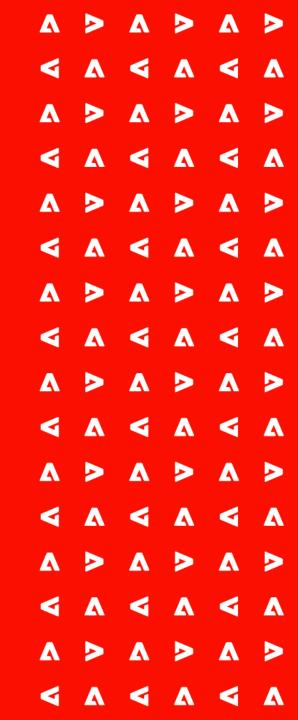


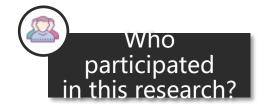
CIO Perspectives Survey 2021

Global Results

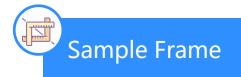
March 2021



Methodology







- 506 CIOs from the US, UK, France, Germany, India, Australia and Singapore completed the survey online;
- To qualify, the participant had to be the CIO of a company with at least 100 employees
- CIOs from a variety of company sizes (23% 100-1000 employees, 36% 1,000-4,999, and 41% over 5000 employees) and industries (technology, retail, financial services, manufacturing, and healthcare are most common)
- Participants were recruited from an actively managed online panel and verified using publicly available information (e.g., LinkedIn profiles)
- Participants were incented using rewards points offered by their online panel
- Research was conducted between February 18th to March 4th,
 2021
- Data was weighted so that the contribution of each global region (US, EMEA, APAC) was equal
- Additional results can be found at https://portal.advanis.net/adbe/

	Count
USA	200
EMEA	150
APAC	156
United States	200
France	50
Germany	50
United Kingdom	50
Australia	55
India	51
Singapore	50

Count

Advanis is a member of the Canadian Research Insights Council (CRIC) and confirms that this research fully complies with all CRIC Standards including the CRIC Public Opinion Research Standards and Disclosure Requirements. This research was sponsored by Adobe and conducted by Advanis. For information about data collection, please contact Lori Reiser (lori_reiser@advanis.net 519.340.0125)

Summary of Key Findings

Global Highlights





CIOs and their Teams

- One year after the start of the COVID-19 pandemic, and nearly half of CIOs still have teams that are working always from home (44%). In a post-pandemic world, CIOs would prefer a more balanced approach, with about half of their team always at the workplace (46%, down from 74% pre-pandemic). CIOs who prefer a hybrid model cite the improved resiliency of this approach, while those who want their teams to return to the office want easier management and better creativity/collaboration.
- 45% of CIOs foresee their organization focusing on productivity measures, over time based measured (driven by India, least popular in the US). Flexible hours are going to be commonly offered. Less likely organizational changes include global hiring, job sharing, or shorter work weeks.
- Challenges during COVID-19 have included effective communication (particularly in the US), security concerns, and technology infrastructure. Software has been a particular challenge in the EU, specifically in Germany.

CIO Priorities & Responsibilities

- CIOs anticipate increased investments in 2021 in security & privacy, Cloud (hybrid & public), AI/ML, and data management/standardization. These areas are of particular concern in the US. Only 17% see an increase in headcount as a priority, contrasted by a decreased investment in headcount for 27% of CIOs.
- At least three-quarters of CIOs feel their role has expanded, their responsibilities increased, and they now have a greater influence on leadership decisions. Pressure on CIOs to digitally transform organizations is felt more in the US than in EMEA markets.

Global Highlights





CIOs & Customer Experience

- Most CIOs in APAC and EMEA markets see managing customer experiences as primary priority of their role. In the US, managing customer experiences in more likely to be a secondary priority for CIOs.
- CIOs regularly partner with two or more c-level employees on customer experience management initiatives.
 - In the US, CIOs are most likely to be partnering with CMO and CEO roles. In EMEA, CMO and CXO are frequent partners. In APAC markets, partnerships is more likely to be with the CTO.
- Responsibility for customer experience management is likely a shared responsibility, with a mix of c-level role being the primary lead across organizations surveyed.
- At least three-quarters of CIOs claim their team has a role in managing customer data profiles, less so for US CIOs (69%). Over half of CIOs interviewed cite a single customer experience strategy across all departments within their organization.
 - However, this strategy is mostly localized to EMEA and APAC markets; around 1 in 3 US CIOs claim to use this strategy compared to nearly 2 in 3 EMEA and APAC CIOs.
- On average, 43% of a CIOs work focuses on digital citizenship, less so for US CIOs (34%). Customer privacy is a high concern when managing experience.
- CIOs interviewed across all regions have a significant role to play in harnessing big data for their organization, more so for US CIOs (84%).
- Most CIOs feel their organization's customer experience priorities have a net positive impact on their team's ability to accomplish
 other initiatives.
 - Under half of US CIOs believe this is the case compared to over three-quarters of EMEA and APAC CIOs.

US Highlights





CIOs and their Teams

- One year after the start of the COVID-19 pandemic, the majority of US based teams are working always from home (61%). In a post-pandemic world, CIOs expect a hybrid approach with a significant use of at-home work, with about 1/3 of their team always at the workplace (down from 76% pre-pandemic).
- Only 36% of CIOs foresee their organization focusing on productivity measures, over time based measured (the US lags other regions in this perspective). Only 1 in 4 US CIOs think that universal hiring (not just close to work locations) is very likely, again lagging other regions. Less likely organizational changes include job sharing (9%), or shorter work weeks (7%).
- Challenges during COVID-19 have included effective communication (the US more than other regions, 35%), security concerns, and technology infrastructure.



CIO Priorities & Responsibilities

- Security and privacy is the most likely area for increased investment in 2021; cited by 71% of US-based CIOs interviewed, and significantly higher when compared to EMEA and APAC regions.
 - Public cloud, Artificial intelligence/machine learning, customer experiences, and data management/standardization are also areas likely to see increased investments for more than 2 in 5 organizations.
 - Only 1 in 5 (22%) foresee an increased investment in headcount, with more than one-quarter (27%) identifying headcount as an area for decreased investment this year.
- At least three-quarters of CIOs feel their role has expanded, their responsibilities increased, and they now have a greater influence on leadership decisions. Pressure on CIOs to digitally transform organizations is felt more in the US than in EMEA markets.

US Highlights





CIOs & Customer Experience

- For more than half (57%) of US-based CIOs, managing customer experiences is a secondary priority for their role. Though responsibility for customer experience management is likely a shared responsibility, 1 in 4 (25%) of CIOs interviewed indicated that their CMO has the most responsibility for this in their organization. The CMO is also the most likely partner for CIOs on Customer Experience Management initiatives.
- Two-thirds (69%) claim their team has a role in managing customer data profiles, comparatively less when compared to EMEA (81%) and APAC (81%) based CIOs, and only 3 in 10 (29%) indicate there a single customer experience strategy that applies to all lines of business or departments within their organization.
- On average, 34% of a CIOs work focuses on digital citizenship, but the majority (84%) say they have a role in harnessing their organization's big data at scale.
- Less than half of CIOs feel their organization's customer experience priorities have a net positive impact on their team's ability to accomplish other initiatives. While only 14% say it has had a negative impact, more than a third (39%) say it has had no impact at all.

Regional Highlights: EMEA





CIOs and their Teams

- One year after the start of the COVID-19 pandemic, 40% of EMEA teams are working always from home.
 - The biggest workplace shift occurred in the UK, where the proportion of teams always working from home has risen from 10% (pre-pandemic) to 57% (currently). The smallest shift occurred in Germany, which had already embraced hybrid / WfH to a higher degree pre-pandemic.
- In a post-pandemic world, EMEA CIOs expect to see half their employees back in the workplace on full-time basis, reducing 'always work from home' arrangements to around 20%. 60% of CIOs in France expect their workforce back in the office on a full-time basis.
- In thinking about future workforce trends: 41% of CIOs foresee their organization focusing on productivity measures, over time-based measures; 37% foresee universal hiring (not just close to work locations), flexible work arrangements (flexible hours, job sharing) for their organization; and 27% foresee shorter work weeks for employees. Job sharing is more likely to be offered in Germany.
- Security and managing software needs have been some of the most common challenges for CIOs teams throughout 2020. Though one-third of CIOs in Germany highlighted managing software issues in 2020, provisioning and managing hardware is mentioned more frequently as an anticipated challenge for 2021.



CIO Priorities & Responsibilities

- CIOs anticipate increased investments in 2021 in cloud (hybrid & public), as well as security & privacy. Edge computing is likely to be an area of investment for 1 in 4 organizations (higher compared to US and APAC based organizations)
- Only 1 in 5 expect headcount to increase, and a similar proportion expect headcount will decrease in 2021.

At least three-quarters of CIOs agree that their role has expanded, their responsibilities increased, and they now have a greater adobe influence on leadership decisions (particularly in Germany).

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Regional Highlights: EMEA





CIOs & Customer Experience

- Most (67%) CIOs see managing customer experiences as primary priority of their role, and regularly partner with two or more clevel employees (most commonly Chief Marketing Officer, Chief Customer Officer, Chief Experience Officer, or Chief Technology Officer) on customer experience management initiatives.
 - In the UK, it's more common for CIOs to partner with the organizations Chief Executive Officer
- The majority (81%) of CIOs claim their team has a role in managing customer data profiles. Two-thirds of CIOs interviewed cite a single customer experience strategy across all departments within their organization.
 - ClOs in Germany are more likely to have a role in managing customer data profiles (94% claim this)
 - In the UK, only 50% of CIOs say there is a single customer experience strategy that applies to all lines of business or departments
- On average, 45% of a CIOs work focuses on digital citizenship, and 80% of CIOs interviewed have a significant role to play in harnessing big data for their organization.
- Most (78%) CIOs feel their organization's customer experience priorities have a net positive impact on their team's ability to accomplish other initiatives.
- Customer privacy has been a particular area of focus while managing customer experience initiatives.

Regional Highlights: APAC









CIOs and their Teams

- One year after the start of the COVID-19 pandemic, 30% of teams are working always from home.
 - The biggest workplace shift occurred in the Singapore, where the proportion of teams always working from home has risen from 5% (pre-pandemic) to 30% (currently).
- In a post-pandemic world, CIOs expect to see more than half their employees back in the workplace on full-time basis, reducing 'always work from home' arrangements to around 1 in 4, and allowing 'sometimes at home' arrangements for another 1 in 4.
- In thinking about future workforce trends, there's a significant divide across the region in terms of where CIOs foresee their organizations moving:
 - At least three-quarters of CIOs in India foresee a shift the management approach (with more focus on productivity measures vs. time measures) shared job options, and global hiring (not just close to work locations) as very likely for their organization in the near future.
 - CIOs in Singapore think future workforce trends are much less likely for their organizations in the near future. The most likely shifts they anticipate are to management approach (more focus on productivity measures vs. time measures), and allowing employees to work more flexible hours, but only just over 1 in 3 think this is very likely.
 - In Australia, the most likely shifts would be to management approach (more focus on productivity measures vs. time measures), shared job options, and allowing employees to work more flexible hours, with about half of CIOs anticipating these changes.
- Technology tools / infrastructure, provisioning and managing hardware, and security have been some of the most common challenges for CIOs teams throughout 2020. Looking forward, 1 in 3 CIOs in India anticipate continued issues with Technology tools / infrastructure through 2021, while security will be an ongoing challenge for 1 in 3 CIOs in Singapore.

Regional Highlights: APAC









CIO Priorities & Responsibilities

- At least 2 in 5 CIOs anticipate their organization will increase investment in security and privacy, Cloud (hybrid & public), Data management/standardization, Artificial intelligence/machine learning, or infrastructure in 2021.
 - Up to 50% of CIOs in India foresee increased investment in hybrid and public cloud investment, with investment in education and employee experience also a priority for 3 in 10.
 - Security and privacy is much more likely to be invested in by organizations in Singapore (61%) than Australia (20%)
- Only 1 in 10 CIOs anticipate investment in headcount; an area which 1 in 4 anticipate there would be decreased investment this
 year.
- At least three-quarters of CIOs agree that their role has expanded, their responsibilities increased, and they now have a greater influence on leadership decisions. Pressure on CIOs to digitally transform organizations is felt more by CIOs in Australia.

Regional Highlights: APAC









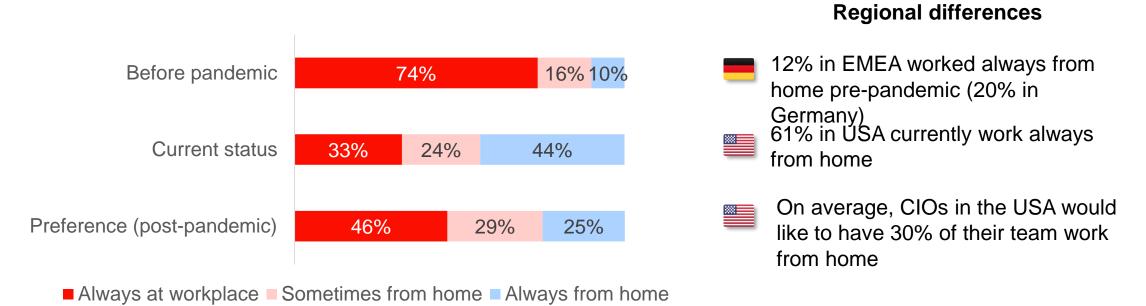
CIOs & Customer Experience

- Most than three-quarters of CIOs in India and Australia see managing customer experiences as primary priority of their role. In Singapore, it is likely to be a secondary priority for more than half of CIOs.
- In India and Australia, CIOs most regularly partner with their organization's CTO on Customer Experience Management initiatives. In Singapore it is most likely to be a CIO/CMO partnership. Through Customer Experience Management initiatives appear to be a shared responsibility, less than 1 in 5 CIOs in Australia and Singapore identify themselves as the person with most responsibility in the organization.
- The majority (81%) of CIOs claim their team has a role in managing customer data profiles. Three-quarters of CIOs interviewed in Australia and India cite a single customer experience strategy across all departments within their organization but is a much less common approach in Singapore (44%).
- On average, 50% of a CIOs work focuses on digital citizenship, and at least half of CIOs interviewed have a significant role to play in harnessing big data for their organization (more than 80% in Australia and Singapore).
- Most (76%) CIOs feel their organization's customer experience priorities have a net positive impact on their team's ability to accomplish other initiatives, though in Australia it is more likely to have a had a limited impact from the CIOs perspective.
- Enabling customer insights has been a particular area of focus while managing customer experience initiatives for CIOs in Singapore.
 - Application Deployment/Development was an area of focus while managing customer experience initiatives for roughly 1 in 4 CIOs in Australia and India.

Key Findings: CIOs & Their Teams

Work Location

- The pandemic has moved nearly half (44%) of CIOs teams to always work from home
 - The biggest shift occurred in the US where, on average, CIOs had less than 10% team members working always from home pre-pandemic; currently more than 60% of their staff are working always from home.
- In a post-pandemic world, CIOs would prefer a more balanced workforce distribution, bringing back up to half
 of those currently in work always from home arrangements.



CIO Perspectives Results (February/March 2021)

A7: If given the choice by your organization after the pandemic, what percentage of your workforce do you think would like to work...? Base: All respondents (506)



A1: Before the pandemic started, what percentage of your team was working...? Base: All respondents (506)

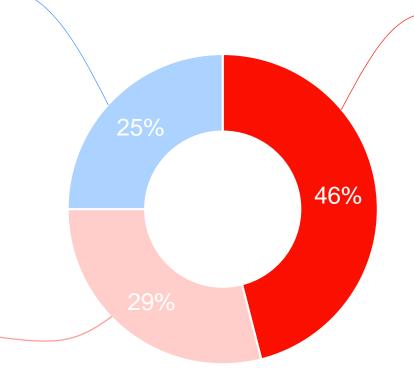
A2: What percentage of your team is currently working...? Base: All respondents (506)

Reasons for preferred working arrangements (selected verbatim)

Always from home

creates good team dynamics in a remote-first company better work life balance with savings on commute

increase workplace flexibility while reducing the facilities costs



Sometimes from home

hybrid model ensure you have the capacity to operate outside of your offices. This ultimately improves resiliency cost savings for space allocation, reduced office buildings, energy savings

CIO Perspectives Results (February/March 2021)
A8: Why would you prefer this work arrangement for your workforce? Base: All respondents (506)

Always from office

it's easier to manage people

the importance of face-to-face contact for teaching, research, and student support

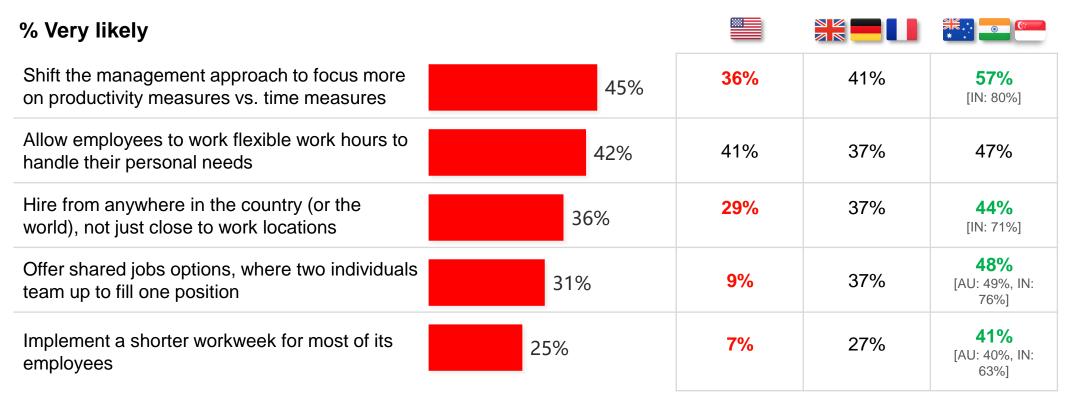
interactive efficiency of working from office inspires creativity and gets things done

I can get a better idea of how people are doing

we had a few difficult issues with our infrastructure for remote working and it caused several delays in solving customer issues

Impact of COVID-19 on Employees

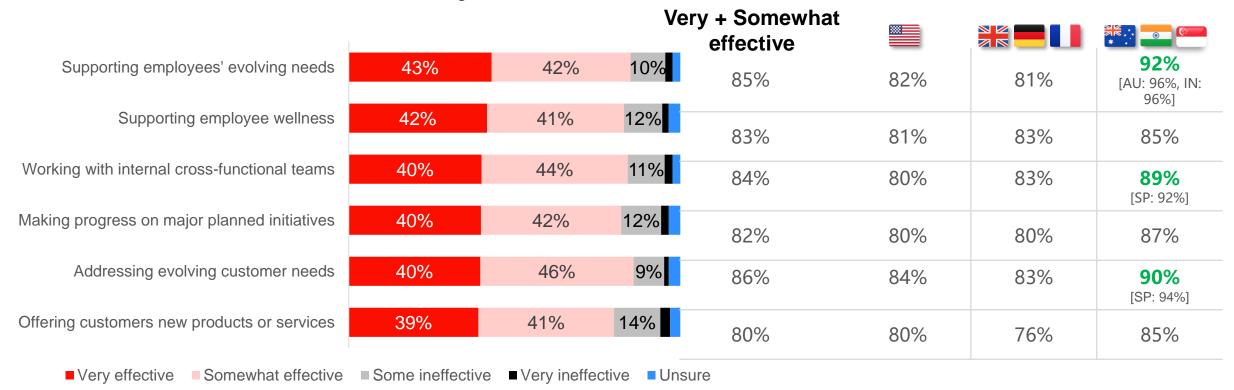
- At least 2 in 5 CIOs foresee their organization focusing more on productivity than time measures, and allowing employees to have flexible work hours to handle personal needs
 - A move to shared job options and shorter work weeks are unlikely in the eyes of US-based CIOs, but could have higher consideration in APAC (India in particular)

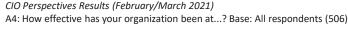




Organizational Supports during COVID-19

- Most CIOs across global regions feel their organization has been a least somewhat effective at managing staff, project, and customers needs.
 - APAC CIOs in particular are pleased with the effectiveness of their organization's ability to work with internal crossfunctional teams and address evolving customers needs



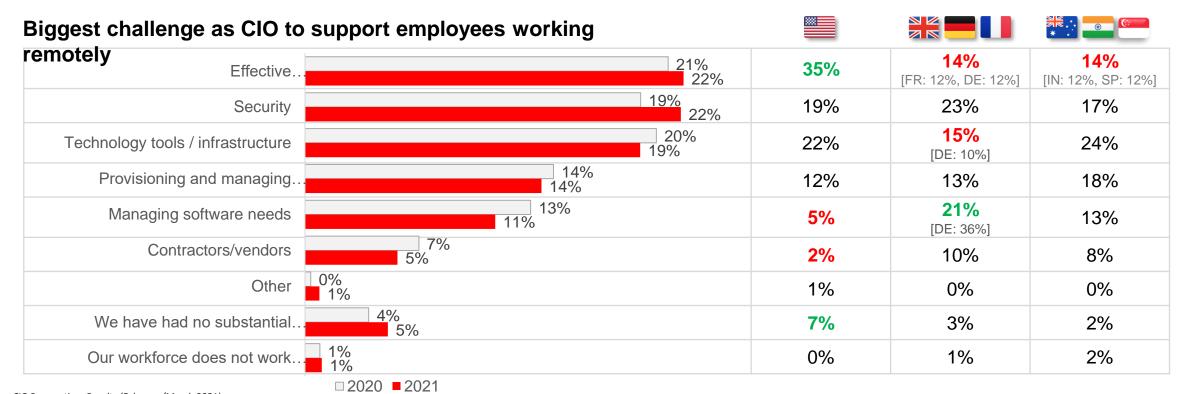




Organizational Challenges during COVID-19

- In the US, effective communication/collaboration is seen as one of the biggest challenges to employees working remotely
 - In EMEA countries there's a greater concern for managing software needs (Germany in particular), while technology tools and infrastructure may pose more of a challenge in APAC countries

Regional differences for 2020





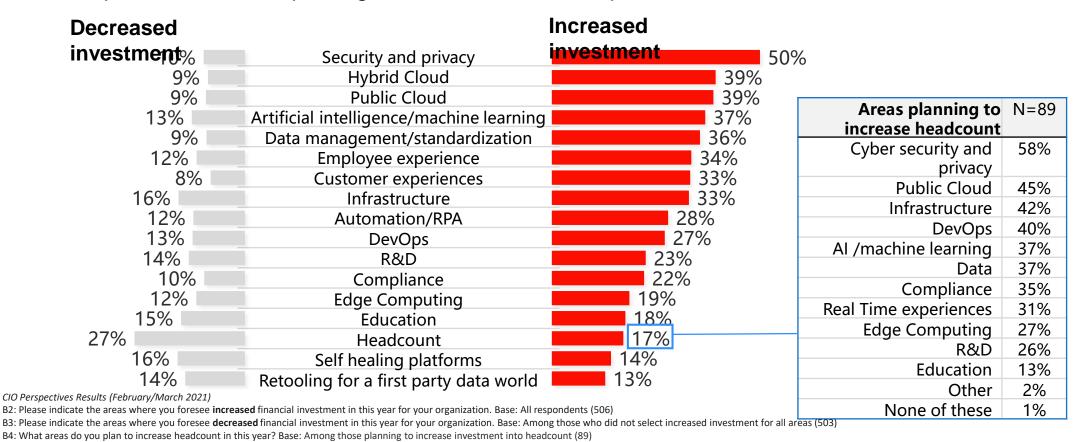
A5a: What was the biggest challenge that you faced in 2020 as CIO to support employees working remotely **in 2020**? Base: All respondents (506) A5b: What will be the biggest challenge that you face in 2021 as CIO to support employees **in 2021 and beyond**? Base: All respondents (506)



Key Findings: CIO Priorities

Organizational Priorities

- Half of CIOs interviewed foresee increased financial investment in their organization's security and privacy this year, including cyber security and privacy staffing
 - Overall staff numbers are among the most likely areas for decreased investment this year, with more than
 a quarter of CIOs expecting their headcount to drop.



Adobe

Organizational Priorities

- · 4 in 10 US CIOs foresee their organizations investing more in Customers Experiences this year
- Security and privacy is likely to be a key area of financial investment across markets

Increased investment	Total			%
Security and privacy	50%	71%	34%	46%
Hybrid Cloud	39%	-	36%	43%
Public Cloud	39%	50%	33%	35%
Artificial intelligence/machine learning	37%	45%	27 %	39%
Data management/standardization	36%	40%	25%	43%
Employee experience	34%	36%	34%	31%
Customer experiences	33%	40%	29%	31%
Infrastructure	33%	34%	26 %	39%
Automation/RPA	28%	28%	25%	31%
DevOps	27%	28%	28%	26%
R&D	23%	18%	27%	23%
Compliance	22%	30%	19%	18%
Edge Computing	19%	14%	25%	17%
Education	18%	19%	18%	17%
Headcount	17%	22%	20%	10%
Self healing platforms	14%	10%	15%	19%
Retooling for a first party data world	13%	6 %	17%	16%

B2: Please indicate the areas where you foresee increased financial investment in this year for your organization. Base: All respondents (506)



Organizational Priorities

• 1 in 3 US CIOs foresee a decreased investment in staff headcount this year

Decreased investment	Total			* (6:
Security and privacy	10%	2 %	16%	12%
Hybrid Cloud	9%	-	9%	8%
Public Cloud	9%	5%	15%	8%
Artificial intelligence/machine learning	13%	8%	13%	18%
Data management/standardization	9%	4%	15%	9%
Employee experience	12%	8%	12%	15%
Customer experiences	8%	3%	8%	14%
Infrastructure	16%	20%	15%	13%
Automation/RPA	12%	12%	12%	14%
DevOps	13%	8%	16%	14%
R&D	14%	9%	15%	17%
Compliance	10%	5%	11%	13%
Edge Computing	12%	12%	9%	15%
Education	15%	13%	18%	16%
Headcount	27%	33%	21%	25%
Self healing platforms	16%	8%	17%	24%
Retooling for a first party data world	14%	14%	15%	15%

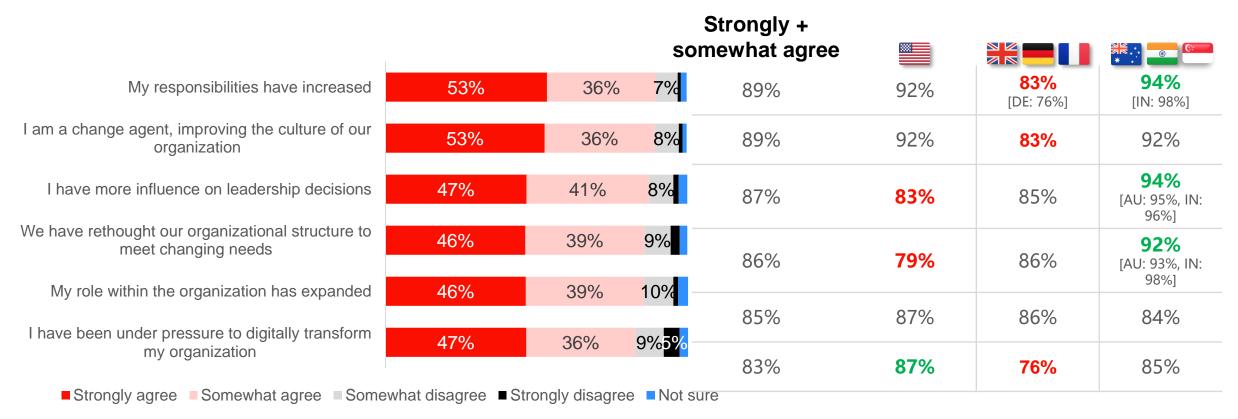
CIO Perspectives Results (February/March 2021)

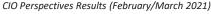
B3: Please indicate the areas where you foresee decreased financial investment in this year for your organization. Base: Among those who did not select increased investment in all areas (503)



Organizational Changes During COVID-19

- At least three-quarters of CIOs feel their role has expanded, their responsibilities increased, and they now have a greater influence on leadership decisions
- Pressure on CIOs to digitally transform organizations is felt more in the US than in EMEA markets.





B1: To what extent do you agree or disagree with the following statements? Base: All respondents (506)



Key Findings: CIO & Customers

Customer Experience Priority

 Most CIOs in APAC and EMEA markets see managing customer experiences as primary priority of their role

In the US, managing customer experiences in more likely to be a secondary priority for CIOs



Methods for managing customer experiences

(among those who consider it a **primary priority**)

Build out seamless experiences for customers with a single view of data

I try to develop the personalization of the entire customer experience in real time.

We're making significant investments in IVR, Web, and CRM technologies with a focus on end user experiences using design thinking techniques.

Integrate data information to explore customers' shifting needs and preferences.

Work with customer facing departments closely to match their needs with solutions

CIO Perspectives Results (February/March 2021)

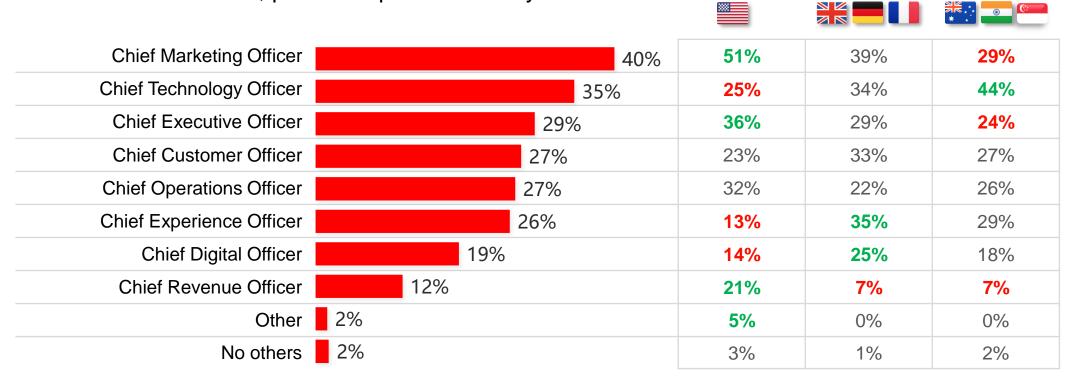
C2: In your current role as a CIO, how high of a priority is managing your company's customer experiences? Base: All respondents (506) C2b: How do you, as CIO, manage customer experiences? Base: All respondents (506)

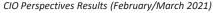


Partnerships

- CIOs regularly partner with two or more c-level employees on customer experience management initiatives
 - In the US, CIOs are most likely to be partnering with CMO and CEO roles

In APAC markets, partnership is more likely to be with the CTO



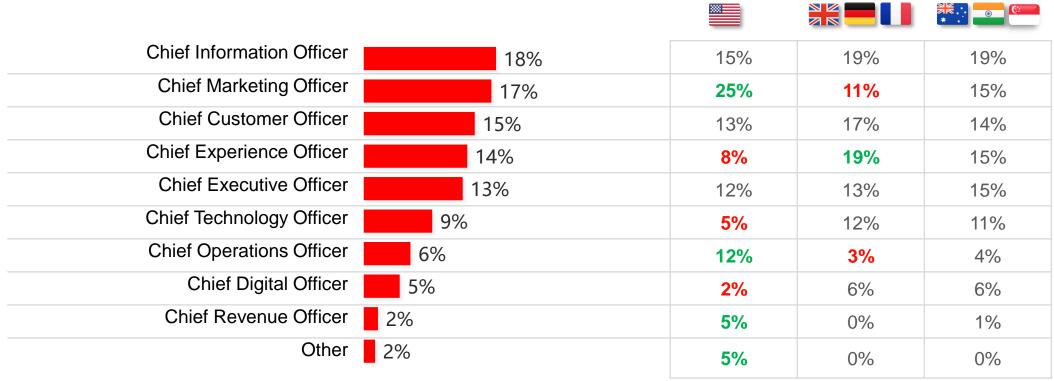


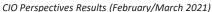
C5: Which other executive-level employees do you regularly partner with on Customer Experience Management initiatives? Base: Among those who consider CEM their primary or secondary priority (490)



Customer Experience Management

- Responsibility for customer experience management is likely a shared responsibility, with a mix of c-level role being the primary lead across organizations surveyed.
- In EMEA markets, the role of Chief Experience Officer is more likely to take lead on customer experience management, while Chief Marketing Office is a more common lead in the US





C1: Who in your organization has the most responsibility for Customer Experience Management? Base: All respondents (506)



Customer Experience

Team has role in customer data profiles



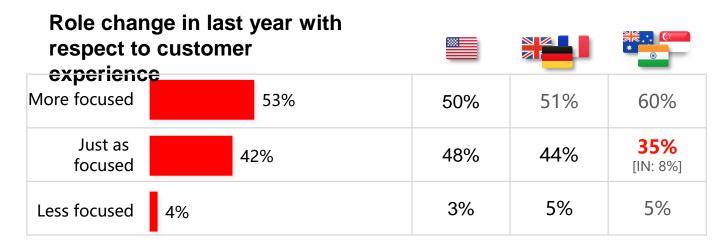
Single customer experience strategy across business lines





- At least three-quarters of CIOs claim their team has a role in managing customer data profiles, less so for US CIOs (69%).
- Over half of CIOs interviewed cite a single customer experience strategy across all departments within their organization.
 - However, this strategy is mostly localized to EMEA and APAC markets; around 1 in 3 US CIOs claim to use this strategy compared to nearly 2 in 3 EMEA and APAC CIOs.

Customer Experience





43%



Have a role in harnessing big data at scale



- Nearly all CIOs remain as focused or are more focused on customer experiences despite potential role changes.
- On average, 43% of a CIOs work focuses on digital citizenship, less so for US CIOs (34%).
- CIOs interviewed across all regions have a significant role to play in harnessing big data for their organization, more so for US CIOs (84%).

CIO Perspectives Results (February/March 2021)

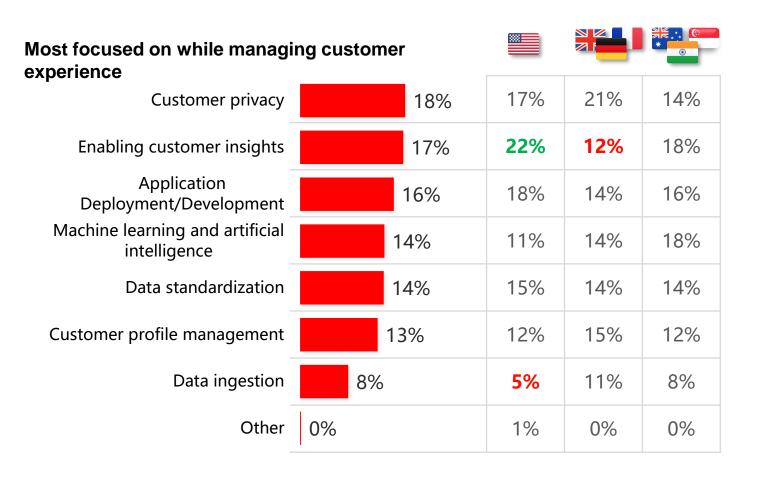
C3: Over the past year, has your role as changed to be more or less focused on managing customer experiences? Base: All respondents (506)

C11: What proportion of your work focuses on digital citizenship? Base: All respondents (506)

C12a: Do you have a role in harnessing your organization's big data at scale? Base: All respondents (506)

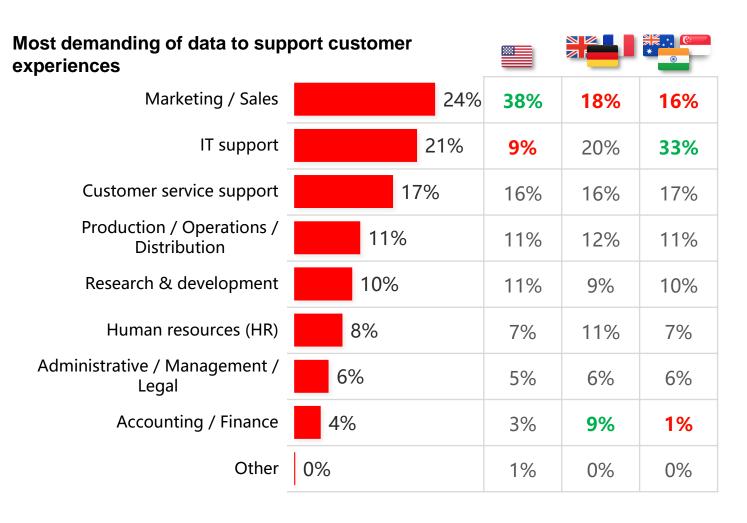
C12b: What proportion of your work focuses on harnessing your organization's big data at scale? Base: Among those with a role in harnessing big data (400)

Customer Experience Priorities



- CIOs mostly focus on customer privacy and enabling insights while managing customer experiences.
 - US CIOs place greater focus on enabling insights and less focus on data ingestion.
 - EMEA CIOs may emphasize customer privacy and APAC CIOs target machine learning / AI.

Customer Experience Priorities



- Marketing / sales and IT support departments are considered most demanding of data to drive customer experiences.
 - Around 2 in 5 US CIOs consider marketing / sales the most demanding, compared to 1 in 5 EMEA and APAC CIOs.
 - One-third of APAC CIOs consider IT support the most demanding, driven mostly by CIOs in India (56%).

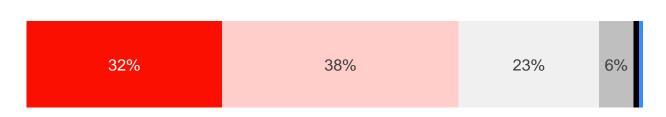
CIO Perspectives Results (February/March 2021)

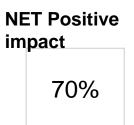
C7: Within your organization, which line of business or department is most demanding of data to support customer experiences? Base: Among those who consider CEM their primary or secondary priority (490)

Customer Experience Priorities

- Most CIOs feel their organization's customer experience priorities have a net positive impact on their team's ability to accomplish other initiatives.
 - Under half of US CIOs believe this is the case compared to over three-quarters of EMEA and APAC CIOs.

Impact Customer Experience Management priorities had on team's ability to accomplish other initiatives







■5 - Positive impact ■4 ■3 - No impact ■2 ■1 - Negative impact ■Don't know

