of respondents believe a multi-cloud approach has benefits to business — including enhanced employee flexibility (cited by **55%** of respondents), the development of higher-value applications (cited by **49%** of respondents), and getting apps into production faster (cited by **49%** of respondents) — this doesn't mean that more clouds are necessarily better. Using too many clouds can become unmanageable.

The survey finds that the highest-revenue-growth companies are actually using fewer public clouds than shrinking or low-growth companies. This indicates a more thoughtful, strategic approach to multi-cloud on the part of the hyper-growth companies — ensuring that they are maximizing the potential of each individual cloud.



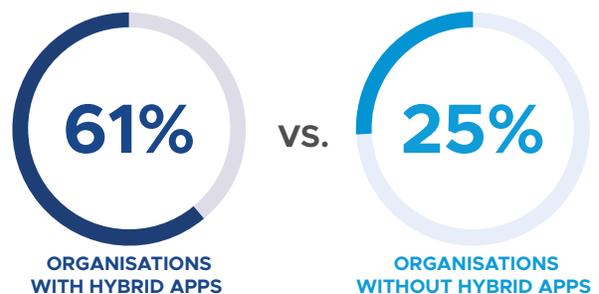
Unlocking the Potential of Multi-Cloud

A whopping **90%** of respondents from multi-cloud organisations have apps that were built to run across multiple clouds, which allows these organisations to increase app dev, DevOps, and/or IT productivity (cited by **51%** of respondents), get products and services to market faster (cited by **50%** of respondents), and improve resilience (cited by **48%** of respondents), among many other benefits. Organisations with apps built to run across multiple clouds (hybrid apps) are more likely to appreciate the role a multi-cloud approach plays in critical business functions.

A MULTI-CLOUD APPROACH PLAYS A VERY OR SOMEWHAT IMPORTANT ROLE IN:



RESPONDENTS FROM ORGANISATIONS THAT RUN HYBRID APPS ARE ALSO MORE LIKELY TO SAY THAT A MULTI-CLOUD APPROACH IS ABSOLUTELY CRITICAL TO BUSINESS SUCCESS



2 The journey to multi-cloud maturity is a long, bumpy road.

Defining Multi-Cloud Maturity

To pinpoint the criteria that the most advanced organisations share, and to assess levels of maturity across the cloud landscape, survey respondents were grouped into four categories: **Trailing**, **Cloud Beginner**, **Cloud Intermediate**, and **Cloud Smart**.

Respondents were categorized based on the number of public clouds used, hybrid app usage, data sovereignty capabilities, visibility and control over cloud expenses, DevOps talent, and cybersecurity. Respondents were assigned positive or negative points depending on their level of maturity in each category and given an overall score, resulting in the following breakdown:



A SNAPSHOT FOR EVERY STAGE

TRAILING ORGANISATIONS

Trailing organisations, by definition, are not multi-cloud organisations. They are:

- + slightly less likely to be from APJ than the global total
- + more likely to come from public education than from other industries
- + more likely to be a small organisation (500-999 employees) vs a larger organisation
- + **26** years old on average

NOTE: While an organisation may technically be 'trailing' in multi-cloud maturity, it may have very good reasons for doing so, for example, industry-specific regulations. These organisations do not aspire to reach multi-cloud maturity.

CLOUD-BEGINNER ORGANISATIONS

Cloud-beginner organisations are either just embarking on their multi-cloud journey or aspiring to do so. They are:

- + slightly less likely to be from APJ than the global total
- + more likely to come from business & professional services than from other industries
- + more likely to be a small organisation (500-999 employees) vs a larger organisation
- + **22** years old on average

CLOUD-INTERMEDIATE ORGANISATIONS

Cloud-intermediate organisations are in the middle of their multi-cloud journey. They are:

- + slightly more likely to be from APJ than the global total
- + more likely to come from energy, oil/gas & utilities than from other industries
- + more likely to be a large organisation (5,000+ employees) vs a smaller organisation
- + **22** years old on average

CLOUD-SMART ORGANISATIONS

Cloud-smart organisations are the most advanced when it comes to multi-cloud maturity. They are:

- + slightly more likely to be from APJ than the global total
- + more likely to come from private healthcare than from other industries
- + more likely to be a medium/large-sized organisation (3,000-4,999 employees) vs other organisations
- + **20** years old on average

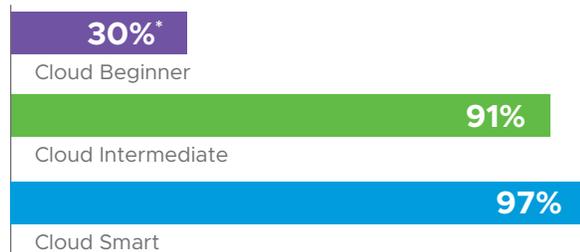
The remainder of this report examines what members of the different categories have in common to determine how multi-cloud adoption affects organisations at each stage of the journey, and to show those in the early stages that more and more benefits will start to come their way.

3 Cloud-smart organisations share key things in common.

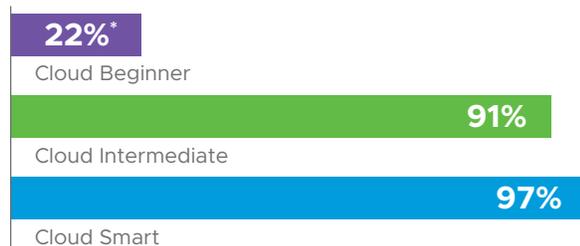
Multi-Cloud Unlocks Revenue and Profitability Potential

While it doesn't happen overnight, the survey finds that a multi-cloud approach can have a positive impact on revenue and profitability. And the farther organisations get on their multi-cloud journey, the more likely they are to see substantial increases.

MULTI-CLOUD HAS HAD A POSITIVE IMPACT ON REVENUE



MULTI-CLOUD HAS HAD A POSITIVE IMPACT ON PROFITABILITY



*Note: Low base

COUNTRY SPOTLIGHT

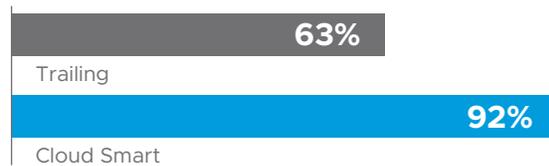
At **98%**, respondents from India and Singapore were more likely than other APJ respondents to report that multi-cloud had a positive impact on revenue growth, while those from Japan were least likely to say the same at **79%**.

Meanwhile, a full **100%** of respondents from India said their multi-cloud strategy had a positive impact on profitability, while at **78%**, respondents from Japan were the least likely in APJ to say the same.

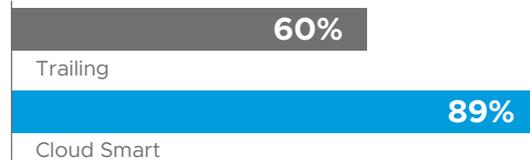
Multi-Cloud Helps Organisations Manage Data Wherever It Resides

With organisations increasingly collecting data from customers all over the world, and national regulations getting more complex by the day, data sovereignty (i.e. the principle that data is subject to the privacy laws within the nation where it is collected and stored) is top of mind.

IT'S EASY TO MANAGE DATA IN WHICHEVER NATION IT RESIDES

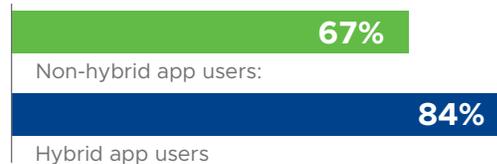


IT'S EASY TO SECURE DATA IN WHICHEVER NATION IT RESIDES

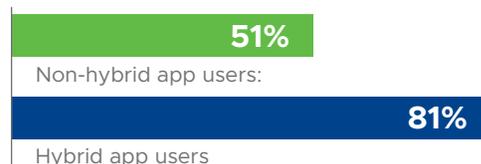


These tasks are also easier for organisations that use hybrid apps (those built to run across multiple public clouds):

IT'S EASY TO MANAGE DATA IN WHICHEVER NATION IT RESIDES



IT'S EASY TO SECURE DATA IN WHICHEVER NATION IT RESIDES



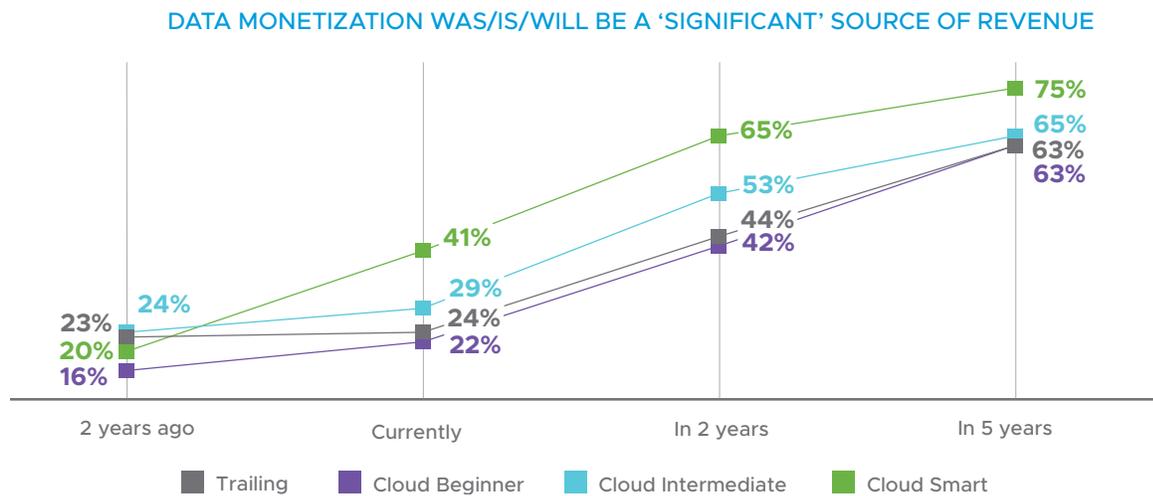
Regardless of the ease with which organisations manage and secure their data, **94%** report that data sovereignty is a concern, with **50%** saying it's a 'significant' concern. (However, this figure varies greatly by country with **74%** of those in Greater China reporting significant concern vs just **36%** of those in South Korea. This is slightly counterintuitive given that South Korea is most likely to report difficulties in this area.)

Luckily, multi-cloud strategies are making it easier to manage and protect data wherever it resides by allowing organisations to work with sovereign cloud providers. These providers are key to ensuring that data is protected, compliant, and resident within a national territory. Operated by a sovereign entity, sovereign clouds are exempt from foreign jurisdictional control and managed by national citizens with the relevant national security clearance.

The farther an organisation gets on its multi-cloud journey, the better it's able to utilise sovereign clouds.

Multi-Cloud Helps Turn Data into Money

The global data monetization market is expanding rapidly. Looking to the future, respondents expect data monetization to become a 'significant' source of revenue, and this is especially true for the cloud-smart group.



Multi-cloud is helping accelerate this trend. That's because it allows ways of managing data through sovereign clouds. Sovereign clouds as part of a multi-cloud strategy provide the ability to choose the right cloud for each data classification and for better governance around data mobility.

COUNTRY SPOTLIGHT

Those from India are much more likely than others in APJ to say it's easy to manage and secure data in whichever nation it resides, at **90%** and **85%**, respectively. Meanwhile, those in South Korea were most likely to say managing and securing data wherever it resides is difficult, at **30%** and **35%**, respectively.

CHALLENGER & INCUMBENT SPOTLIGHT

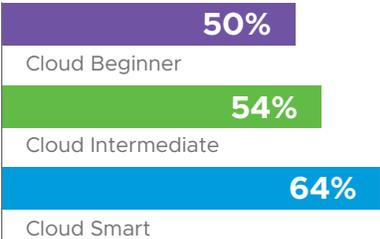
Similar to the way incumbent organisations are playing 'catch-up' with regard to the number of public clouds used, incumbents are also planning to outpace challengers over the next five years when it comes to data monetization. While data is currently only a 'significant' source of revenue for **23%** of incumbent respondents, they expect these numbers to increase to **46%** and **63%** over the next two and five years, respectively. Meanwhile, challengers (currently sitting at **32%**) expect to plateau at **53%** over the next five years.

From the Server Room to the Board Room

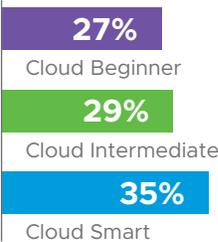
Unlocking the potential of multi-cloud isn't solely about having the right tech in place. Respondent organisations that put the CEO at the helm of their multi-cloud journey — ensuring that a multi-cloud strategy plays a central role in overall business objectives — have better outcomes.

Cloud-smart organisations were also most likely to have the CEO as the **primary** decision maker when it comes to a multi-cloud strategy.

CEO 'EXTREMELY' ENGAGED IN CLOUD USE



CEO WAS OR WOULD BE THE PRIMARY DECISION MAKER IN ORGANISATION'S MULTI-CLOUD APPROACH



COUNTRY SPOTLIGHT

There is currently a large differential in the extent to which APJ countries are monetizing their data. **44%** of respondents from India said data monetization is currently a 'significant' source of revenue, whereas only **14%** of those from Singapore said the same. But in five years' time, Singapore actually expects to overtake India, with **75%** of Singapore respondents predicting data monetization will be a 'significant' source of revenue, compared to just **73%** of respondents from India.

APP USAGE SPOTLIGHT

Organisations that run hybrid apps were much more likely than non-hybrid app users to say that their CEO is 'extremely' engaged at **60%** and **22%**, respectively.

4 While organisations are less affected when they become cloud smart, no multi-cloud journey is without challenges.

Security in Multi-Cloud: A Double-Edged Sword

With more clouds, comes more potential entry points for bad actors, prompting organisations to cite ‘increased cybersecurity risks’ as the number one challenge associated with multi-cloud at **42%** (tied with ‘different skill sets/tools required for each cloud’).

Paradoxically, at the same time multi-cloud is increasing security risks by creating more points of entry, it’s also providing organisations with the ability to segment and sequester data as needed and design more tailored cybersecurity strategies. Increased security of customer and employee data were the top-cited benefits of a multi-cloud approach.

BENEFITS OF A MULTI-CLOUD APPROACH: INCREASED SECURITY

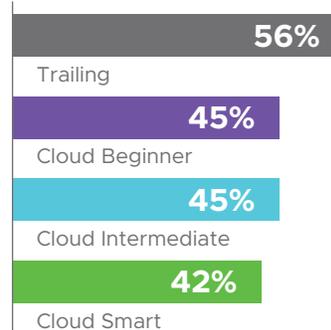


More Clouds Require More (and Different) Talent

After security (and ‘different skill sets/tools required for each cloud’), other challenges associated with implementing a multi-cloud approach are the lack of in-house talent to successfully implement the multi-cloud strategy (cited by **41%** of respondents), and the need for increased hands-on management of clouds (cited by **40%** of respondents).

However, as with most areas, skills gaps tend to become less pronounced as organisations continue on their cloud journey and become cloud smart:

“MY ORGANISATION DOES NOT HAVE THE SKILLS IN-HOUSE TO ACHIEVE A MULTI-CLOUD APPROACH”



DevOps SPOTLIGHT

One bright spot in the talent gap story is DevOps, with only **2%** of respondents saying that their organisation has not at least partly achieved DevOps capabilities. When it comes to fully achieving DevOps capabilities, it’s unsurprising that hybrid app users are soaring ahead at **50%** vs **22%** for non-hybrid app users.

5 Despite challenges along the way, organisations that take a deliberate, conscientious approach will eventually see the proverbial clouds lift on their multi-cloud strategies.

From Chaos to Clarity

Embarking on a multi-cloud journey is rarely, if ever, a seamless process. But the **21%** of organisations that are considered cloud smart act as a beacon for those still on their way.

These cloud-smart organizations are experiencing the freedom to choose the best cloud for each application... the ability to say 'no' to vendor lock-in and the skyrocketing costs that result... and the power to control their data, and not the other way around.

Those currently struggling with increased security risks, visibility concerns, or any other challenge associated with a multi-cloud approach should rest assured. VMware's tools can help organisations design an approach that brings together the best of all clouds.

Learn more at vmware.com/multi-cloud





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