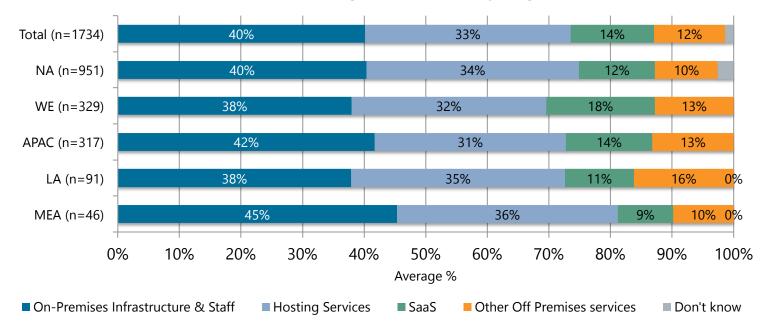
451 Research

Hosting and Cloud Study 2016 The Digital Revolution, Powered by Cloud

0

Survey Results



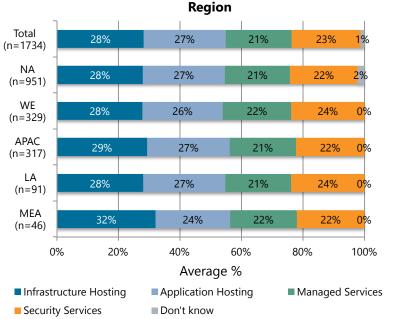


2016 IT Budget Allocation by Region

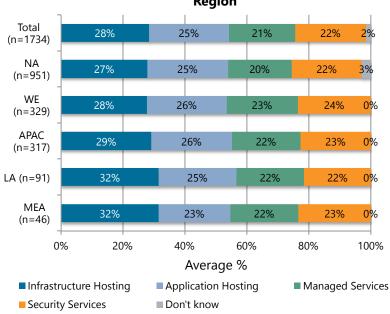
S8. Using your best guess, approximately what percent of your total IT budget in 2016 is allocated to: [sum to 100%]







2016 Hosting/Cloud Services Budget Allocation by



2018 Hosting/Cloud Services Budget Allocation by Region

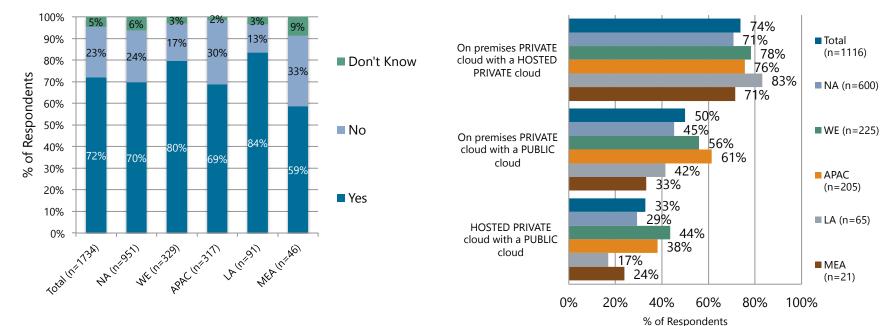
S9. Approximately what percent of your HOSTING & CLOUD SERVICES budget in 2016 is allocated to the following services? [Sum to 100%]

S10. Now thinking out two years, approximately what percent of your HOSTING & CLOUD SERVICES budget will be allocated to the following services? [Sum to 100%]



Cloud

On-Premise Private Cloud by Region



I2. Does your organization currently have an on-premise private cloud?

13. Has your organization configured any of the following clouds for interoperability for the seamless delivery of a business functions? Check all that apply

Cloud Interoperability by Region

4

451 Research

Infrastructure Services

61% 62% 59% Hosted Private Cloud 54% ■ Total (n=1685) 60% 52% **Basic Website Hosting** 61% 63% ■ NA (n=922) 78% 55% 53% **Dedicated Servers** 64% 43% 43% ■ WE (n=324) 50%_{53%} Public Cloud/laas 60% APAC (n=305) 48% 22% 15% 19% 30% Bare Metal Servers 21% ■ LA (n=88) 11% 15% 2% 2% NONE ■ MEA (n=46) 3% 40% % of Respondents 70% 0% 10% 20% 30% 50% 60% 80%

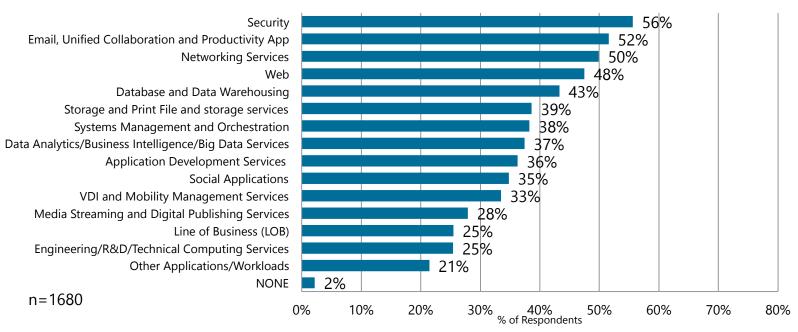
Hosted Infrastructure Services Use by Region

11. Which of the following infrastructure services -- if any -- did your organization use over the last year?



Application Services

Hosted Applications Use

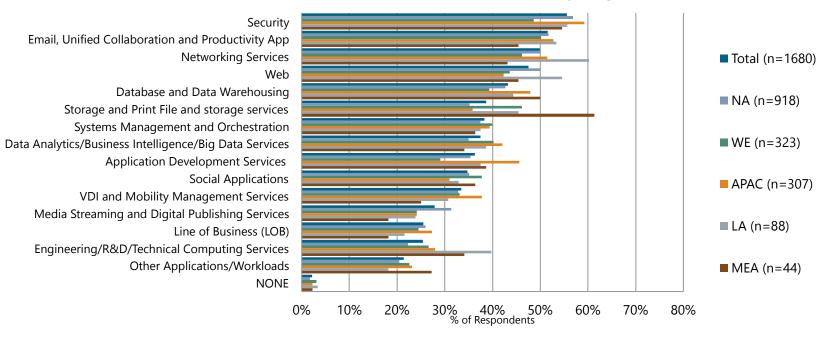


A1. Which of the following hosted applications -- if any -- did your organization use over the last year?



Application Services

Hosted Applications Use by Region

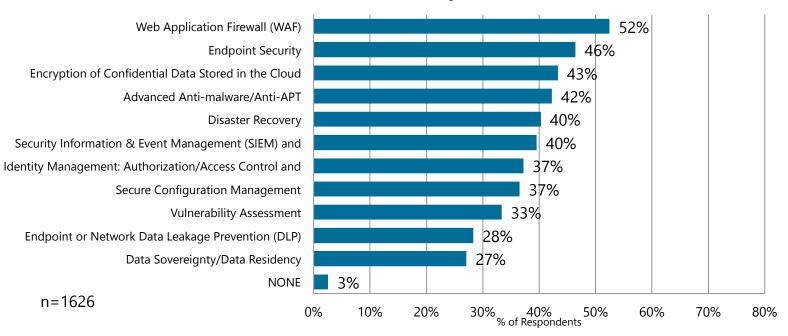


A1. Which of the following hosted applications -- if any -- did your organization use over the last year?



Security Services

Hosted Security Services Use

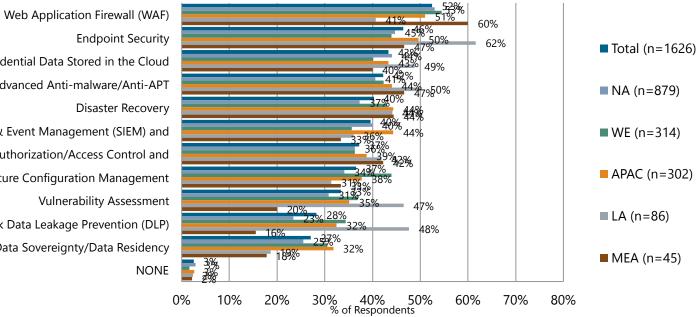


E1. Which of the following hosted security services -- if any -- did your organization use over the last year?



Security Services

Hosted Security Services Use by Region



Endpoint Security Encryption of Confidential Data Stored in the Cloud Advanced Anti-malware/Anti-APT Disaster Recovery Security Information & Event Management (SIEM) and Identity Management: Authorization/Access Control and Secure Configuration Management Vulnerability Assessment Endpoint or Network Data Leakage Prevention (DLP) Data Sovereignty/Data Residency NONE

E1. Which of the following hosted security services -- if any -- did your organization use over the last year?



Hosting/Cloud Provider Services

Importance of Hosting/Cloud Provider Services

Our Providers:

...have experience helping customers transform existing IT env. to cloud-based srvcs...develop holistic strategy

...can offer srvcs beyond infrastructure, i.e. managed/ security srvcs & hosted- or SaaS-based apps

...can assess our IT env....make recommendations for cloud platforms or apps to purchase

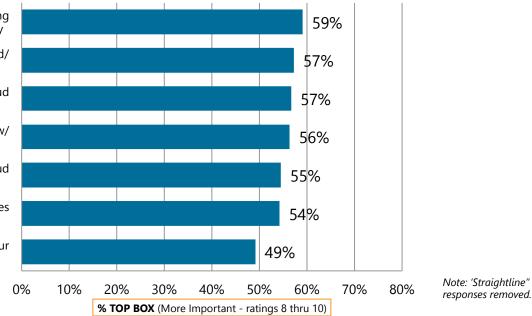
...should specialize in building best-of-breed...will work w/ multiple providers for all our services

...can migrate workloads/data to different cloud environments...

...can offer one-stop-shopping for a variety cloud services and be single point of contact...

...can broker contracts w/ other service providers on our behalf for additional services...

n=1626



E2. When thinking about all the potential services that your organization may want from hosting and cloud providers over the next two years, rate how important the following are to your organization in meetings its goals. Use a scale where 0=not at all important and 10=extremely important. [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]



Hosting/Cloud Provider Services

Importance of Hosting/Cloud Provider Services by Region

Our Providers:

...have experience helping customers transform existing IT env. to cloud-based srvcs...develop holistic strategy

...can offer srvcs beyond infrastructure, i.e. managed/ security srvcs & hosted- or SaaS-based apps

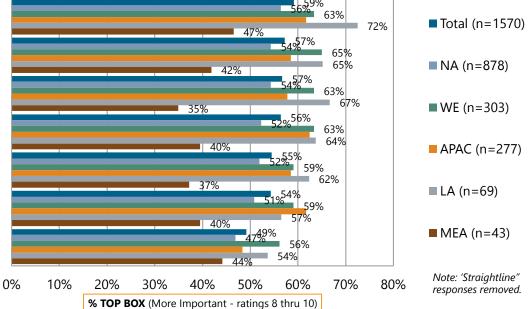
...can assess our IT env....make recommendations for cloud platforms or apps to purchase

...should specialize in building best-of-breed...will work w/ multiple providers for all our services

...can migrate workloads/data to different cloud environments...

...can offer one-stop-shopping for a variety cloud services and be single point of contact...

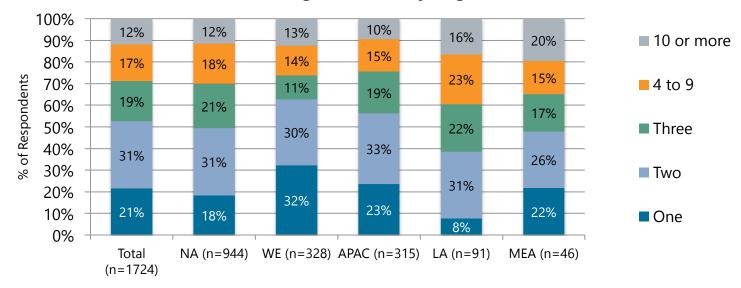
...can broker contracts w/ other service providers on our behalf for additional services...



E2. When thinking about all the potential services that your organization may want from hosting and cloud providers over the next two years, rate how important the following are to your organization in meetings its goals. Use a scale where 0=not at all important and 10=extremely important. [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]



Hosting/Cloud Providers

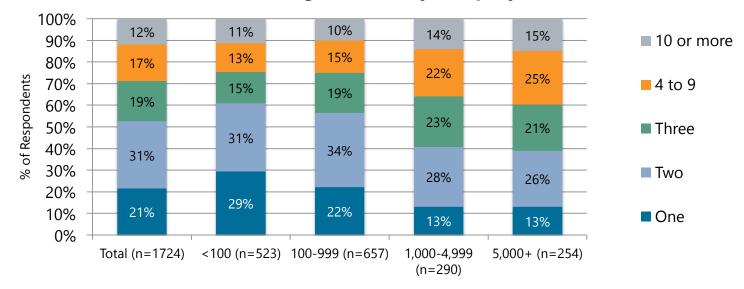


Number of Cloud/Hosting Providers by Region

L1. Approximately how many hosting and cloud providers does your organization currently work with?



Hosting/Cloud Providers



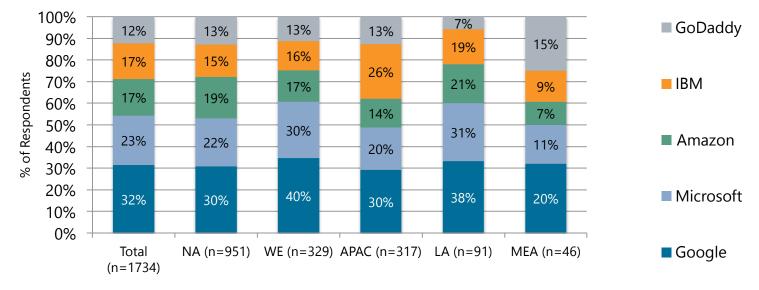
Number of Cloud/Hosting Providers by Company Size

L1. Approximately how many hosting and cloud providers does your organization currently work with?



Hosting/Cloud Providers

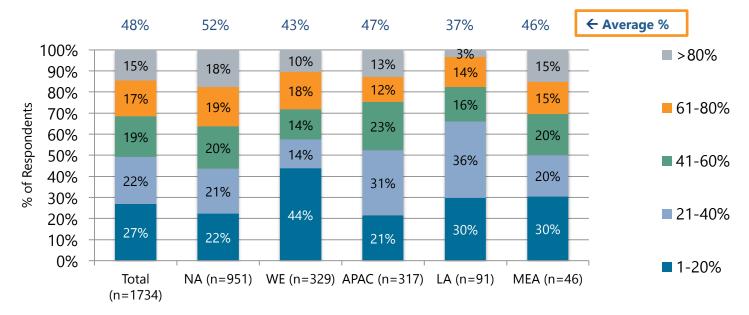
Most Frequently Mentioned (Top Five) Hosting/Cloud Providers by Region



L2. Please name your organization's top three hosting or cloud providers based on spending.



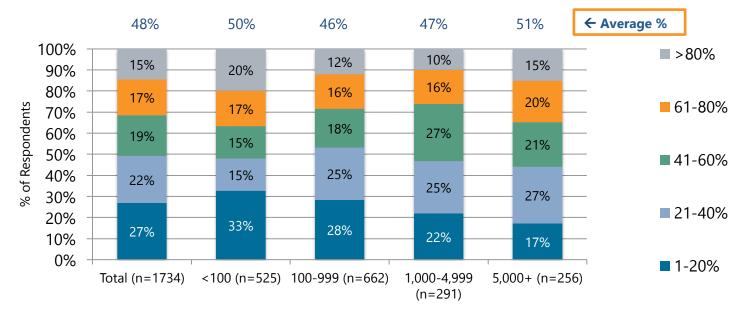
% Hosting/Cloud Services Spending For Primary Provider by Region



L4. Approximately what percent of your organization's spend on hosting and cloud services is for [Primary Hosting/Cloud Services Provider]?



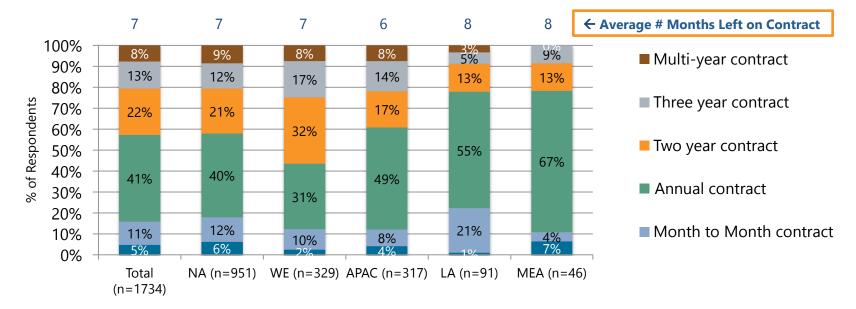
% Hosting/Cloud Services Spending For Primary Provider by Company Size



L4. Approximately what percent of your organization's spend on hosting and cloud services is for [Primary Hosting/Cloud Services Provider]?



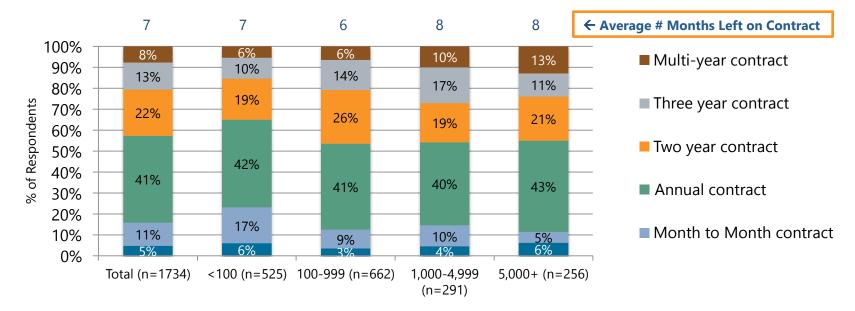
Primary Provider Contract Terms by Region



Research

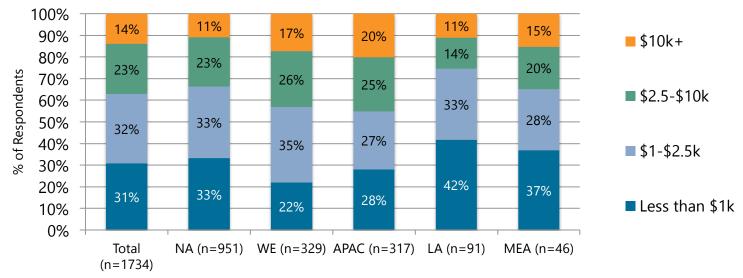
L5. What is your organizations contract terms with [Primary Hosting/Cloud Services Provider], meaning how long are you obligated to pay for their services (not how often you pay their invoices)? Select one L6. [If contract] How many months are left on your current contract?

Primary Provider Contract Terms by Company Size



L5. What is your organizations contract terms with [Primary Hosting/Cloud Services Provider], meaning how long are you obligated to pay for their services (not how often you pay their invoices)? Select one L6. [If contract] How many months are left on your current contract?

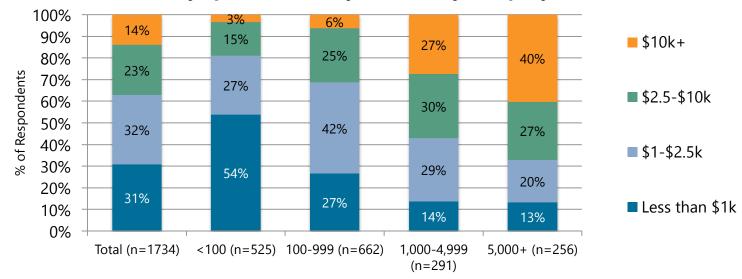




Monthly Spend w/Primary Provider by Region

L7. On average, how much does your organization spend with [Primary Hosting/Cloud Services Provider] on a monthly basis?

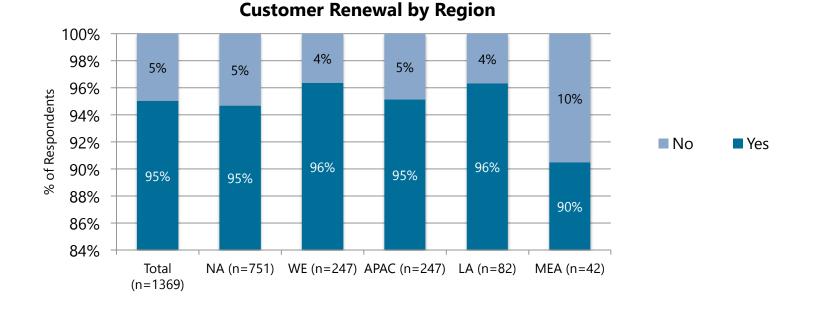




Monthly Spend w/Primary Provider by Company Size

L7. On average, how much does your organization spend with [Primary Hosting/Cloud Services Provider] on a monthly basis?

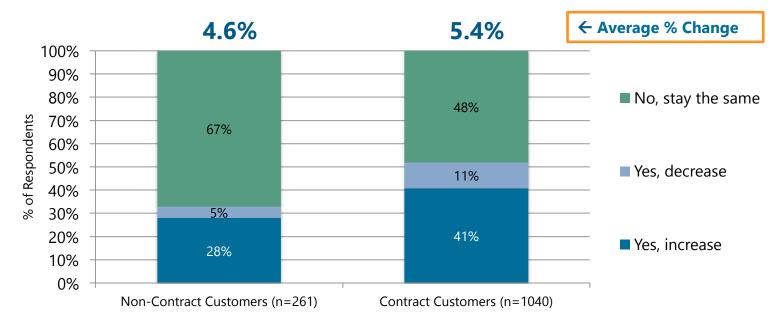




L8a/L8b. (Combines contract and no contract users) Does your organization intend to be a customer next month/renew your contract with [Primary Hosting/Cloud Services Provider]?



Monthly Change in Spend w/Primary Provider by Customer Type

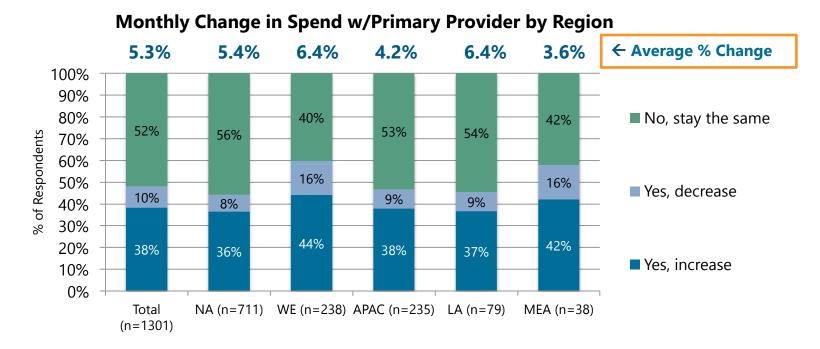


L9a. Will your organization change what you spend with [Primary Hosting/Cloud Services Provider] next month?

L9b. Will your organization change what you spend with [Primary Hosting/Cloud Services Provider] on a monthly basis when the contract renews?

L10a/L10b. Approximately what will be the (increase/decrease) in spending on a monthly basis?





L9a. Will your organization change what you spend with [Primary Hosting/Cloud Services Provider] next month?

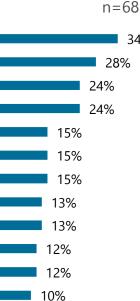
L9b. Will your organization change what you spend with [Primary Hosting/Cloud Services Provider] on a monthly basis when the contract renews?

L10a/L10b. Approximately what will be the (increase/decrease) in spending on a monthly basis?



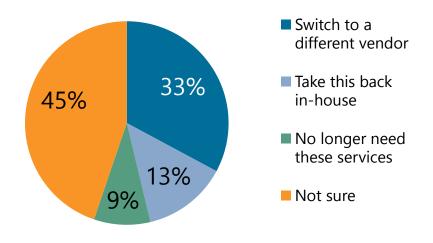
Top Drivers to Discontinue Services w/ Primary Provider

Pricing no longer competitive Other vndr offered appealing switch plan Lack of Expertise Lack of security transparency/auditability Lack of technical knowledge Poor customer service/call center Lack of services specific to our industry Products/services no longer competitive Not able to meet SLAs...Downtime Doesn't understand my business Limited numbers of products/services Lack of demand from our users





n=68

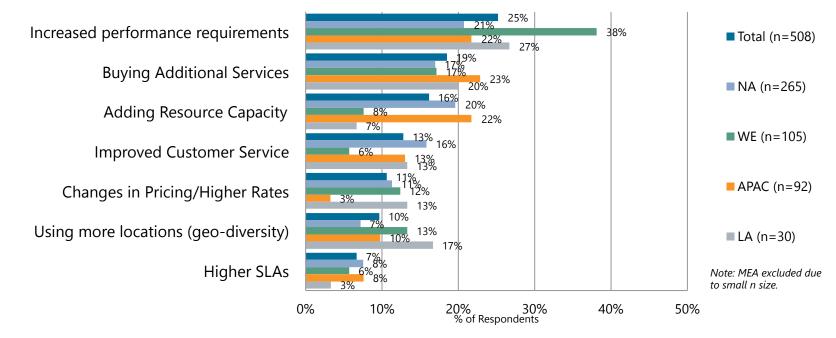


L9c. What are the top three drivers in your decision to discontinue services with [Primary Hosting/Cloud Services Provider]? L9da. Which vendor will you likely switch these services to?

34%



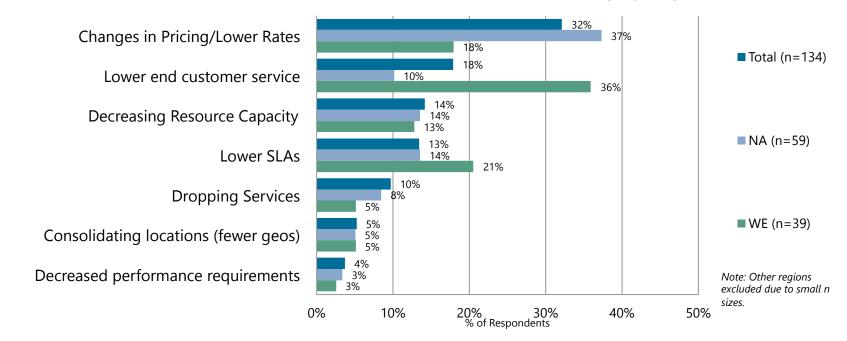
Top Reason for Increase in Spending by Region



L11a. What is the top reason for the increase in spending on a monthly basis?

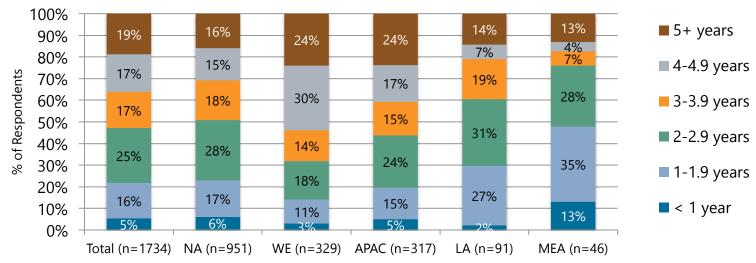


Top Reason for Decrease in Spending by Region



L11b. What is the top reason for the decrease in spending on a monthly basis?

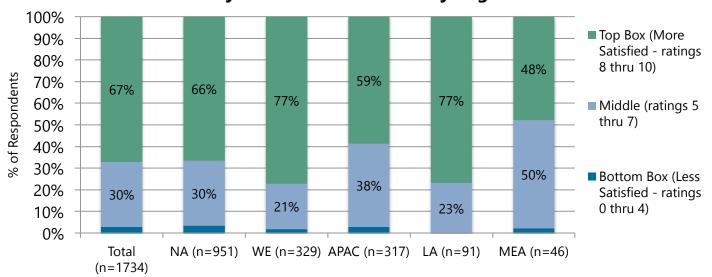




Primary Provider Customer Length by Region

L12. How long has your organization been a customer of [Primary Hosting/Cloud Services Provider]?

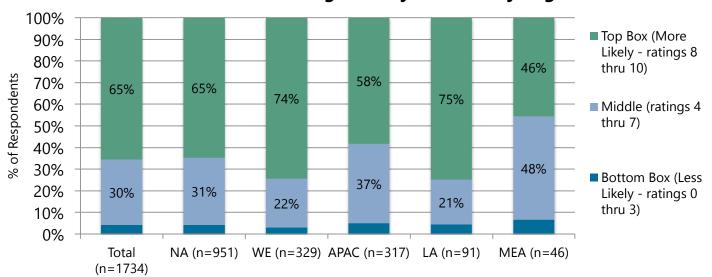




Primary Provider Satisfaction by Region

L13. Overall, how satisfied are you with [Primary Hosting/Cloud Services Provider]? Use a scale from 0 to 10 where 0=not at all satisfied and 10= extremely satisfied

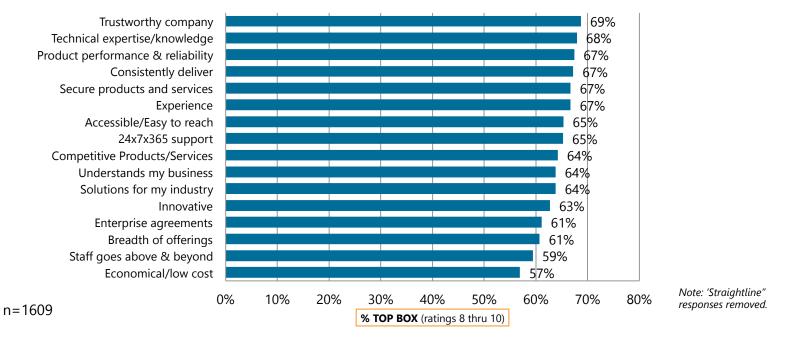




Likelihood of Recommending Primary Provider by Region

L14. How likely is it that you would recommend [Primary Hosting/Cloud Services Provider] to a friend or colleague? Use a scale from 0 to 10 where 0=not at all likely and 10= extremely likely



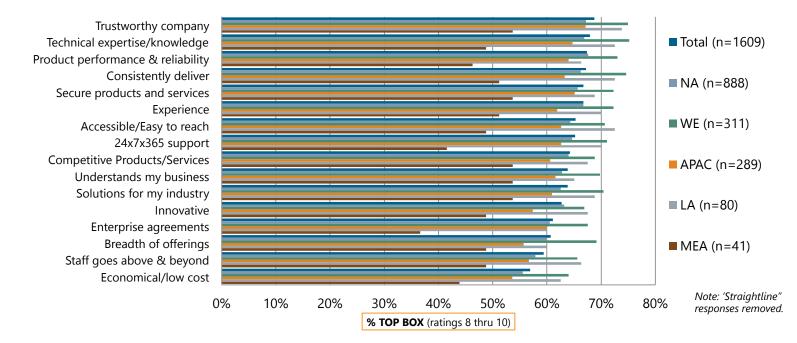


Primary Hosting/Cloud Provider Service Attribute Ratings

L15. Please rate [Primary Hosting/Cloud Services Provider] on the following service attributes where 0=poor and 10=excellent. [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]



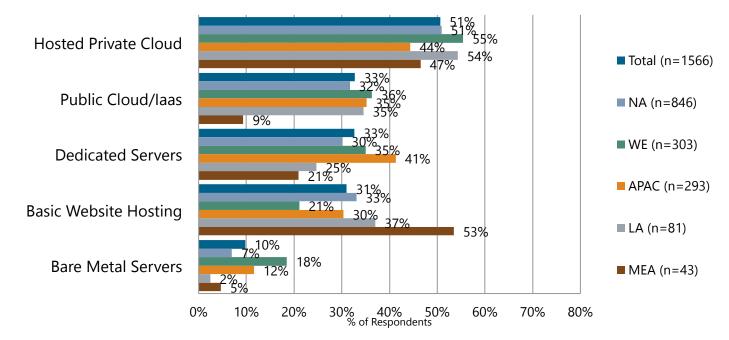
Primary Hosting/Cloud Provider Service Attribute Ratings by Region



Research

L15. Please rate [Primary Hosting/Cloud Services Provider] on the following service attributes where 0=poor and 10=excellent. [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]

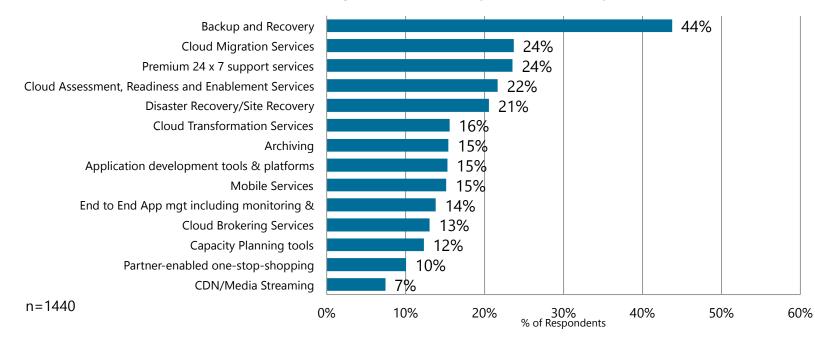
Hosted Infrastructure Services Bought from Primary Provider by Region



L16. Which of the following [Infrastructure services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



Hosted Managed Services Buy from Primary Provider



L16. Which of the following [Managed services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



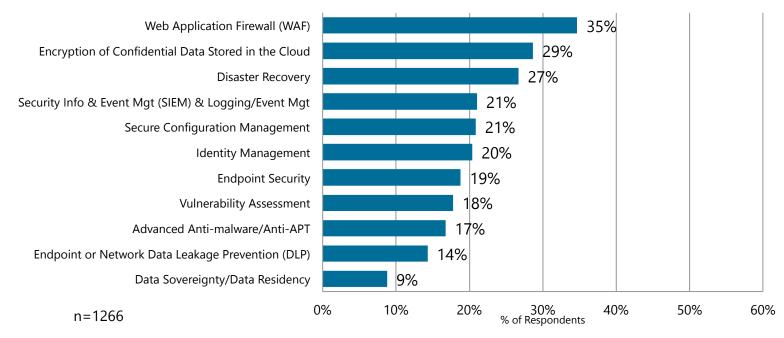
Backup and Recovery **Cloud Migration Services** ■ Total (n=1440) Premium 24 x 7 support services Cloud Assessment, Readiness and Enablement Services ■ NA (n=777) Disaster Recovery/Site Recovery Cloud Transformation Services ■ WE (n=284) Archivina Application development tools & platforms Mobile Services APAC (n=259) End to End App mgt including monitoring & **Cloud Brokering Services** ■ LA (n=81) Capacity Planning tools Partner-enabled one-stop-shopping MEA (n=39) CDN/Media Streaming 30% 40% 50% % of Respondents 0% 10% 20% 60% 70% 80%

Hosted Managed Services Buy from Primary Provider by Region

L16. Which of the following [Managed services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



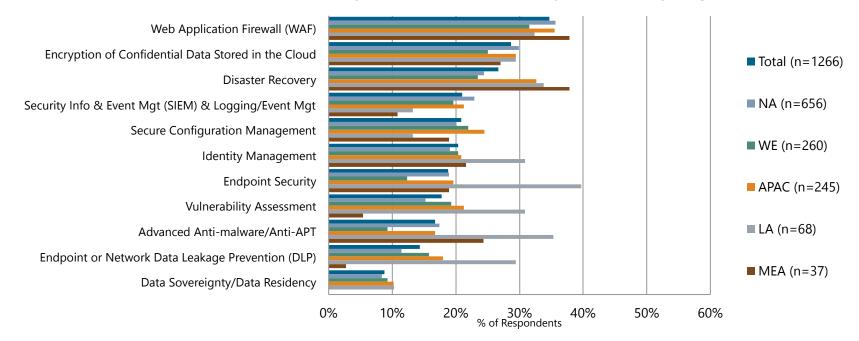
Hosted Security Services from Primary Provider



L16. Which of the following [Security services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



Hosted Security Services from Primary Provider by Region

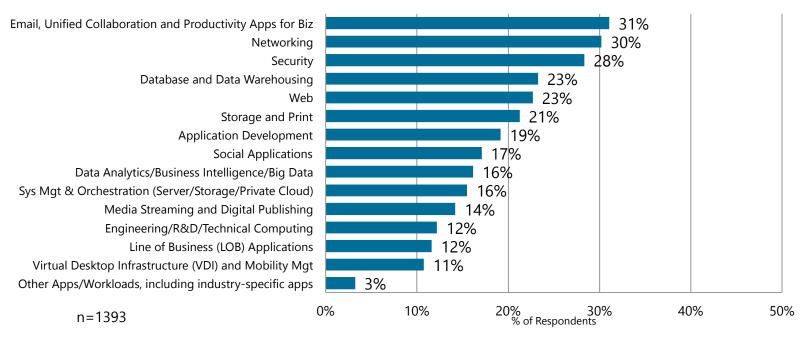


L16. Which of the following [Security services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



Customer Loyalty

Hosted Application Services from Primary Provider

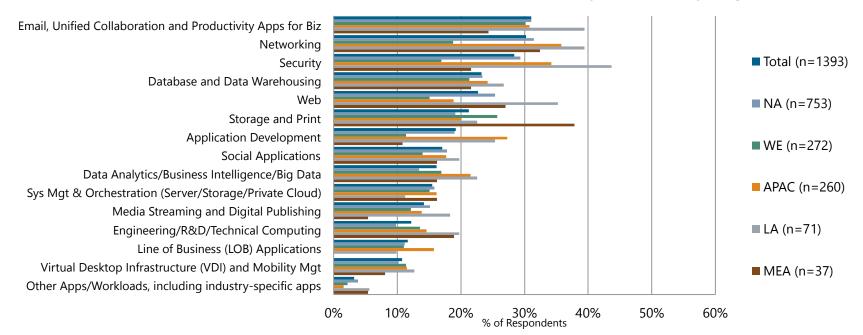


L16. Which of the following [Application services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



Customer Loyalty

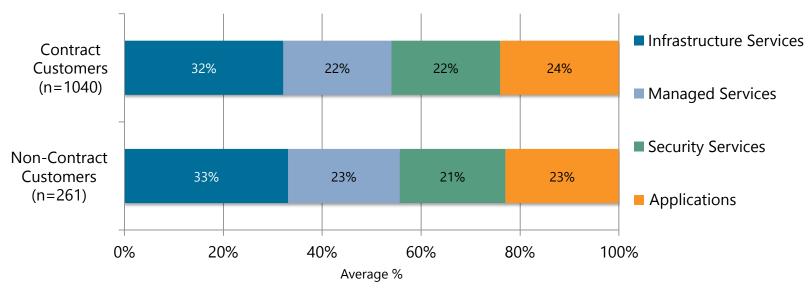
Hosted Application Services from Primary Provider by Region



L16. Which of the following [Application services] does your organization buy from ([Primary Hosting/Cloud Services Provider])?



Hosting/Cloud Provider Spending



Services Spending w/Primary Provider by Customer Type

L17. Using your best estimate, how will your spending with [Primary Hosting/Cloud Services Provider] be allocated across the following areas in 12 months? Sum to 100%



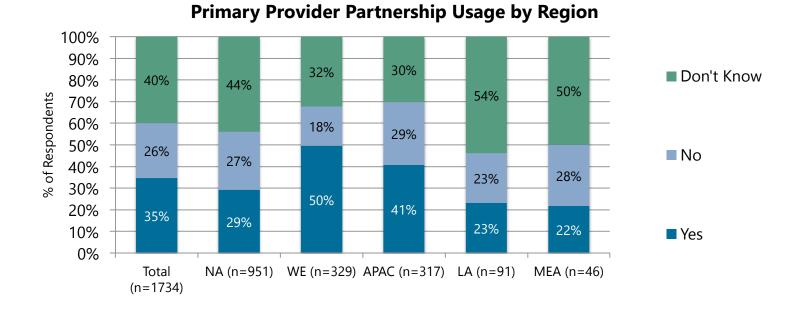
Hosting/Cloud Provider Spending

Total (n=1301) 32% 25% 22% 22% Infrastructure Services 31% 25% 22% 22% NA (n=711) Managed Services 31% 24% 22% 23% WE (n=238) APAC (n=235) 33% 26% 21% 20% Security Services 33% LA (n=79) 23% 24% 21% Applications 35% MEA (n=38) 26% 24% 16% 0% 20% 40% 60% 80% 100% Average %

Services Spending w/Primary Provider by Region

L17. Using your best estimate, how will your spending with [Primary Hosting/Cloud Services Provider] be allocated across the following areas in 12 months? Sum to 100% L18. Using your best estimate, how will your spending with [Primary Hosting/Cloud Services Provider] be allocated across the following areas under the new contract? Sum to 100%

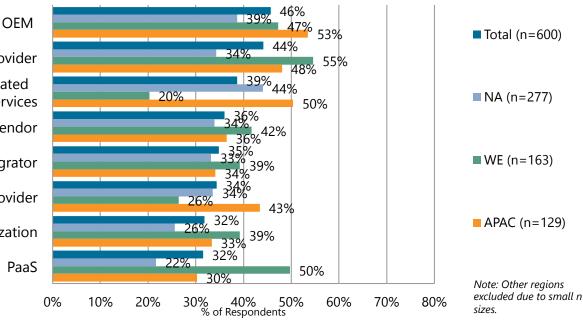




P1. Do you know if [Primary Hosting/Cloud Services Provider] partners with any other providers to deliver the services you procure from them?



Type of Primary Provider Partners by Region



Infrastructure hardware suppler or OEM

SaaS provider

Hosting Service Provider offering dedicated and shared infrastructure or managed services

Traditional Software vendor

Consultant/Systems integrator

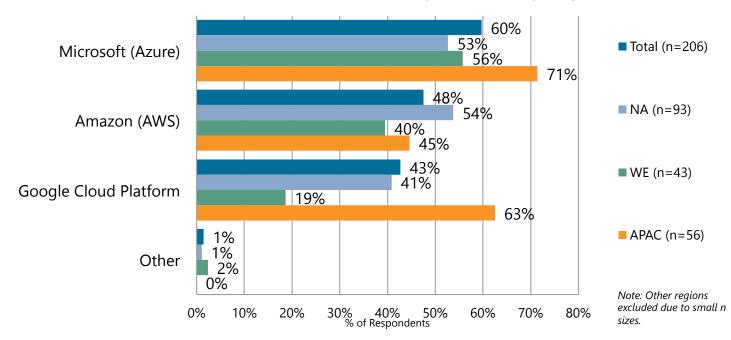
Infrastructure as a Service provider

Security organization

P2. Which type of organization does [Primary Hosting/Cloud Services Provider] partner with? (All that apply)



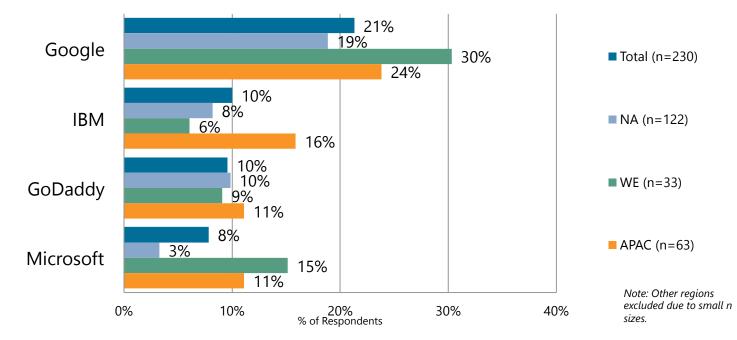
IaaS Vendor Partner of Primary Provider by Region



P2a. Who is the vendor of your Infrastructure as a Service provider partner?



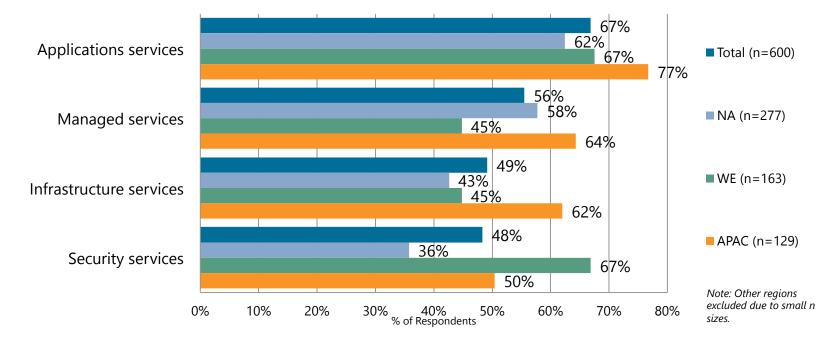
Top Hosting Vendor Partner of Primary Provider by Region





P2b. Who is your hosting vendor partner?

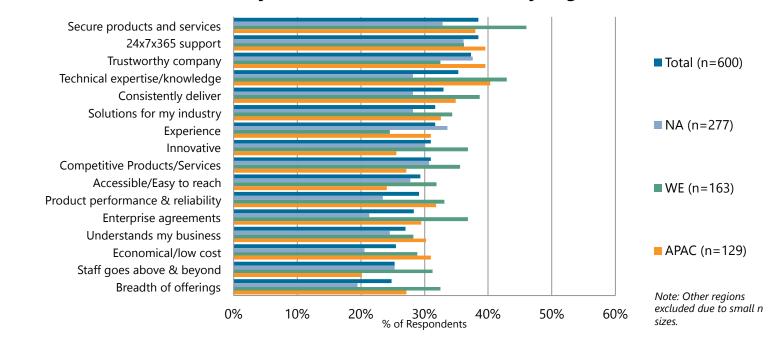
Partner Managed Services Acquired by Region



P3. Which of the following services do you buy from [Primary Hosting/Cloud Services Provider] that they manage via their partnership?



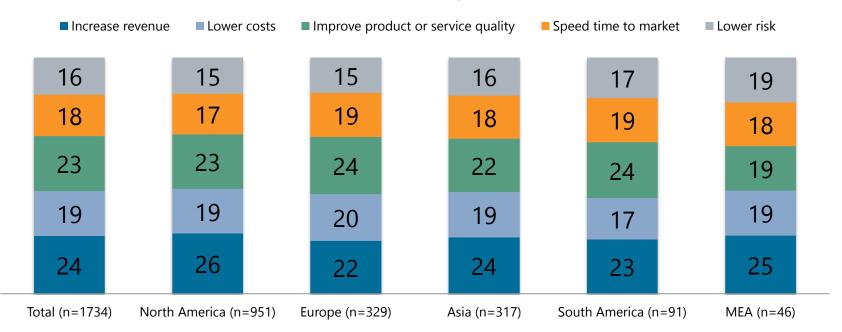
Primary Provider Partner Attributes by Region



P4. In your opinion, do the partners [Primary Hosting/Cloud Services Provider] works with provide any of the following attributes?



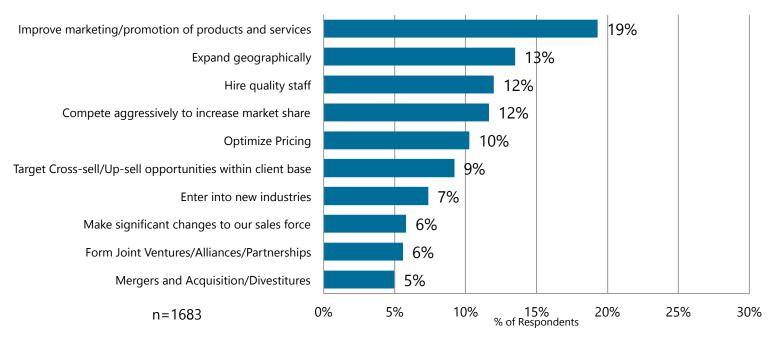
Relative Company Goals



C3. Allocate 100 points among the following five goals as they relate to your company or organization? [Sum to 100]

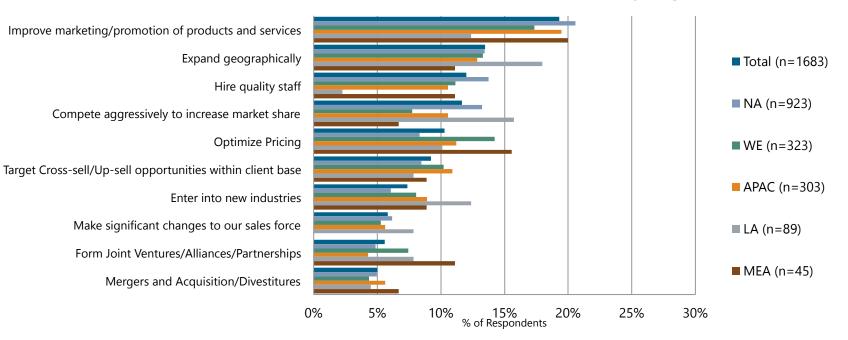


Most Important Attribute to Increase Revenue



C4. Based on what you have heard, which the following will be most important to your organization to increase revenue over the next two years:? (select one)



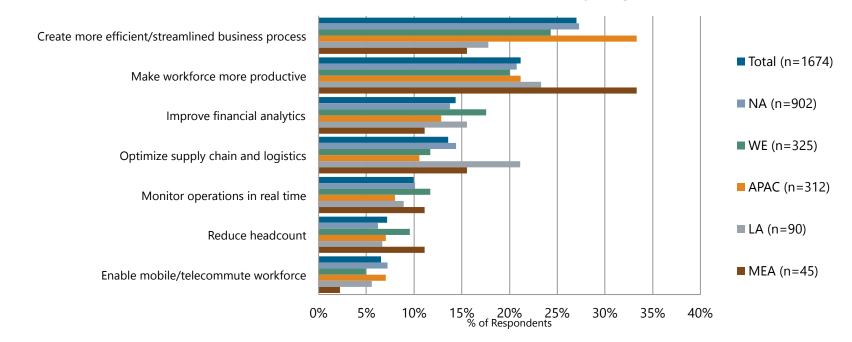


Most Important Attribute to Increase Revenue by Region

C4. Based on what you have heard, which the following will be most important to your organization to increase revenue over the next two years:? (select one)

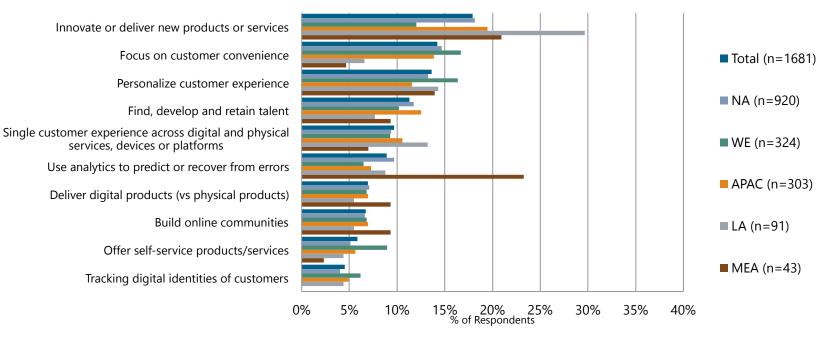


Most Important Attribute to Lower Cost by Region



C5. Based on what you have heard, which the following will be most important to your organization to lower costs over the next two years: (select one)





Most Important Attribute to Improve Product or Service Quality by Region

C6. Based on what you have heard, which the following will be most important to your organization to improve product or service quality over the next two years: (select one)



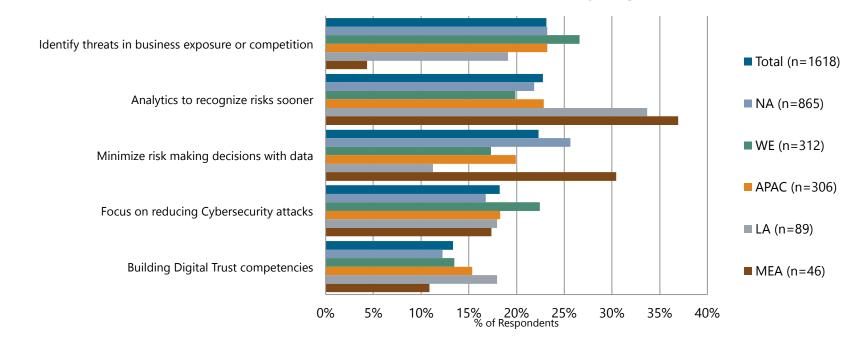
Improve production processes ■ Total (n=1621) Invest in research and development ■ NA (n=878) Automate business processes ■ WE (n=314) Use data to drive strategic decision making APAC (n=295) Encourage knowledge sharing & collaboration among employees Integrate customer feedback through communities or ■ LA (n=90) analytics Cultivate a culture of risk taking (where failure is a valid ■ MEA (n=44) outcome) to accelerate development 15% 20% 25% of Respondents 0% 5% 10% 25% 30% 35% 40%

Most Important Attribute to Speed Time to Market by Region

C7. Based on what you have heard, which the following will be most important to your organization to speed time to market over the next two years: (select one)

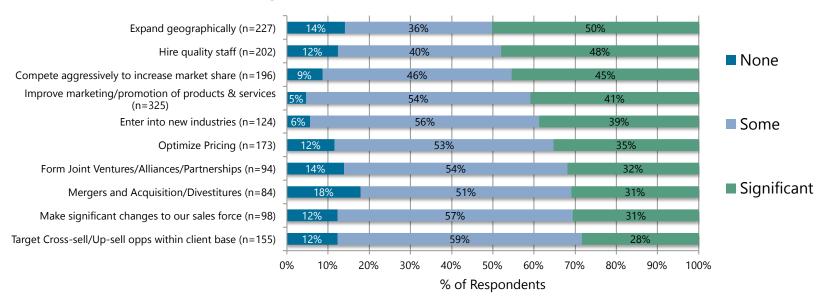


Most Important Attribute to Lower Risk by Region



C8. Based on what you have heard, which the following will be most important to your organization to lower risk over the next two years: (select one)





Digital Investment to Increase Revenue

C9a. What is the level of digital investment that your organization will need to make to deliver on these strategies [Increase Revenue] over the next two years, based either on your own knowledge or impressions?



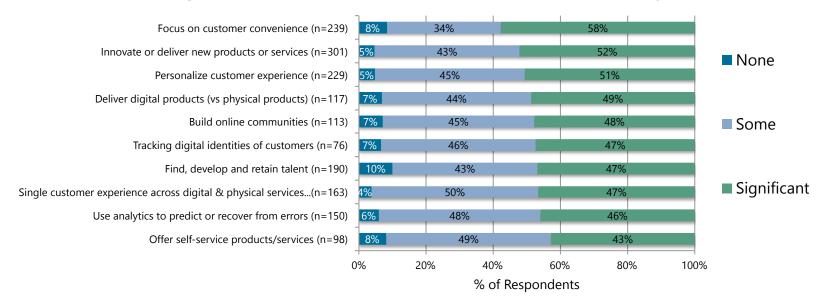
Improve financial analytics (n=240)5% 43% 52% None Monitor operations in real time (n=167)8% 44% 47% Make workforce more productive (n=354) 7% 47% 46% Some 6% Optimize supply chain and logistics (n=227) 45% 49% Create more efficient/streamlined business process (n=452) 3% 53% 43% Significant Enable mobile/telecommute workforce (n=109) 53% 39% 13% Reduce headcount (n=120) 58% 30% 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% % of Respondents

Digital Investment to Lower Costs

C9b. What is the level of digital investment that your organization will need to make to deliver on these strategies [Lower Costs] over the next two years, based either on your own knowledge or impressions?

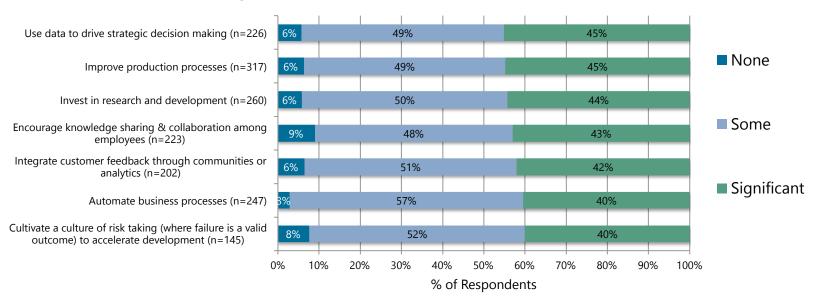


Digital Investment to Improve Product or Service Quality



C9c. What is the level of digital investment that your organization will need to make to deliver on these strategies [Improve Product or Service Quality] over the next two years, based either on your own knowledge or impressions?



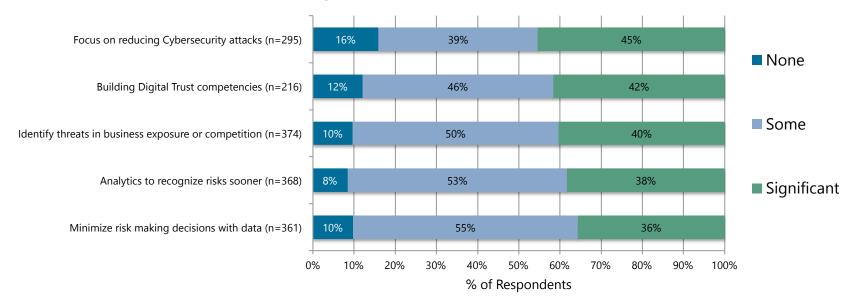


Digital Investment to Speed Time to Market

C9d. What is the level of digital investment that your organization will need to make to deliver on these strategies [Speed Time to Market] over the next two years, based either on your own knowledge or impressions?



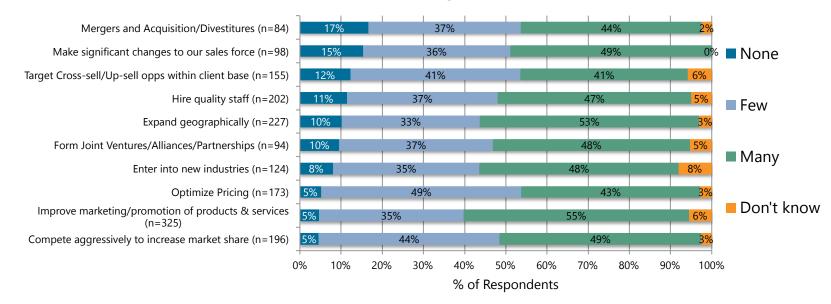
Digital Investment to Lower Risk



C9e. What is the level of digital investment that your organization will need to make to deliver on these strategies [Lower Risk] over the next two years, based either on your own knowledge or impressions?

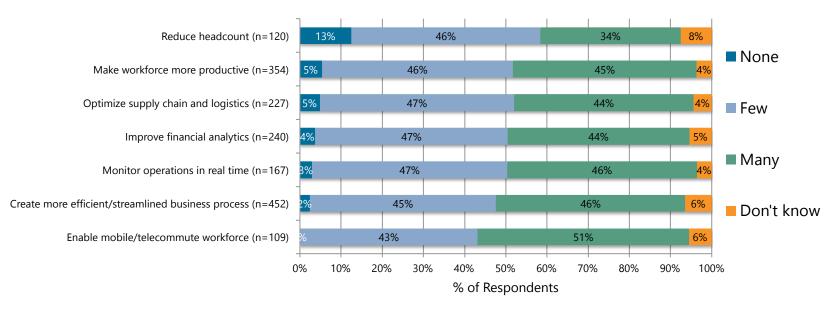


Proportion of Providers Can Support Digital Investment to Increase Revenue



C10a. Estimate the PROPORTION of cloud and hosting providers that could deliver services to support the digital investment required for these strategies [Increase Revenue], based either on your own knowledge or what you heard?

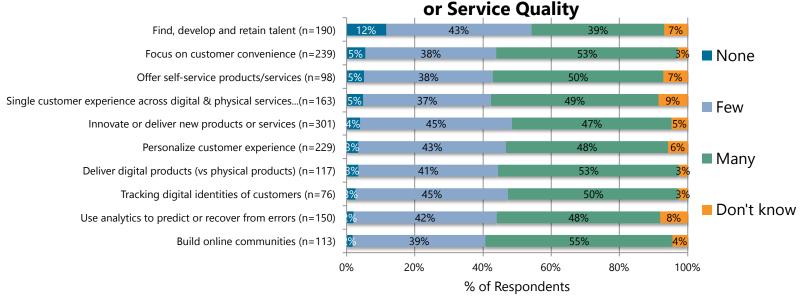




Proportion of Providers Can Support Digital Investment to Lower Costs

C10b. Estimate the PROPORTION of cloud and hosting providers that could deliver services to support the digital investment required for these strategies [Lower Costs], based either on your own knowledge or what you heard?

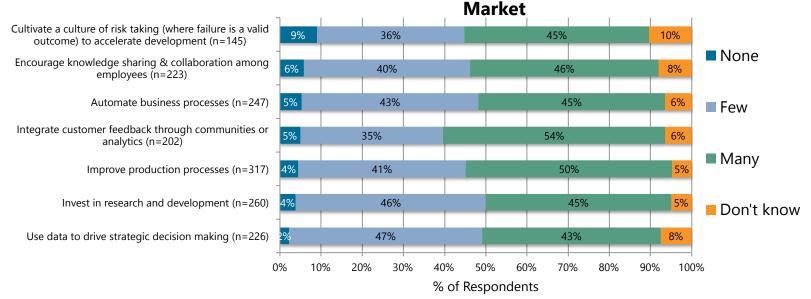




Proportion of Providers Can Support Digital Investment to Improve Product

C10c. Estimate the PROPORTION of cloud and hosting providers that could deliver services to support the digital investment required for these strategies [Improve Product or Service Quality], based either on your own knowledge or what you heard?



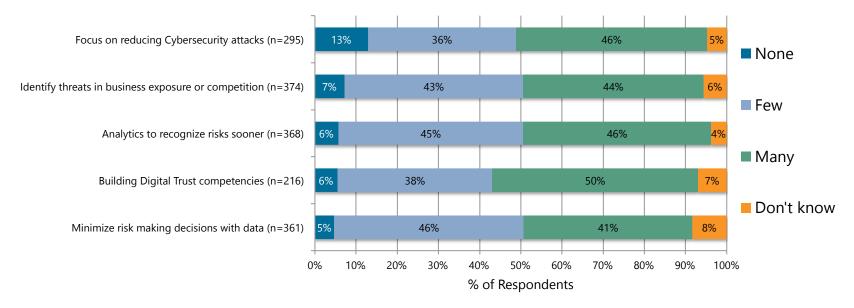


Proportion of Providers Can Support Digital Investment to Speed Time to

C10d. Estimate the PROPORTION of cloud and hosting providers that could deliver services to support the digital investment required for these strategies [Speed Time to Market], based either on your own knowledge or what you heard?

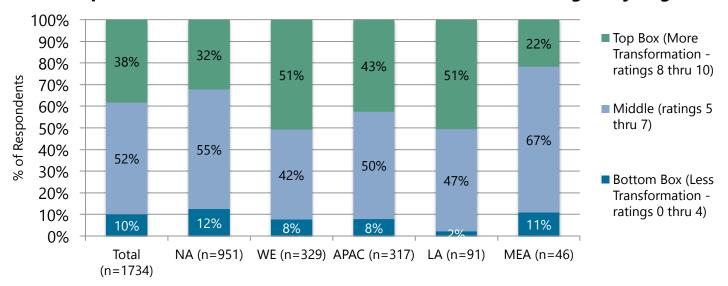


Proportion of Providers Can Support Digital Investment to Lower Risk



C10e. Estimate the PROPORTION of cloud and hosting providers that could deliver services to support the digital investment required for these strategies [Lower Risk], based either on your own knowledge or what you heard?

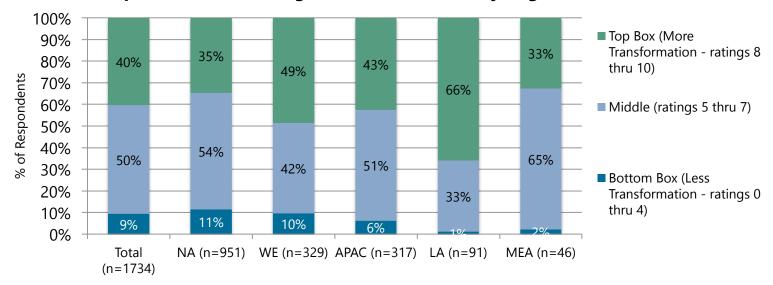




Required Level of Business Transformation For New Strategies by Region

C11. Rate the level of business transformation required in your current operations to support the new organizational strategies you previously identified over the next five years. 0=no transformation, 10=major transformation



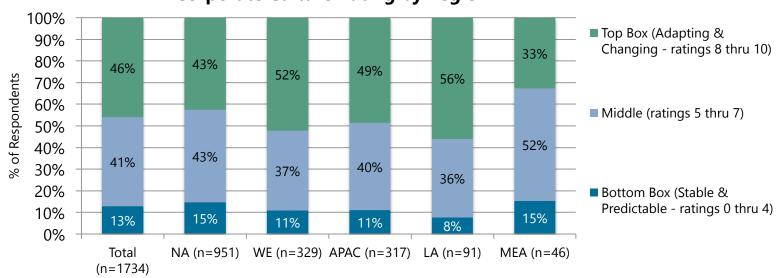


Required Level of IT Digital Transformation by Region

C12. Rate the level of transformation required in your current IT or digital portfolio to support this level of business transformation over the next five years. 0=no transformation, 10=major transformation



Digital Culture

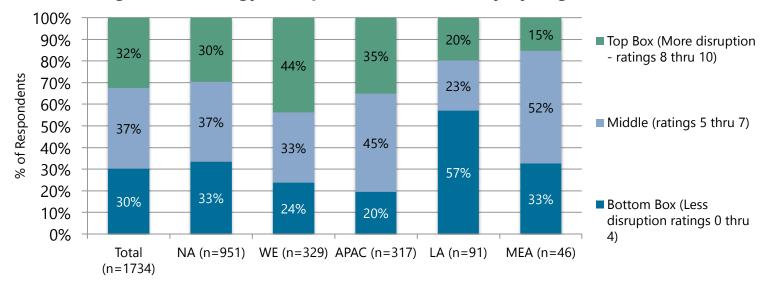


Corporate Culture Rating by Region

C13. Please rate your corporate culture on a scale of 0 to 10 where 0 = stable and predictable and 10 = continuously adapting and changing.



Digital Culture



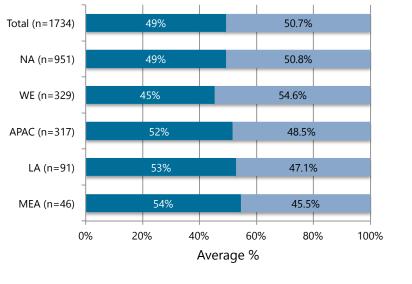
Digital Technology Disruption in Your Industry by Region

C14. Rate the extent to which digital technology is disrupting your industry over the next 5 years on a 0 to 10 scale where 0 = no disruption and 10 = major disruption.





2016 Infrastructure Reliance by Region



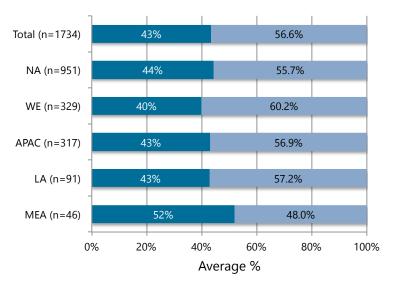
% physical infrastructure - Today

% digital infrastructure - Today

■ % physical infrastructure - In 2 Years ■ % digital infrastructure - In 2 Years

C15. Estimate the reliance of your organization on physical infrastructure vs. digital infrastructure to deliver products and services, today and in two years. Please sum to 100% (e.g. manufacturing companies rely extensively on heavy machinery, software companies rely primarily on digital technology, Uber does not own any cars but rely on their digital platform)

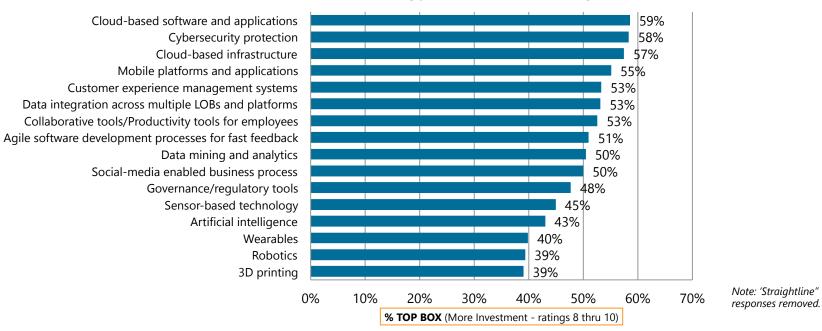
2018 Infrastructure Reliance by Region



451 Research 68

Business Investment

Technology Investment Ratings

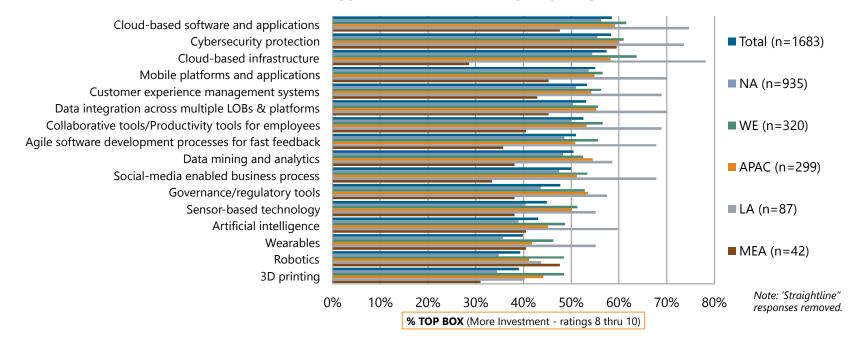


C17. Rate the level of investment in the following technologies over the next 5 years in terms of meeting your business goals: 0=no investment, 10= Significant investment. Randomize [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]



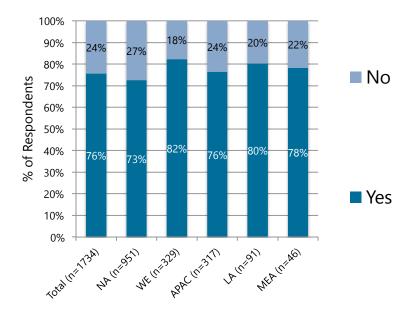
Business Investment

Technology Investment Ratings by Region



C17. Rate the level of investment in the following technologies over the next 5 years in terms of meeting your business goals: 0=no investment, 10= Significant investment. Randomize [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]

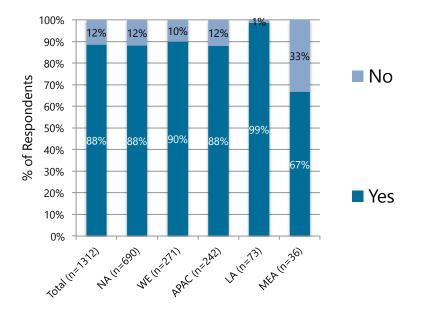




Clear Strategy for Digital Environment by Region

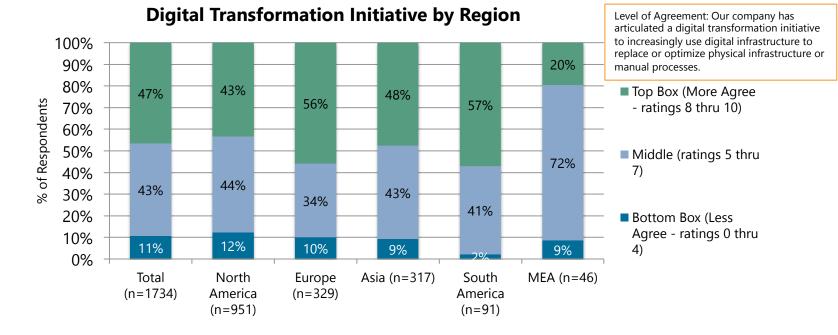
C18. Does your organization have a clear strategy for the change in your digital environment over the next five years?

Digital Environment Key Stakeholder by Region



C19. (Ask if C18=yes) Does your organization have a key stakeholder to drive and support transformation of your digital environment?

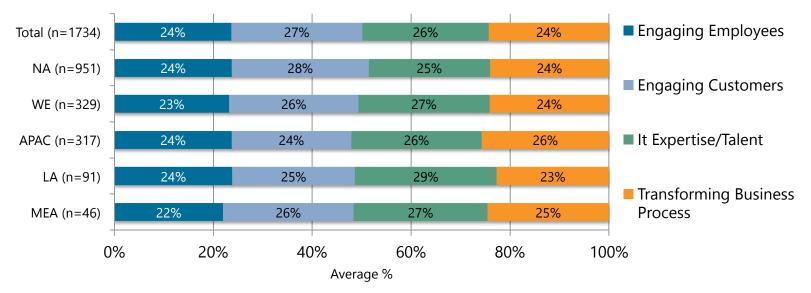
71



C20. Please rate your level of agreement with this statement (where 0=disagree, 10=completely agree): Our company has articulated a digital transformation initiative to increasingly use digital infrastructure to replace or optimize physical infrastructure or manual processes.

451 Research





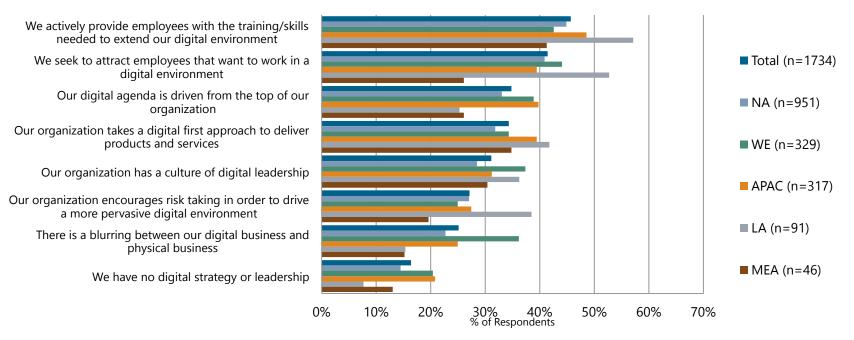
Digital Innovation Driver by Region

C21. In your opinion, which of the following is most important in successfully driving a culture of digital innovation in your organization? Sum to 100%



Digital Culture

Organizational Digital Culture Attributes by Region

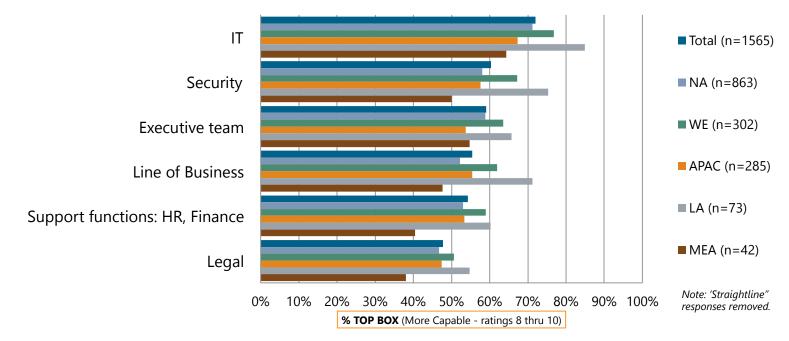


C22. Which of the following is true of your organization? (check all those that apply)



Digital Culture

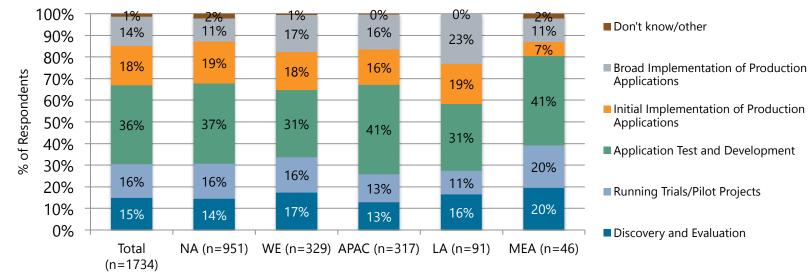
Staff Capability to Understand Digital Technology Transformation by Region



C23. How capable are staff in the following groups at your organization in understanding how digital technologies could transform your business? 0=not at all capable, 10=very capable [TOP BOX %, COMBINES RATINGS OF 8 THRU 10]



Cloud Computing



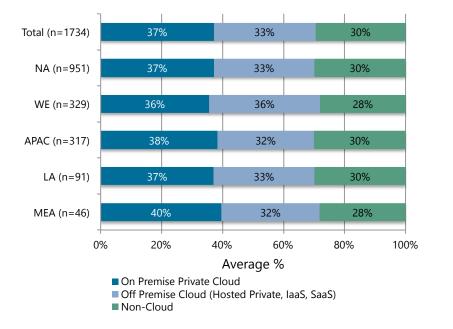
Cloud Adoption by Region

L20. Which of the following best describes your organization's adoption of cloud computing models?

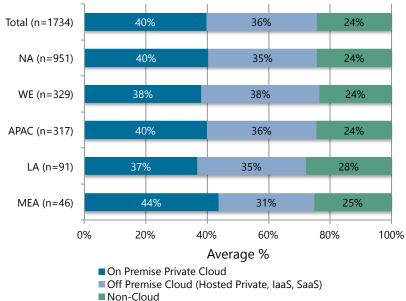


Application Environment

2016 Application Environment by Region



2018 Application Environment by Region



L24. Thinking of all the applications your organization runs, what percentage are currently running in the following environments? [sum=100%]

L25. Looking ahead two years, approximately what percentage of your organization's total applications will be running in a cloud computing environment? [sum=100%]





NEW YORK LONDON BOSTON WASHINGTON, D.C. SAN FRANCISCO