Embracing a Digital Future

Vanson Bourne research findings & benchmark methodology

DELLTechnologies

Contents

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Research methodology

Vanson Bourne

BENCHMARK

Respondents scored according to responses to four key questions.
Businesses then split into five maturity groups.

4,000 QUANTITATIVE
Reponses from Director, C-Suite, mid-size to enterprise w/key functions

- Finance
- Sales
- IT/Tech
- Customer services
- Marketing
- Production & Manufacturing
- Owner/ Executive
- R&D
- Digital
- Customer Experience
- Logistics and Supply Chain

12 INDUSTRIES

- Automotive
- Financial Services
- Public Healthcare
- Private Healthcare
- Technology and Telecoms
- Insurance
- Life Sciences
- Manufacturing
- Media and Entertainment
- Oil and Gas
- Retail and Consumer

16 COUNTRIES

AMERICAS
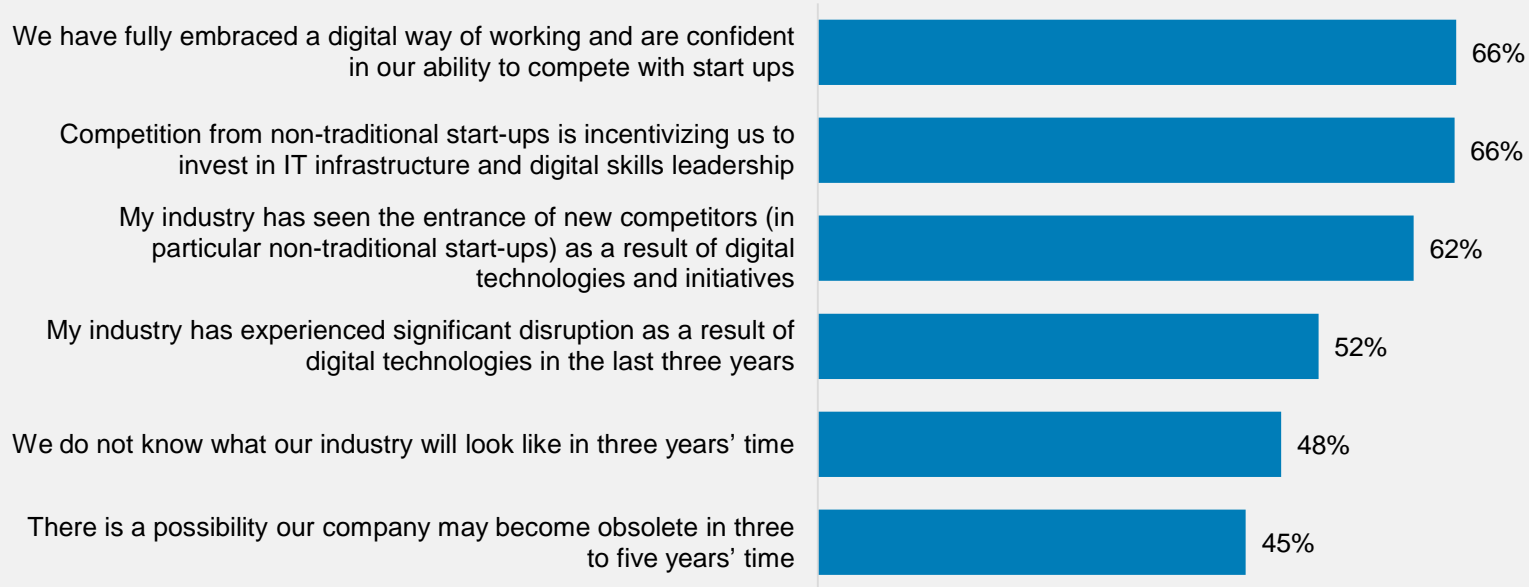USA, Canada, Brazil, Mexico

APJ
Australia, China, India, Japan

EMEA
France, Germany, Italy, Switzerland, The Netherlands, UAE/Saudi Arabia, United Kingdom

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Section 2

Pressures to transform & disruptive trends

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The impact of disruption

We have fully embraced a digital way of working and are confident in our ability to compete with start ups — **66%**

Competition from non-traditional start-ups is incentivizing us to invest in IT infrastructure and digital skills leadership — **66%**

My industry has seen the entrance of new competitors (in particular non-traditional start-ups) as a result of digital technologies and initiatives — **62%**

My industry has experienced significant disruption as a result of digital technologies in the last three years — **52%**

We do not know what our industry will look like in three years' time — **48%**

There is a possibility our company may become obsolete in three to five years' time — **45%**
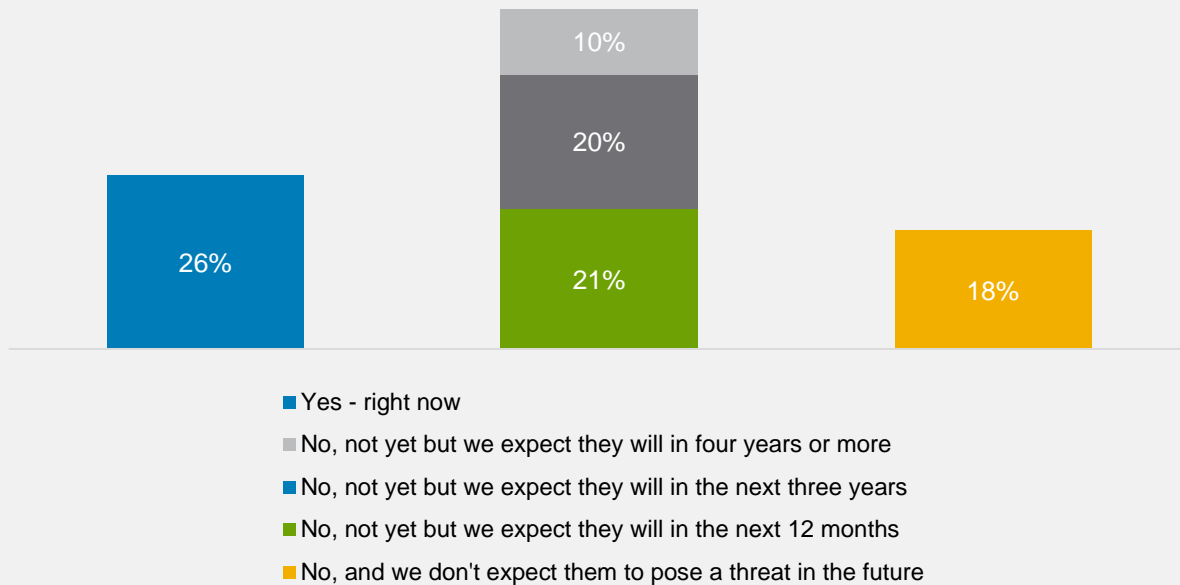
Analysis of respondents who <u>agree</u> with the above statements when it comes to their own organization and industry. Base: all respondents (4000)

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Reasons to be cheerful or naïve?

Of respondents who say that digital start-ups do not pose a threat…

…around half (47%) claim it's because they don't have an established reputation; 44% credit a lack of extensive industry knowledge

They do not have an established reputation — 47%

They do not have extensive industry knowledge — 44%

They do not have our extensive customer database — 39%

They do not have access to sophisticated information infrastructure — 35%

They do not have an extensive network of open and collaborative partnerships to lean on — 31%

They do not have the financial resources to invest in the latest digital technologies or talent — 24%

We can acquire them — 12%

"Why don't non-traditional start-ups built in the digital age currently pose a threat to your organization?"
Base: only respondents who say that non-traditional start-ups do not yet pose a threat/do not pose a threat/don't know (2947)

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Reasons to be fearful

**Of respondents who say that digital start-ups pose a threat…
there are a number of reasons why these nimbler competitors have the advantage:**

48%
are early adopters of smart technologies

41%
believe they're more agile in nature and free of legacy technology

40%
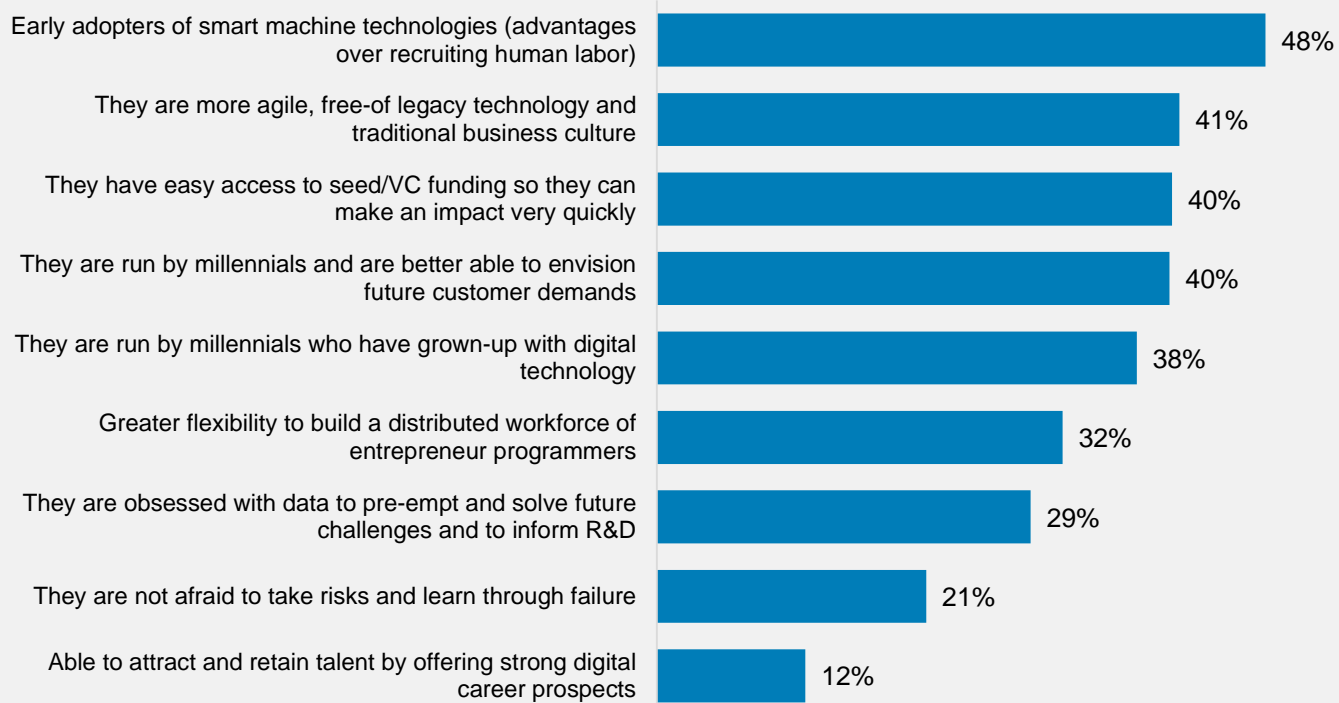say they are run by millennials & better able to predict future customer demands

29%
say they are obsessed with data to pre-empt/solve challenges and inform R&D

"Why do (or will) non-traditional start-ups built in the digital age pose a threat to your organization?"
Base: only respondents who say that non-traditional pose a threat or will do in the future (3120)

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Reasons to be fearful

Reason	Percentage
Early adopters of smart machine technologies (advantages over recruiting human labor)	48%
They are more agile, free-of legacy technology and traditional business culture	41%
They have easy access to seed/VC funding so they can make an impact very quickly	40%
They are run by millennials and are better able to envision future customer demands	40%
They are run by millennials who have grown-up with digital technology	38%
Greater flexibility to build a distributed workforce of entrepreneur programmers	32%
They are obsessed with data to pre-empt and solve future challenges and to inform R&D	29%
They are not afraid to take risks and learn through failure	21%
Able to attract and retain talent by offering strong digital career prospects	12%

"Why do (or will) non-traditional start-ups built in the digital age pose a threat to your organization?"
Base: only respondents who say that non-traditional pose a threat or will do in the future (3120)
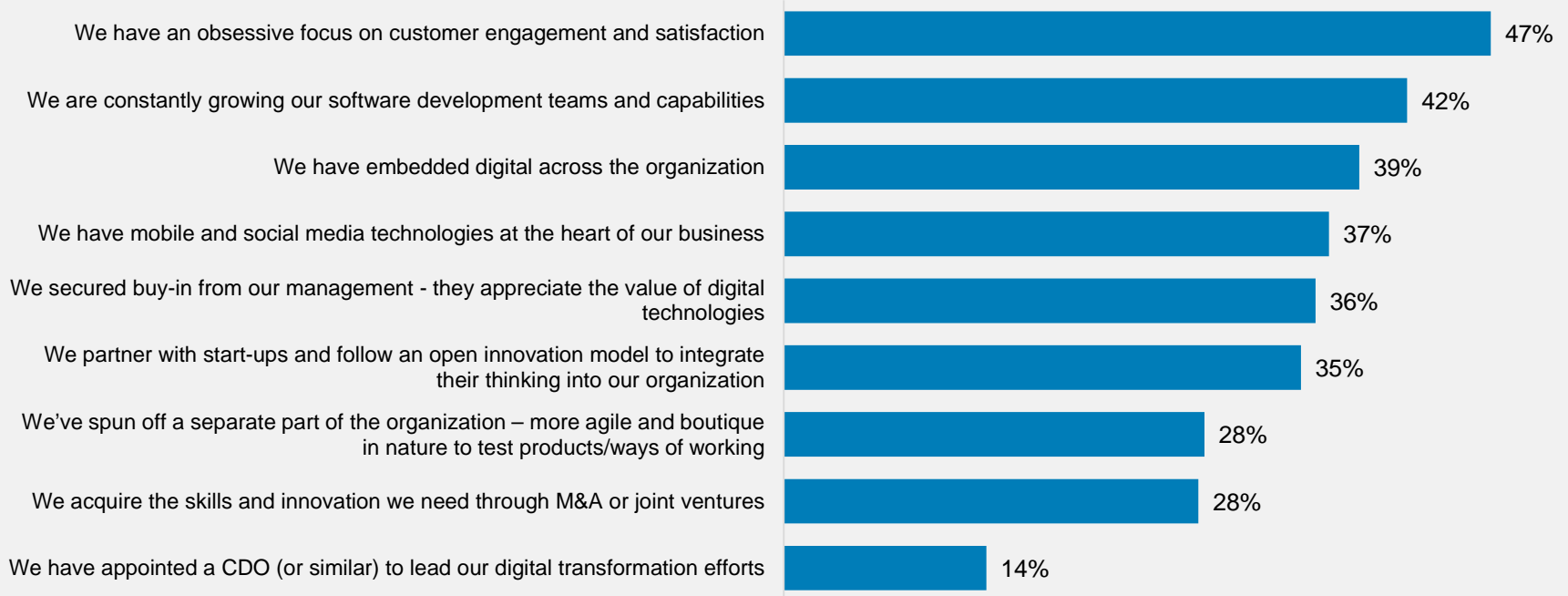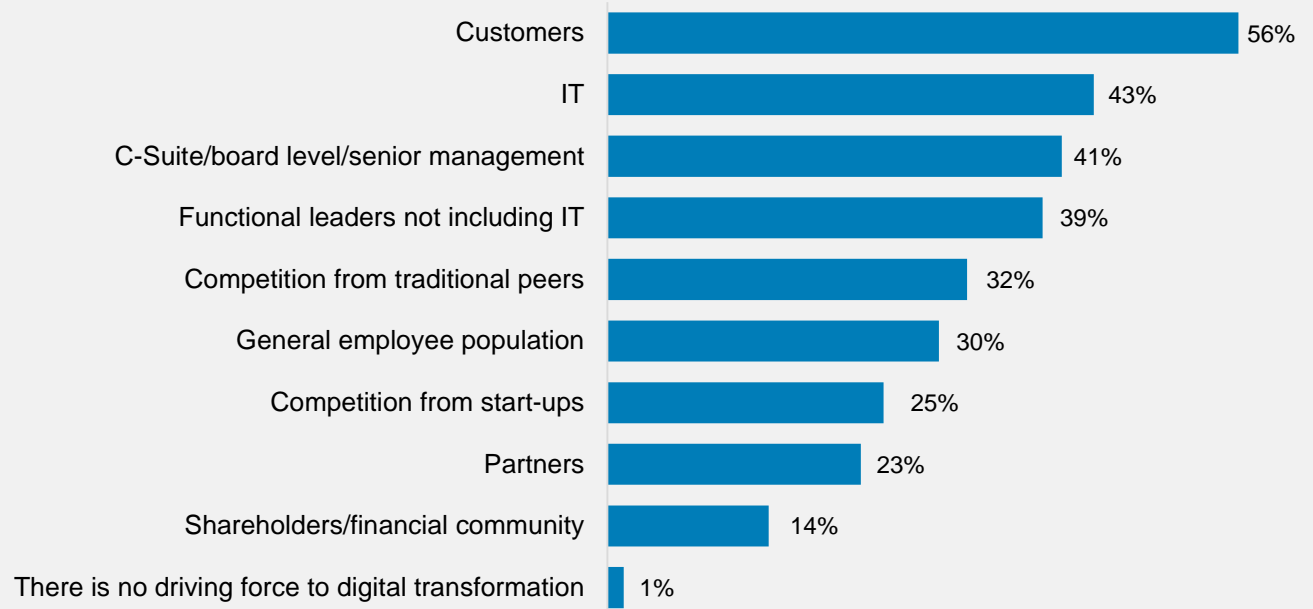
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Countering the threat

We have an obsessive focus on customer engagement and satisfaction	47%
We are constantly growing our software development teams and capabilities	42%
We have embedded digital across the organization	39%
We have mobile and social media technologies at the heart of our business	37%
We secured buy-in from our management - they appreciate the value of digital technologies	36%
We partner with start-ups and follow an open innovation model to integrate their thinking into our organization	35%
We've spun off a separate part of the organization – more agile and boutique in nature to test products/ways of working	28%
We acquire the skills and innovation we need through M&A or joint ventures	28%
We have appointed a CDO (or similar) to lead our digital transformation efforts	14%

"What is your organization doing to counter the threat from the non-traditional start-up?" Base: all respondents (4000)

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Main influencers driving digital transformation

56%
say customers are the driving force

For 2/5 of businesses digital drivers are coming From IT (43%), the C-suite (41%) or other functional leaders (39%)
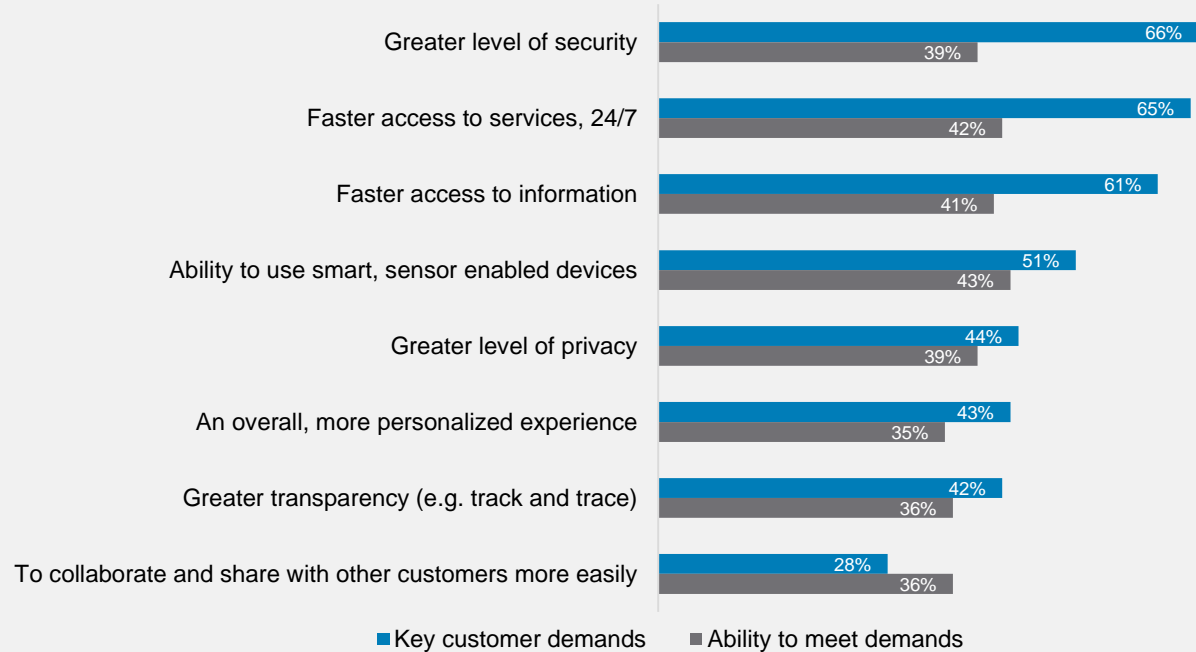
Influencer	Percentage
Customers	56%
IT	43%
C-Suite/board level/senior management	41%
Functional leaders not including IT	39%
Competition from traditional peers	32%
General employee population	30%
Competition from start-ups	25%
Partners	23%
Shareholders/financial community	14%
There is no driving force to digital transformation	1%

"Who are the main influencers driving your organization to become a more digital business?" Base: all respondents (4000)

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Top customer demands

2/5

or fewer are completely able to meet customer digital demands

Demand	Key customer demands	Ability to meet demands
Greater level of security	66%	39%
Faster access to services, 24/7	65%	42%
Faster access to information	61%	41%
Ability to use smart, sensor enabled devices	51%	43%
Greater level of privacy	44%	39%
An overall, more personalized experience	43%	35%
Greater transparency (e.g. track and trace)	42%	36%
To collaborate and share with other customers more easily	28%	36%

■ Key customer demands   ■ Ability to meet demands

"Today's community of connected digital citizens, increasingly expects more from the businesses they transact with. What are the top customer expectations that your organization experiences?" – Table: those completely able to meet customer expectations/demands Base: all respondents (4000)

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Section 3

What does a successful digital business look like?

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DNA of a best-in-class digital business

Digital technologies accelerate new products and/or services development	55%
Security and privacy is built into all devices, applications and algorithms	54%
Agile innovation	48%
Digital goals are integrated into all departmental/staff objectives	46%
Ability to act on intelligence in real-time	44%
Equipped with always connected, sensor enabled and location aware technologies	42%
Company-wide data-driven decision making	42%
Mature e-commerce and e-business models	41%
Company-wide automated decision-making	35%
Continued investment in digital skills/talent	34%
Ability to communicate through multi-sensory channels	34%
Cross-functional knowledge	27%

A digital business has technology that accelerates product development (55%), has security built into all devices (54%) and a track record in agile innovation (48%)

"What does a best-in-class digital business look like?" Base: all respondents (4000)

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DNA of a best-in-class digital business

Strong online and digital collaboration among customers and key influencers — 66%

Mobile technologies embedded into business activity and interactions — 64%

Easy to provide personalized offerings and interactions — 59%

Total 24/7 access and connectivity — 58%

Social media technologies embedded in business activity and interactions — 58%

Access and connectivity on any device or platform — 57%

Easy to make predictive recommendations to customers — 55%

Deep digital and online interactions — 45%

Fast access to information and offerings — 38%

A digital business collaborates with customers, is mobile at the core and offers personalized services

"Thinking about customers, employees and other stakeholders, do you agree with the following statements about what a best-in-class digital business looks like?" Base: all respondents (4000)

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Section 4

How are organizations doing it?

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How organizations are going digital

46%

are integrating digital goals into departmental and staff objectives

51%

Over half of businesses are using digital technologies to accelerate product/service development

Activity	Percentage
Using digital technologies to accelerate new product/services development	51%
Building security and privacy into all devices, applications and algorithms	47%
Integrating digital goals into all departmental/staff objectives	46%
Developing mature e-commerce and e-business models	44%
Equipped with always connected, sensor enabled and location aware technologies	37%
Acting on intelligence in real-time	36%
Rolling out data-driven decision making across the business	36%
Evolving our ways of communicating and marketing to involve more innovative channels...	34%
Agile innovation	33%
Investing in digital skills/talent	27%
Rolling out automated decision-making (artificial intelligence) across the business	27%
Developing cross-functional knowledge	19%

"Thinking about what a digital business looks like, which of the following is your organization doing?" Base: all respondents (4000)

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Ideal vs. actual leaders of digital transformation
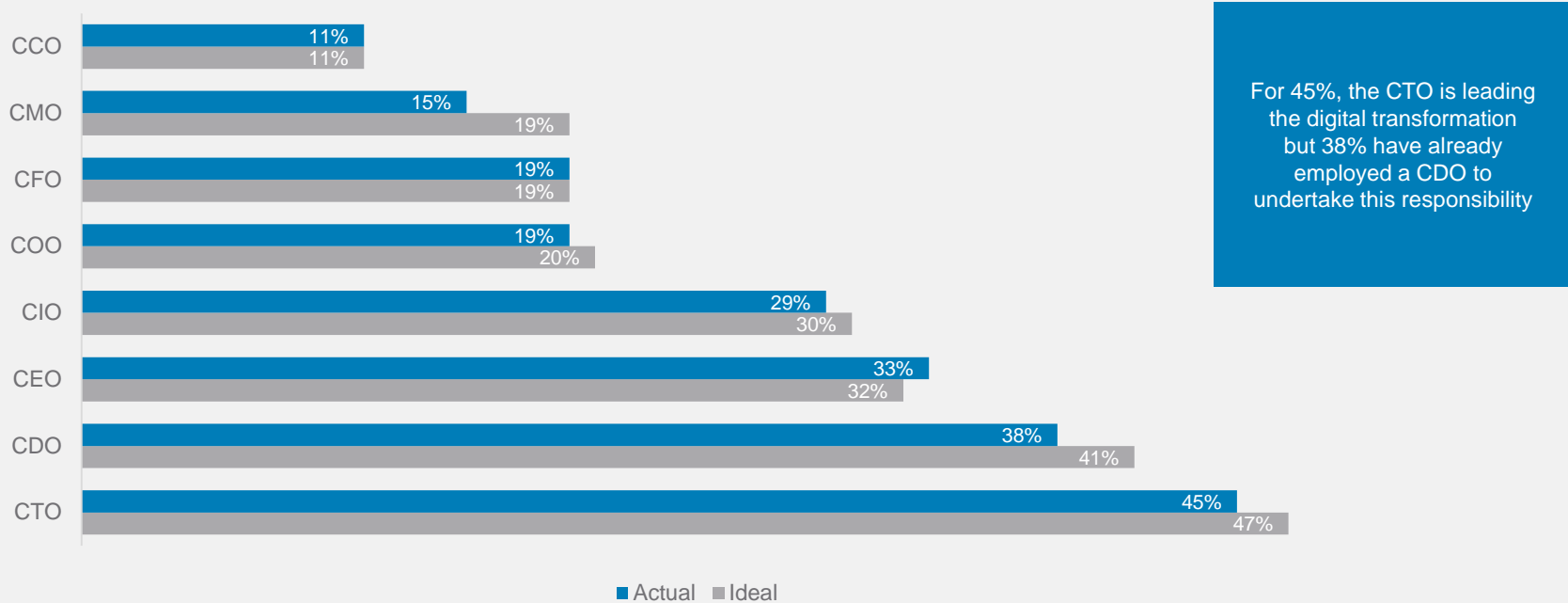
For 45%, the CTO is leading the digital transformation but 38% have already employed a CDO to undertake this responsibility

Role	Actual	Ideal
CCO	11%	11%
CMO	15%	19%
CFO	19%	19%
COO	19%	20%
CIO	29%	30%
CEO	33%	32%
CDO	38%	41%
CTO	45%	47%

■ Actual ■ Ideal

Analysis comparing respondents' views on who is leading vs. who ideally should lead their organization's digital transformation Base: all respondents (4000)

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Extent of IT strategic support for digital

Only around a quarter say their organization has fully completed its investment in IT cloud infrastructure (26%) data storage (26%) & data analytics (22%)
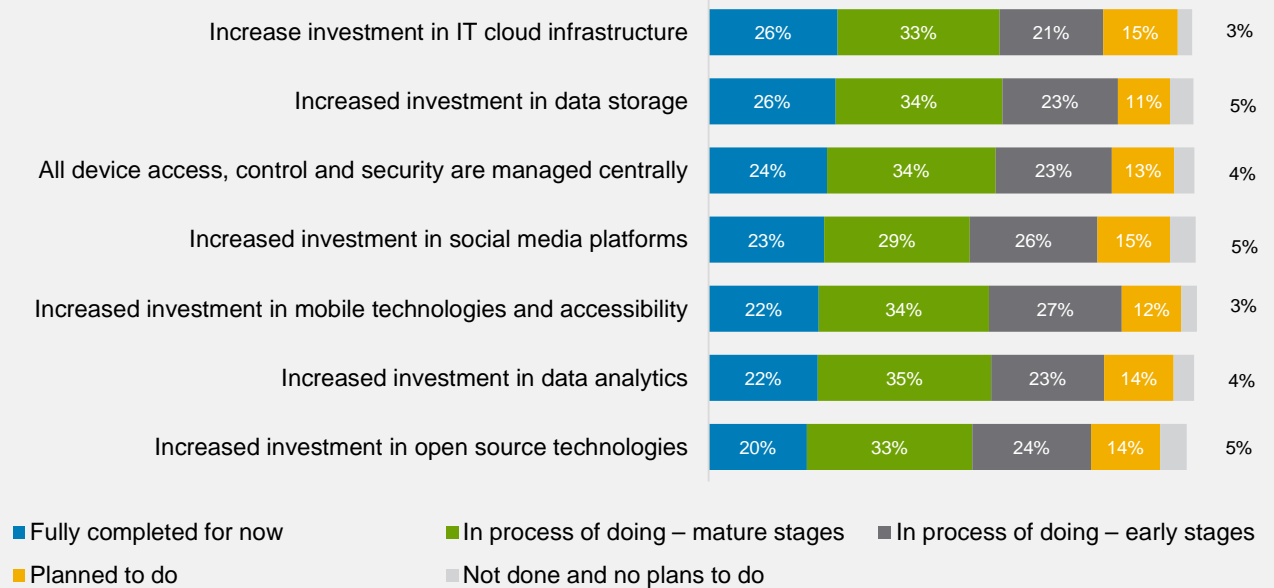
	Fully completed for now	In process of doing – mature stages	In process of doing – early stages	Planned to do	Not done and no plans to do
Increase investment in IT cloud infrastructure	26%	33%	21%	15%	3%
Increased investment in data storage	26%	34%	23%	11%	5%
All device access, control and security are managed centrally	24%	34%	23%	13%	4%
Increased investment in social media platforms	23%	29%	26%	15%	5%
Increased investment in mobile technologies and accessibility	22%	34%	27%	12%	3%
Increased investment in data analytics	22%	35%	23%	14%	4%
Increased investment in open source technologies	20%	33%	24%	14%	5%

- Fully completed for now
- In process of doing – mature stages
- In process of doing – early stages
- Planned to do
- Not done and no plans to do
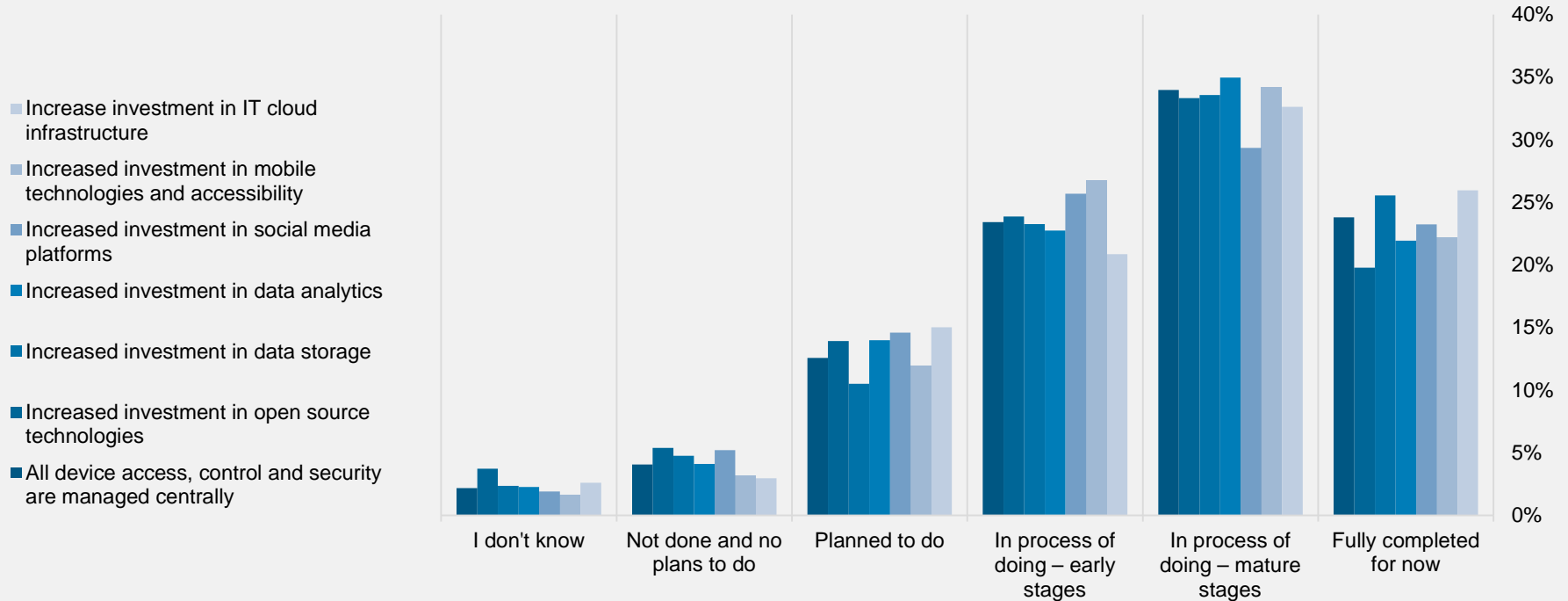
"In terms of your organization's existing IT strategy, to what extent are you doing the following to support your digital business transformation?"
Base: all respondents (4000)

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Investment plans – Next 1-3 years
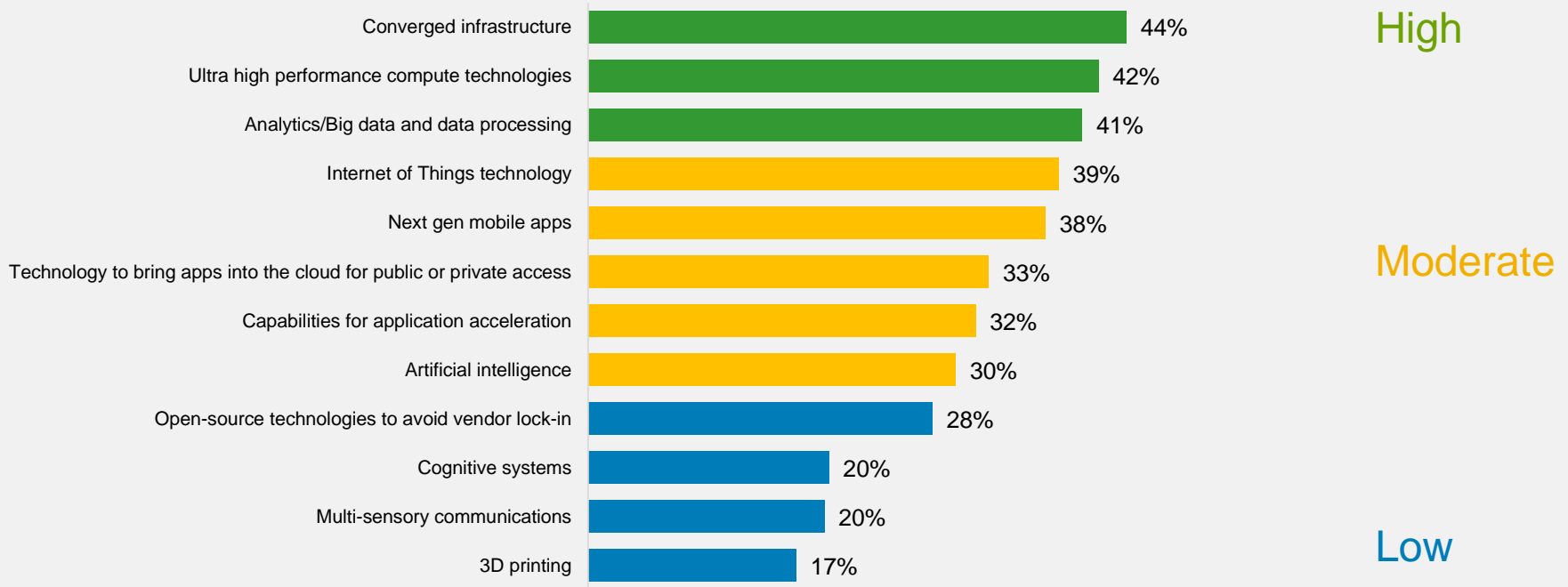
Converged infrastructure	44%
Ultra high performance compute technologies	42%
Analytics/Big data and data processing	41%
Internet of Things technology	39%
Next gen mobile apps	38%
Technology to bring apps into the cloud for public or private access	33%
Capabilities for application acceleration	32%
Artificial intelligence	30%
Open-source technologies to avoid vendor lock-in	28%
Cognitive systems	20%
Multi-sensory communications	20%
3D printing	17%

High

Moderate

Low

"What new innovations or solutions is your organization investing in over the next 1-3 years to enable digital business?" Base: all respondents (4000)

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Measuring digital performance

Metric	Percentage
Customer satisfaction using digital analytics	44%
Our speed to market	43%
The proportion of customer interactions now handled digitally	40%
We have a dedicated executive committee to assess digital transformation progress	38%
We create a full digital profit & loss statement	36%
The cost savings gained as a result of replacing human labor with smart technologies	35%
The percentage of our employees who have received digital training	31%
The ability to successfully facilitate human interactions with machines	29%
Our ability to predict human behavior through data	28%
The number of patents filed	17%
By percentage of revenue spent on R&D and lessons learned	15%

"How do you measure the progress and performance of your organization's digital transformation efforts?" Base: all respondents (4000)

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Section 5

How are organizations measuring up?

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Implementing digital attributes

Predictively spotting new opportunities is a priority for six in ten respondents (59%)

But only around three in ten (32%) are doing well, organization-wide

Predictively spot new opportunities
32% 68%

Innovate in an agile way
28% 72%

Demonstrate transparency and trust
31% 69%

Deliver a unique and personalized experience
26% 74%

Always on, operating in real time
31% 69%

■ Doing well, organization-wide ■ Needs improvement
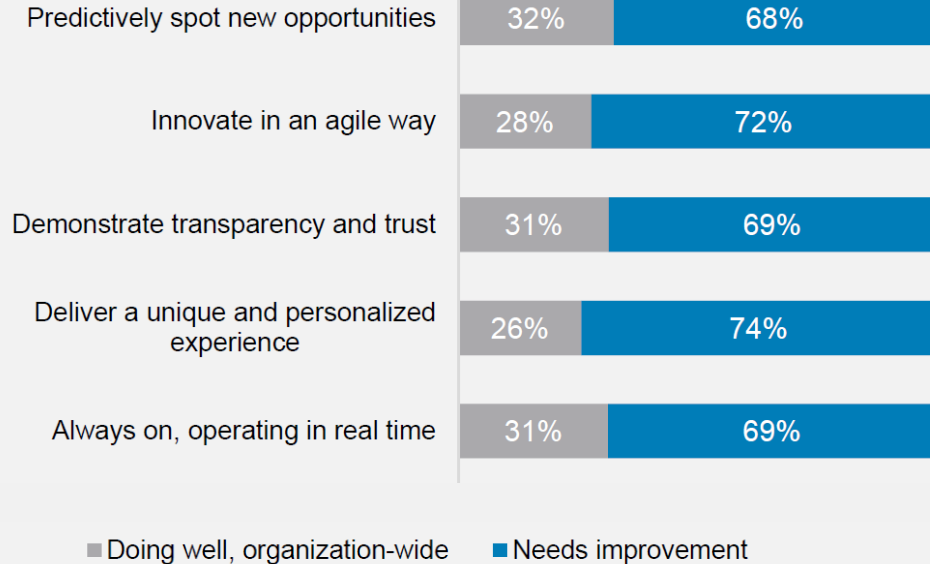
In 2015, business leaders noted these five attributes defined a digital business.

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How attributes performed by business function

50% believe their IT dept. is adequately addressing digital attributes; marketing and finance teams follow closely behind

Business Function	Percentage
IT	50%
Marketing	40%
Finance	40%
Customer service	38%
Manufacturing/production	32%
R&D	29%
Human resources	29%
Sales	22%
Legal	19%
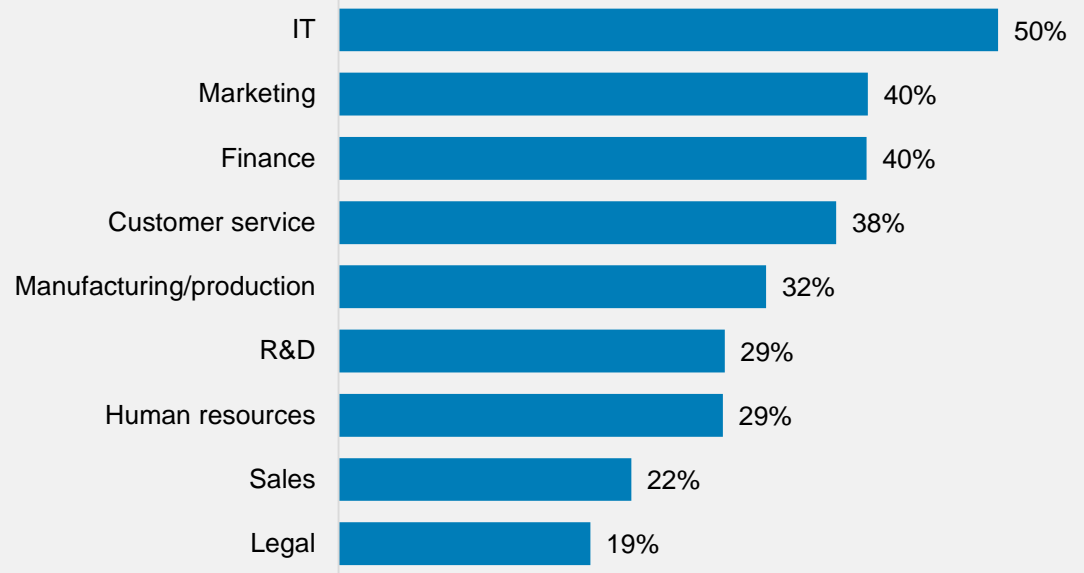
"You have indicated that your organization is addressing some of the attributes in pockets of your organization. In which specific areas is this taking place?"
Base: only respondents whose organization is addressing at least one digital attribute in pockets of the organization (3150)

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Digital transformation approach

Statement	Percentage
Our strategy and vision could be improved	75%
My organization is ready for upcoming digital legislation and compliance commitments	73%
Digital transformation could be more widespread throughout the organization	73%
A centralized technology strategy should be more of a priority for our business	73%
We are planning to expand our software development capabilities	72%
Our cloud strategy is fundamental to the success of our business	70%
Our organization can benefit from digital transformation but is held back by too many traditional applications that are still important to the business	69%

Analysis of respondents who agree with the above statements when it comes to their own organization's digital transformation. Base: all respondents (4000)

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Barriers to digital progress

Barrier	Percentage
Lack of budget and resources	33%
Lack of the right in-house skill sets and expertise	31%
Lack of senior support and sponsorship	29%
Lack of the right technologies to work at the speed of business	29%
Data privacy and security concerns	29%
Reactive approach to competitor activities	26%
Lack of a coherent digital strategy and vision	26%
Immature digital culture	26%
Regulation or legislative changes	23%
A fragmented or siloed computing environment	22%
Weak digital governance and structure	17%
Unable to extract valuable insights from data	10%
Information overload	8%

"In general, what are the biggest barriers to progress with digital business projects in your organization?" Base: all respondents (4000)

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Section 6

Digital Transformation Index

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Question weighting
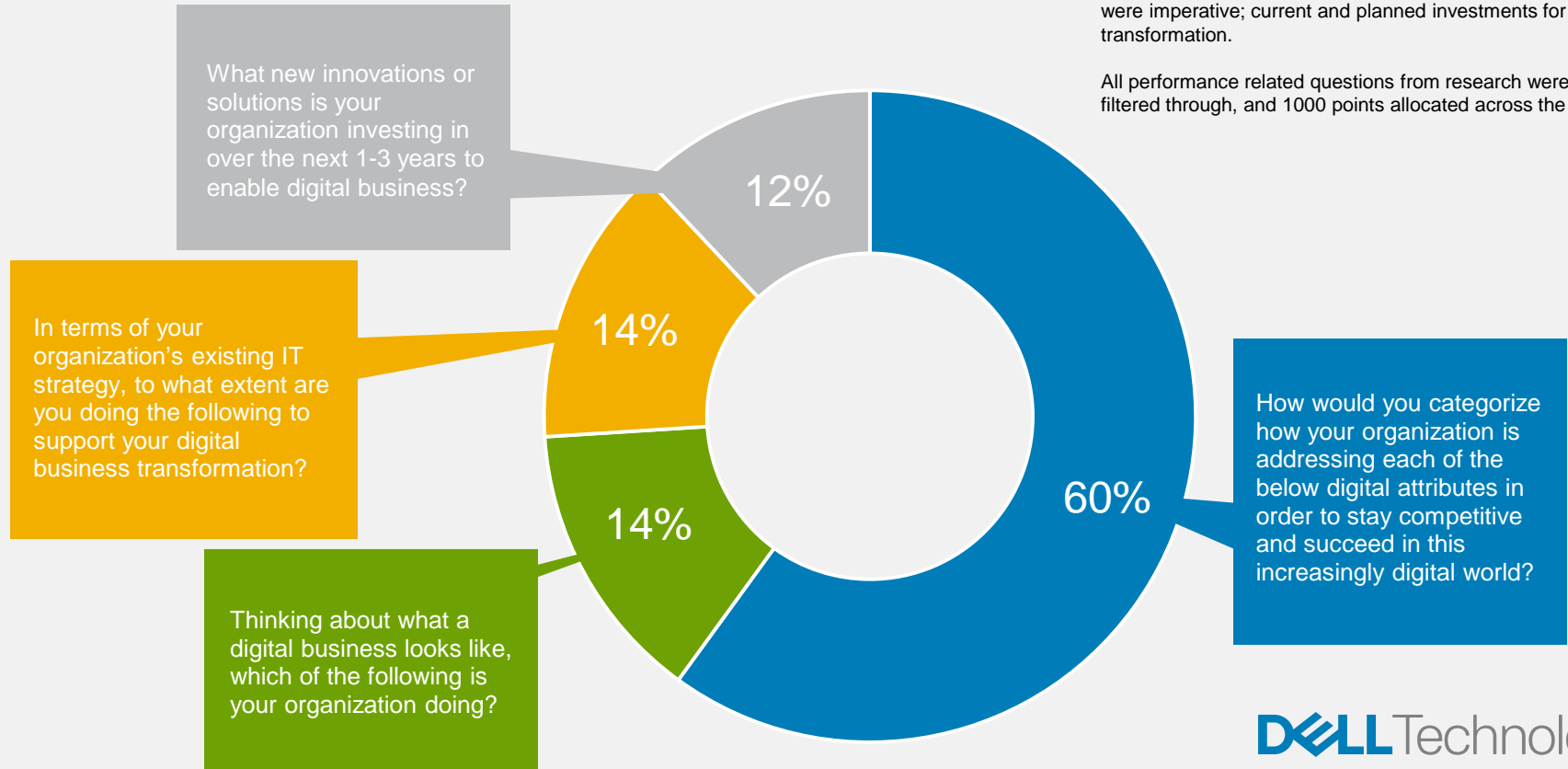
Methodology: Index based on respondents' performance and progress against digital business attributes they agreed were imperative; current and planned investments for digital transformation.

All performance related questions from research were filtered through, and 1000 points allocated across the curve.

What new innovations or solutions is your organization investing in over the next 1-3 years to enable digital business?

12%

In terms of your organization's existing IT strategy, to what extent are you doing the following to support your digital business transformation?

14%

Thinking about what a digital business looks like, which of the following is your organization doing?

14%

How would you categorize how your organization is addressing each of the below digital attributes in order to stay competitive and succeed in this increasingly digital world?

60%

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Benchmark questions and scores

S NUMBER=DATA SUMMARY SHEET REFERENCE

How would you categorize how your organization is addressing the provision of digital skills and training to stay competitive and succeed in this increasingly digital world?

- Predictively spot new opportunities
- Innovate in an agile way
- Demonstrate transparency and trust
- Deliver a unique and personalized experience
- Always on, operating in real time

For each of the above, respondents selected one of the below statements (score in brackets):

Doing well, organization-wide (100)
Doing well, in pockets of the organization (30)
Not doing well, organization-wide (20)
Not doing well, in pockets of the organization (10)
Research/ planning stage (5)
No plans (0)
I don't know (0)

Maximum score = 600

Thinking about what a digital business looks like, which of the following is your organization doing?

- Integrating digital goals into all departmental/staff objectives
- Developing mature e-commerce and e-business models
- Using digital technologies to accelerate new product/services development
- Equipped with always connected, sensor enabled and location aware technologies
- Building security and privacy into all devices, applications and algorithms
- Rolling out data-driven decision making across the business
- Rolling out automated decision-making (artificial intelligence) across the business
- Acting on intelligence in real-time
- Evolving our ways of communicating and marketing to involve more innovative channels such as multi-sensory
- Agile innovation – software developers can begin coding and securely launch new applications within much shorter cycles
- Investing in digital skills/talent
- Developing cross-functional knowledge

Respondents scored 15 for each outcome selected (in bold) and 5 for each foundational element selected

Maximum score = 140

Benchmark questions and scores

S NUMBER=DATA SUMMARY SHEET REFERENCE

In terms of your organization's existing IT strategy, to what extent are you doing the following to support your digital business transformation?

- Increase investment in IT cloud infrastructure
- Increased investment in mobile technologies and accessibility
- Increased investment in social media platforms
- Increased investment in data analytics
- Increased investment in data storage
- Increased investment in open source technologies
- All device access, control and security are managed centrally

For each of the above, respondents selected one of the below statements (score in brackets):

Fully completed for now (20)
In process of doing – mature stages (10)
In process of doing – early stages (5)
Planned to do (1)
Not done and no plans to do (0)
I don't know (0)

Maximum score = 140

What new innovations or solutions is your organization investing in over the next 1-3 years to enable digital business?

- A converged infrastructure that simplifies data management and allows information to flow quickly across platforms
- Analytics/Big data and data processing
- Next generation mobile applications
- Ultra high performance compute technologies for rapid digital communication/data access/data processing
- Capabilities for application acceleration
- Open-source technologies to avoid vendor lock-in
- Technology to bring apps into the cloud for public or private access
- Internet of Things technology
- 3D printing
- Artificial intelligence
- Multi-sensory communications
- Cognitive systems

Respondents scored 10 for each element selected

Maximum score = 120

MAX TOTAL SCORE = 1000

Digital Transformation Index

Digital Laggards	Digital Followers	Digital Evaluators	Digital Adopters	Digital Leaders
Do not have a digital plan; limited initiatives and investments in place	*Very few digital investments; tentatively planning for the future*	*Gradually embracing digital transformation and planning for the future*	*Have a mature digital plan, investments and innovations in place*	*Digital transformation is ingrained in the DNA of the business*
15%	**32%**	**34%**	**14%**	**5%**
of total respondents	*of total respondents*	*of total respondents*	*of total respondents*	*of total respondents*

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Benchmark – Overall maturity distribution

VARIABLES	DIGITAL LAGGARDS	DIGITAL FOLLOWERS	DIGITAL EVALUATORS	EARLY ADOPTERS	DIGITAL LEADERS
ATTRIBUTE PERFORMANCE	Not done, in planning	Limited to pockets, poorly done	Spread more widely yet not done well	Done well in pockets	Well done and organization wide
DIGITAL INITIATIVES	Limited	A small number	4-5 initiatives	5-6 initiatives	8+ adopted
ADOPTED CURRENTLY	Little or none	In planning or early stages	Early to mid stages	In mature stage, few fully completed	Most fully completed
IT STRATEGY & DIGITAL INVESTMENT	Very few in line	A handful in scope	3-4 innovations in scope for future investment	Growing number of innovations (4-6)	8+ in line for future investment
INNOVATION & FUTURE INVESTMENT	15%	32%	34%	14%	5%

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Maturity by country and region

Average score out of 100

Country

Country	Score
India	53
Brazil	50
Mexico	47
Australia	44
Germany	43
UAE & Saudi Arabia	42
Netherlands	42
France	42
Italy	41
US	41
Switzerland	40
UK	38
Canada	38
China	33
Japan	30

Region

AMERICAS	EMEA	APJ
45	41	41

Developed vs. Emerging

Emerging	Developed
45	40

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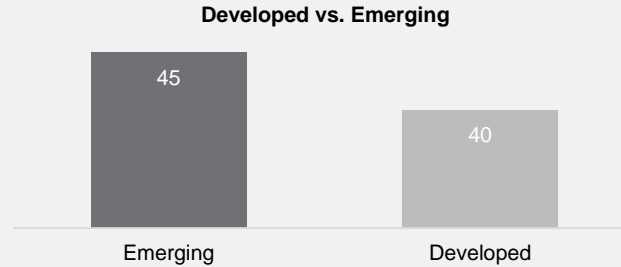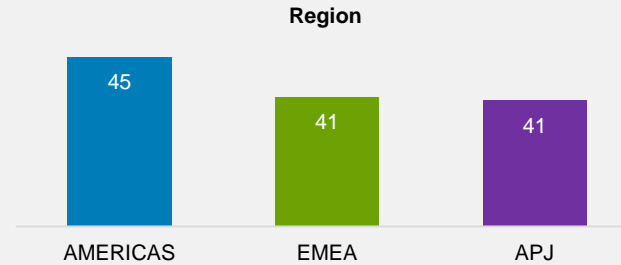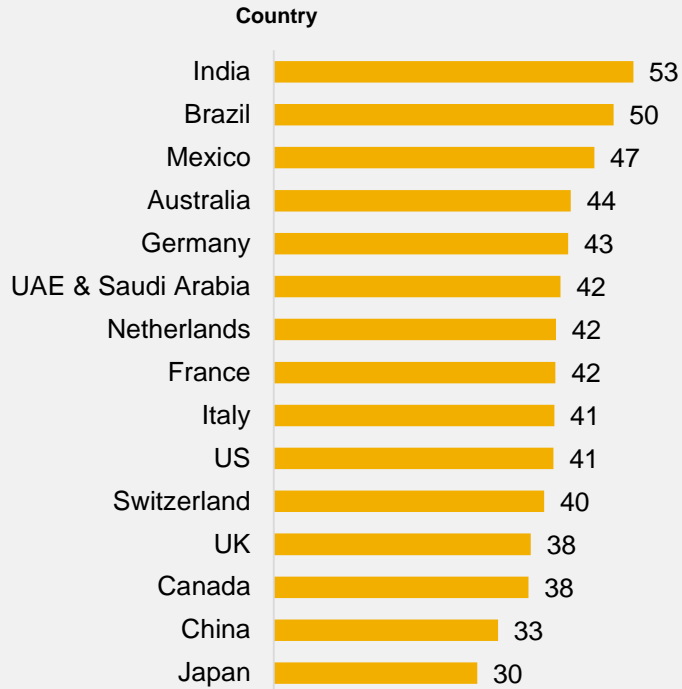
Maturity by vertical

Average score out of 100

Vertical	Score
Telecommunications	46
Technology	45
Media and entertainment	44
Manufacturing	43
Life sciences	43
Oil and gas	42
Automotive	42
Financial services	42
Retail and consumer products	42
Insurance	41
Private healthcare	39
Public healthcare	37

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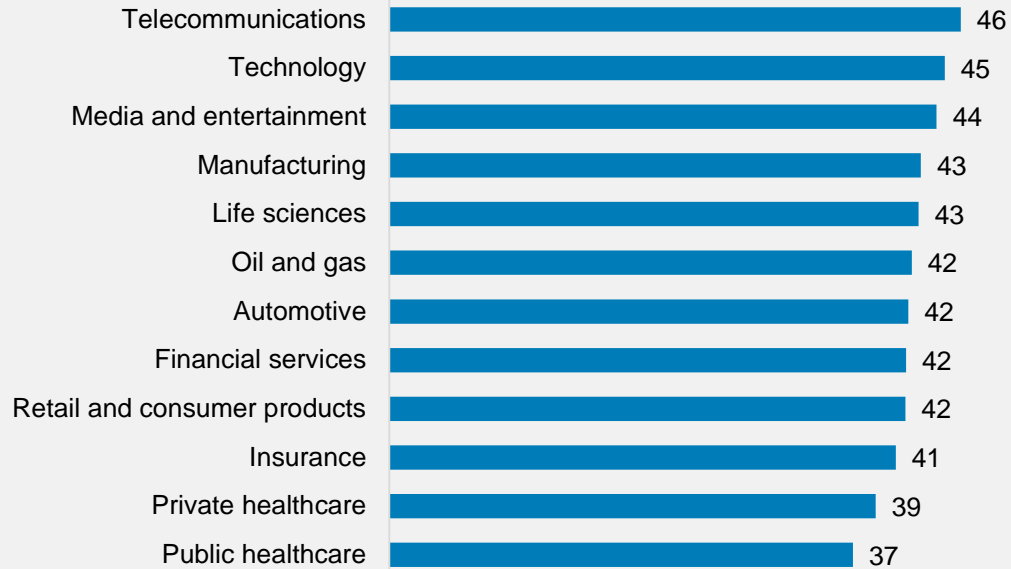
Best and worst performers

Countries

India

Brazil

Mexico

Canada

China

Japan

Industry/Verticals

Telecoms

Technology

Media and entertainment

Insurance

Private healthcare

Public healthcare

MOST MATURE

LEAST MATRURE

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Section 7: Appendix

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Key regional differences

EMEA variances

Where are digital demands coming from?

Customers (52%) remain the key influence but competition from peers (36%) and start-ups (29%) play an increased role

Influences on digital transformation

	Global	EMEA
CUSTOMERS	56%	52%
COMPETITION FROM TRADITIONAL PEERS	32%	36%
COMPETITION FROM START-UPS	25%	29%

■ Global ■ EMEA
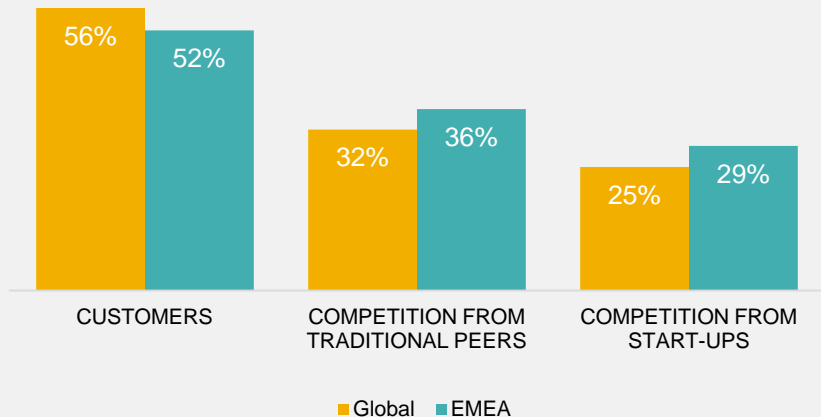
What does a digital business look like?

UK respondents most likely to believe that best in class means digital technologies accelerating new products (58%)

Agreement that a best in class digital business means digital technologies accelerate new products and/or services development

Global	55%
EMEA	53%
UK	58%
Italy	56%
UAE and Saudi Arabia	55%
France	53%
Netherlands	51%
Switzerland	51%
Germany	50%

DELLTechnologies
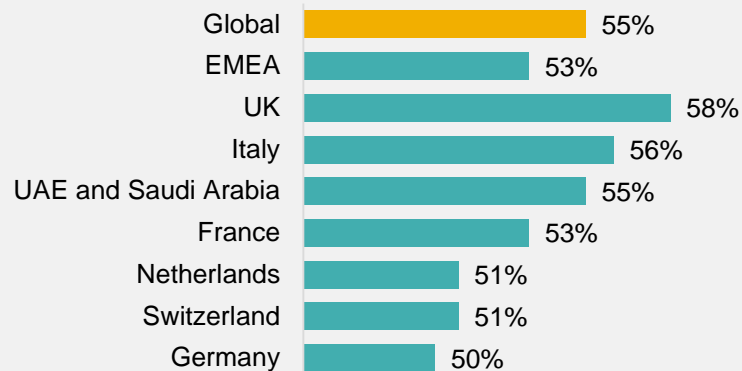
EMEA variances

How are organizations doing it?

Outside IT, the marketing (56%) function is most likely to drive digital programs; the manufacturing sector (39%) is least likely to be involved (compared to the global average)

Functions driving digital (outside of IT)

Function	GLOBAL	EMEA
Marketing	55%	56%
Customer service	52%	50%
Finance	47%	46%
Manufacturing/production	44%	39%
R&D	37%	39%
Human resources	35%	36%
Sales	33%	29%
Legal	26%	28%

DELL Technologies
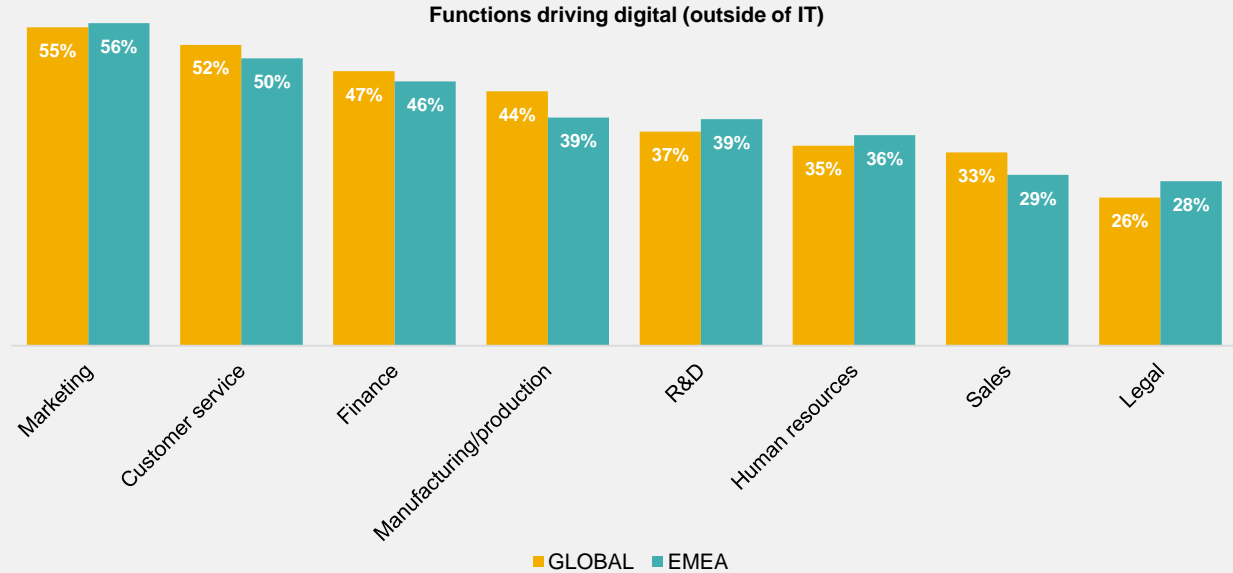
EMEA variances

The future and disruptive trends

Switzerland (60%) and Netherlands (52%) respondents are even more concerned that their organization may become obsolete in 3-5 years' time

Agreement with the statement: 'There is a possibility our company may become obsolete in three to five years' time'

Global	45%
EMEA	45%
Switzerland	60%
Netherlands	52%
France	48%
UAE and Saudi Arabia	45%
Germany	43%
Italy	41%
UK	32%
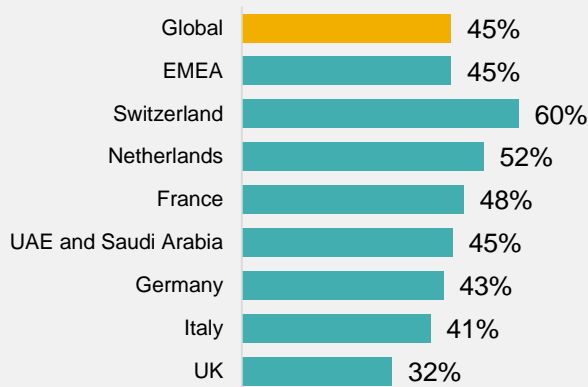
A greater number of EMEA respondents believe that non-traditional start-ups pose an immediate threat (29%)

Respondents who believe non-traditional start-ups pose an immediate threat to their organization

Global	EMEA
26%	29%

DELLTechnologies
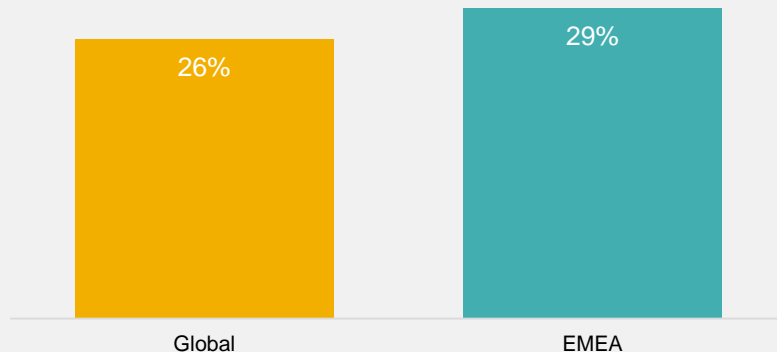
Americas variances

Where are digital demands coming from?

In the Americas, security is the key customer demand (70%) for even more organizations – particularly in Brazil (76%) and Mexico (71%)

Greater level of security as a key customer demand

Global	66%
Americas	70%
Brazil	76%
Mexico	71%
Canada	67%
US	66%
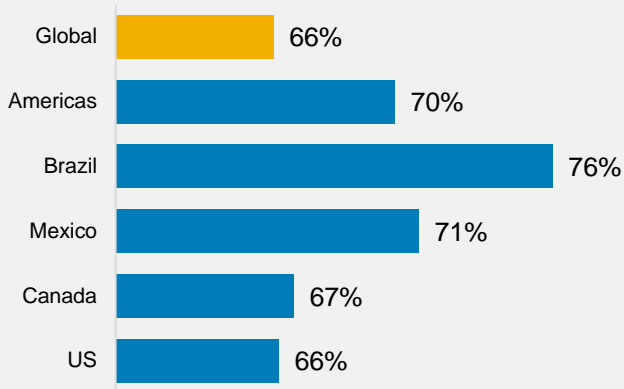
What does a digital business look like?

There is a higher focus on 24/7 access and connectivity, compared to the global average – particularly for respondents in Brazil (68%) and Mexico (65%)

Total 24/7 access and connectivity is a key element of what a best in class digital business looks like

Total	Americas total	Brazil	Mexico	Canada	US
58%	62%	68%	65%	59%	54%

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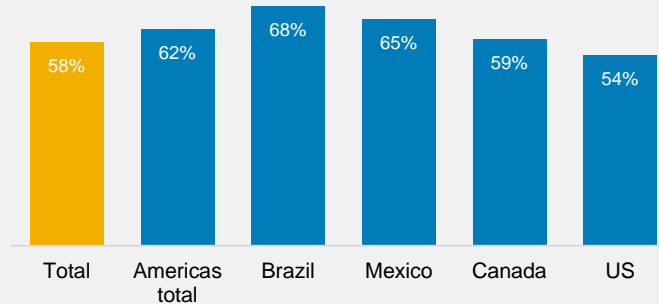
Americas variances

How are organizations doing it?

Other than the IT department, Marketing (59%), Customer Service (57%) and Sales (41%) functions are more likely to drive organizations' digital transformation

Functions driving digital (outside of IT)

	Global	Americas
Marketing	55%	59%
Customer service	52%	57%
Finance	47%	51%
Manufacturing/production	44%	47%
R&D	37%	23%
Human resources	35%	34%
Sales	33%	41%
Legal	26%	26%

■ Global ■ Americas

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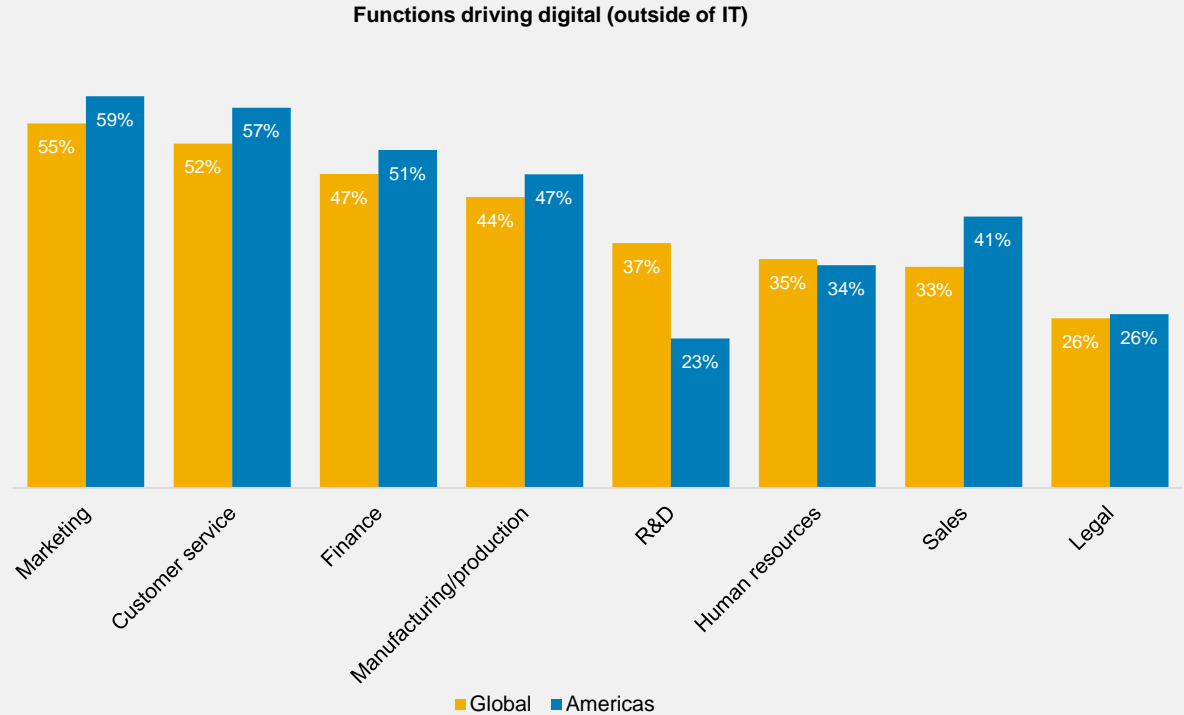
Americas variances

The future and disruptive trends

Top means of countering a digital start-up

Much less likely to report that non-traditional start-ups pose a current threat to their organization (16%). But most likely to forecast a threat from digital start-ups further down the line.

Countering the non-traditional start-up

We have an obsessive focus on customer engagement and satisfaction
- 47%
- 51%

We have mobile and social media technologies at the heart of our business
- 37%
- 43%

■ Global ■ Americas

Respondents who believe non-traditional start-ups pose an immediate threat to their organization

- Global: 26%
- Americas: 16%

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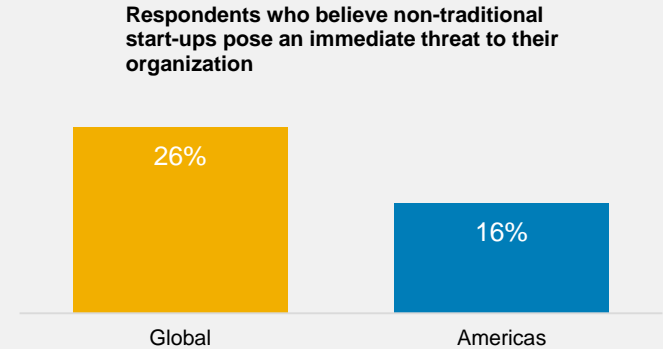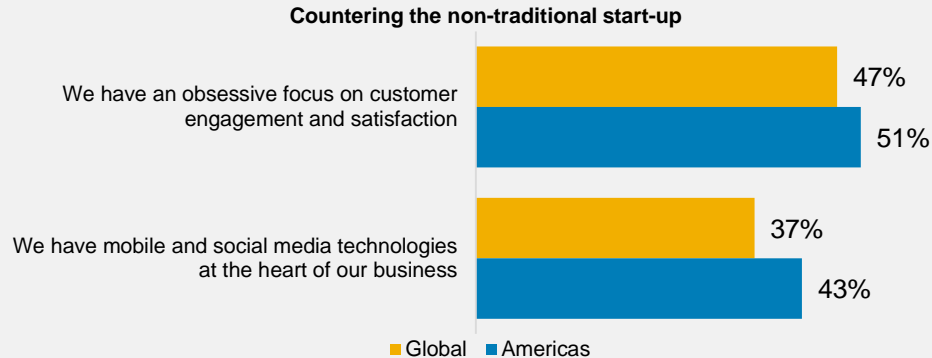
APJ variances

Where are digital demands coming from?

In contrast to the other countries, fewer Japanese respondents report that their organizations' digital transformation is driven by customers (38%)

Customers' influence on digital transformation

Global	APJ	India	Australia	China	Japan
56%	52%	62%	58%	45%	38%

DELLTechnologies
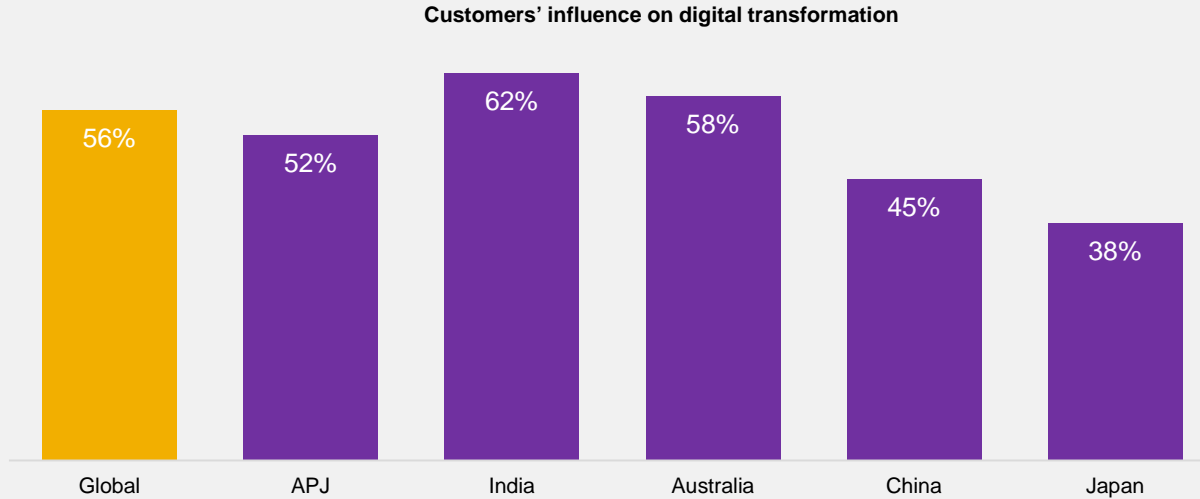
APJ variances

How are organizations doing it?

Least likely to invest in digital skills (23%) compared to the global average

Investing in digital skills/talent to drive digital transformation

Global	APJ
27%	23%
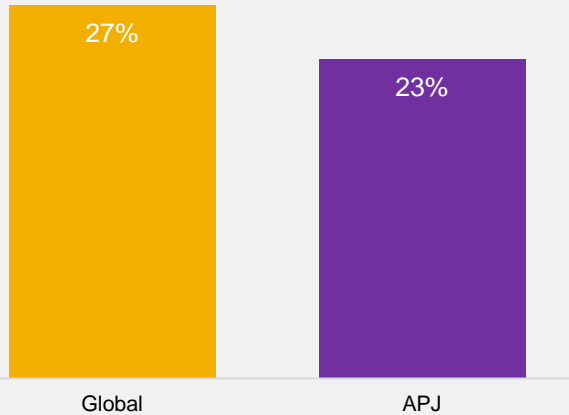
Outside of IT, a greater spread of functions are involved in digital including Customer Service (51%), Finance (47%), Manufacturing (48%) and R&D (47%)

Functions driving digital (outside of IT)

Function	Global	APJ
Marketing	55%	50%
Customer service	52%	51%
Finance	47%	47%
Manufacturing/production	44%	48%
R&D	37%	47%
Human resources	35%	32%
Sales	33%	33%
Legal	26%	20%

■ Global ■ APJ

D⌀LL Technologies
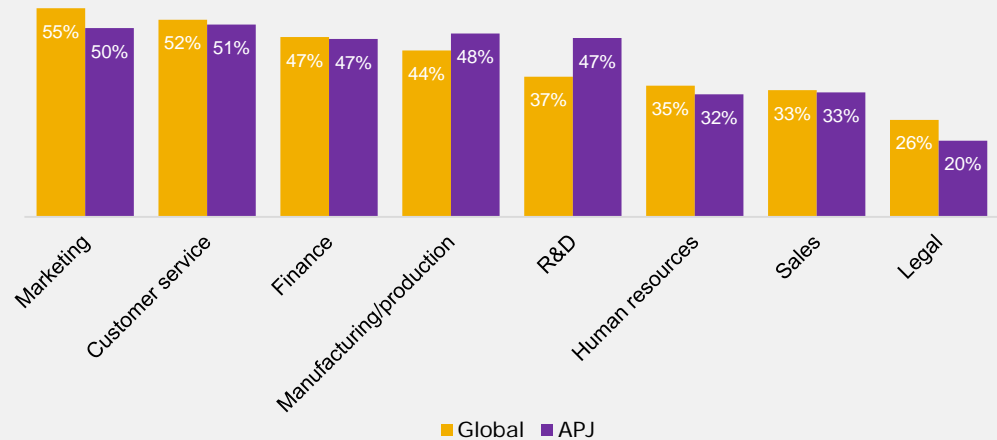
APJ variances

The future and disruptive trends

Majority (52%) are concerned about their organization becoming obsolete over the next 3-5 years

Agreement with the statement: 'There is a possibility our company may become obsolete in three to five years' time'

Global	45%
APJ	52%
India	62%
China	57%
Australia	54%
Japan	27%
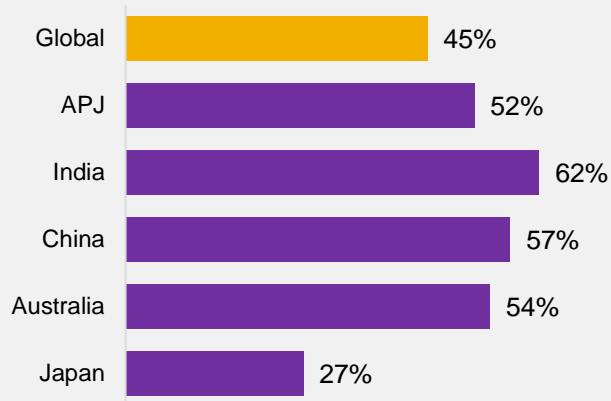
Around a third (32%) believe that non-traditional start-ups pose a threat.

Respondents who believe non-traditional start-ups pose an immediate threat to their organization

Global	APJ
26%	32%

DELLTechnologies
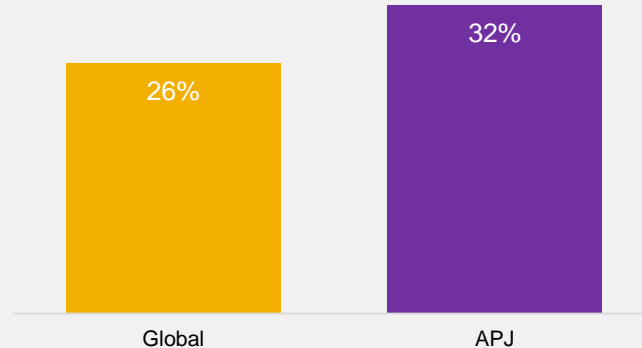
Regional variances

What does a digital business look like?

Respondents from organizations in the Americas appear to have greater confidence in customer digital demands being completely met: in particular privacy (50%), security (47%) and the ability to use smart devices (50%)

"To what extent is your organization able to meet these customer expectations and demands?"
Showing those who are completely able to meet this demand

Legend: ■ EMEA ■ Americas ■ APJ

Category	EMEA	Americas	APJ
The ability to use smart, sensor enabled devices	41%	50%	39%
Faster access to more information	41%	44%	37%
Faster access to services, 24/7	44%	40%	40%
An overall, more personalized experience	33%	41%	33%
Greater transparency (e.g. track and trace)	34%	41%	35%
Greater level of security	37%	47%	35%
Greater level of privacy	36%	50%	36%
To collaborate and share with other customers more easily	33%	40%	37%

DELLTechnologies

Regional variances

What does a digital business look like?

Even greater numbers of Americas respondents see customers (68%) as their main digital influence

Customers are the main influencers driving our organization to become a more digital business
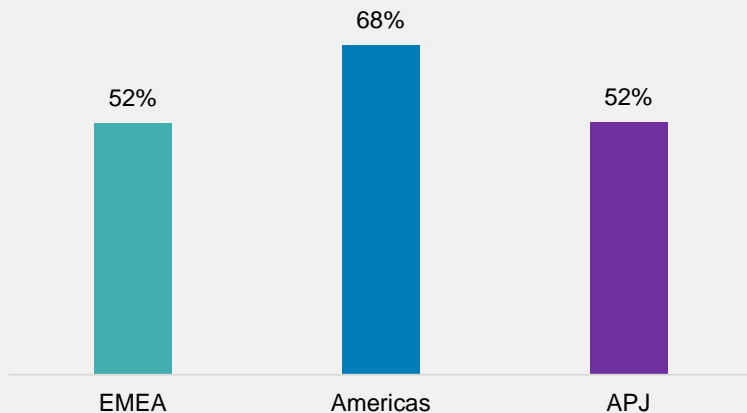
Fewer respondents in APJ regard agile innovation (42%) as part of what a best in class digital business looks like

What does a best-in-class digital business look like? (%age who ranked these in their top 5)

■ Digital technologies accelerate new products and/or services development
■ Security and privacy is built into all devices, applications and algorithms
□ Agile innovation

DELLTechnologies
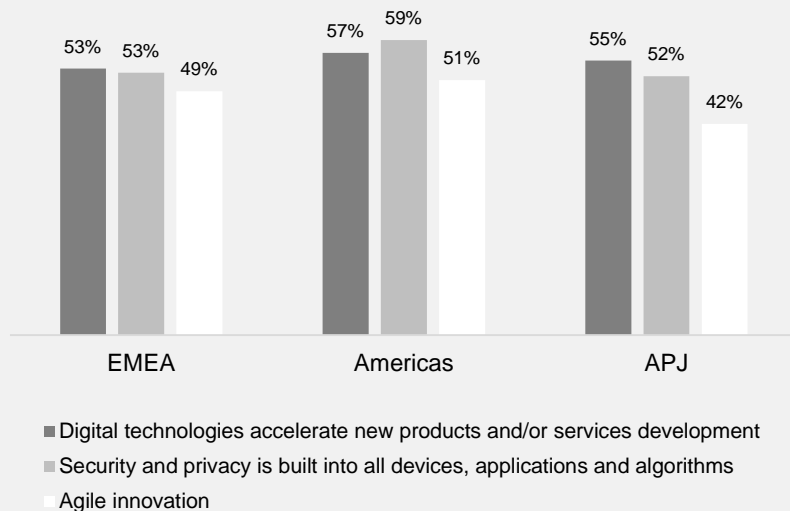
Regional variances

How are organizations doing it?

Organizations in the Americas are much more likely to believe the CTO (56%/54%) should lead digital transformation efforts. There is a greater likelihood the CDO will be involved in EMEA (42%/45%) and APJ (45%/42%),

In your opinion, who ideally should lead digital transformation efforts?

	EMEA	Americas	APJ
CTO	44%	56%	44%
CDO	42%	35%	45%
CEO	28%	37%	33%

■ CTO ■ CDO □ CEO

Who is leading (or will lead) your organization's digital transformation?

	EMEA	Americas	APJ
CTO	43%	54%	42%
CDO	40%	32%	42%
CEO	29%	37%	34%

■ CTO ■ CDO □ CEO

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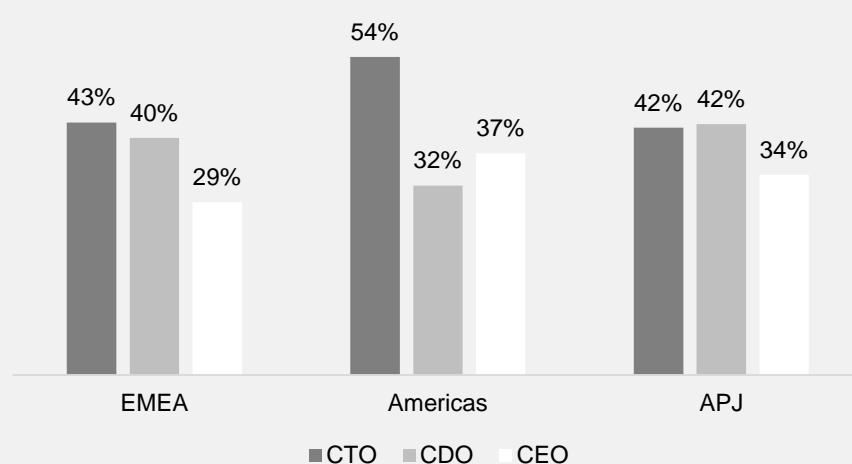
Regional variances

The future and disruptive trends

Looking ahead, APJ respondents are more likely to articulate concerns for the future – over half don't know what their industry will look like (58%) or even whether their organization will still be here (52%). As a result, more claim that disruption is incentivizing them to invest in IT infrastructure and digital skills (70%)

Percentage who agree with the following statements about their industry/organization

	EMEA	Americas	APJ
My industry has experienced significant disruption as a result of digital technologies in the last three years	52%	44%	61%
My industry has seen the entrance of new competitors (in particular non-traditional start-ups) as a result of digital technologies and initiatives	57%	63%	68%
We do not know what our industry will look like in three years' time	46%	42%	58%
There is a possibility our company may become obsolete in three to five years' time	45%	36%	52%
We have fully embraced a digital way of working and are confident in our ability to compete with start ups	64%	69%	68%
Competition from non-traditional start-ups is incentivizing us to invest in IT infrastructure and digital skills leadership	64%	66%	70%

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Regional variances

The future and disruptive trends

APJ (32%) and EMEA (29%) respondents are much more likely to see non-traditional start-ups as an immediate threat. To counter the threat, organizations in the Americas are most likely to focus obsessively on customer engagement (51%) and APJ organizations are more active in growing their software development capabilities (46%)

Do non-traditional start-ups built in the digital age pose a threat to your business? Yes - right now
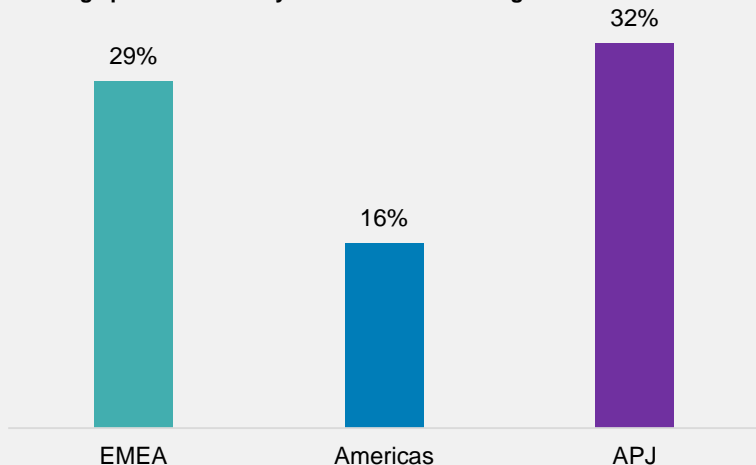
EMEA — 29%
Americas — 16%
APJ — 32%

What is your organization doing to counter the threat from the non-traditional start-up?

EMEA: 47% 39% 37% 35%
Americas: 51% 41% 38% 43%
APJ: 46% 46% 42% 34%

- ■ We have an obsessive focus on customer engagement and satisfaction
- ■ We are constantly growing our software development teams and capabilities
- ■ We have embedded digital across the organization
- ■ We have mobile and social media technologies at the heart of our business

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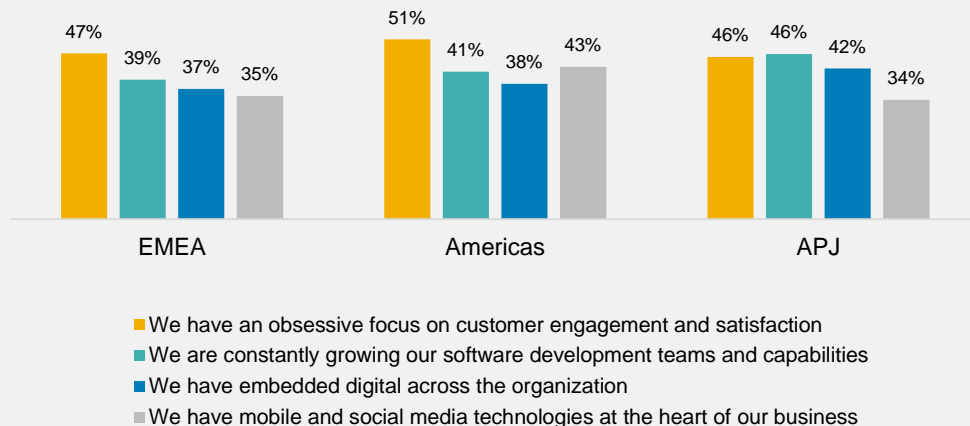
Key sector differences

Financial services

Customer demand for faster access to services, 24/7

Global: 65%
Financial services: 71%

Investing in digital skills/talent

Global: 27%
Financial services: 21%
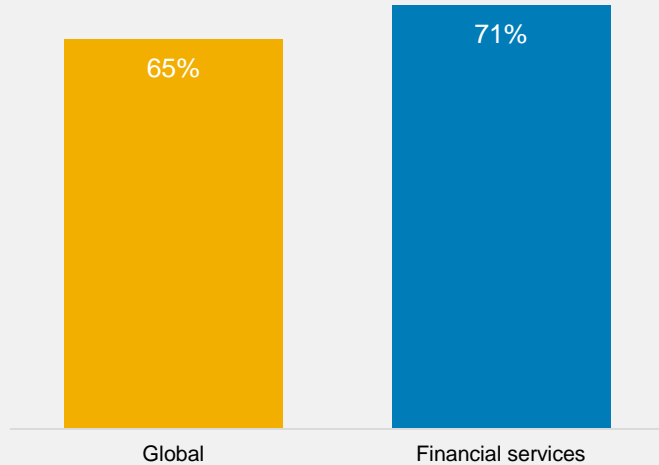
More respondents from financial services organizations say that customers are demanding faster access to services, 24/7
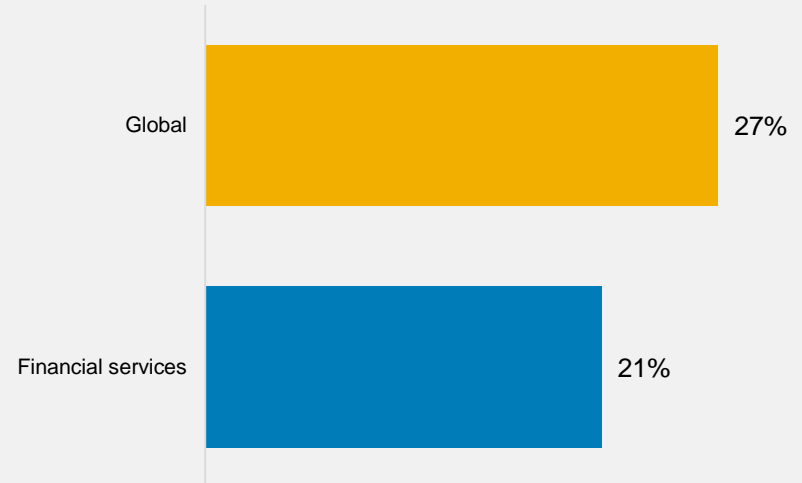
Respondents' organizations from financial services are least likely to be investing in digital skills (21%)

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Financial services

There is a possibility our company may become obsolete in three to five years' time

Threat of non-traditional start-ups

Global

- ■ Yes - right now
- ■ No, not yet but we expect they will in four years or more
- ■ No, not yet but we expect they will in the next three years
- ■ No, not yet but we expect they will in the next 12 months
- ■ No, and we don't expect them to pose a threat in the future
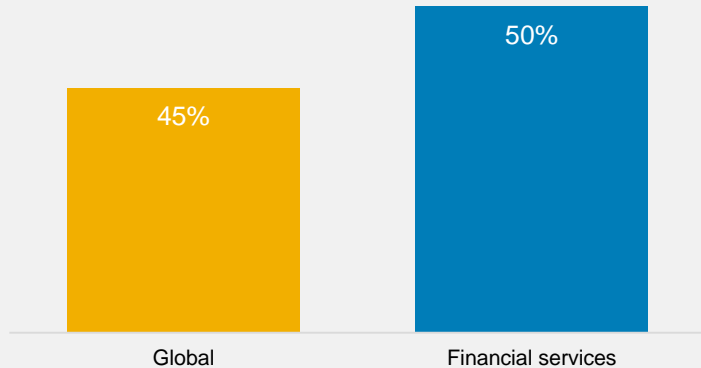
Half (50%) of respondents from financial services organizations agree that their company may become obsolete in 3 to 5 years' time
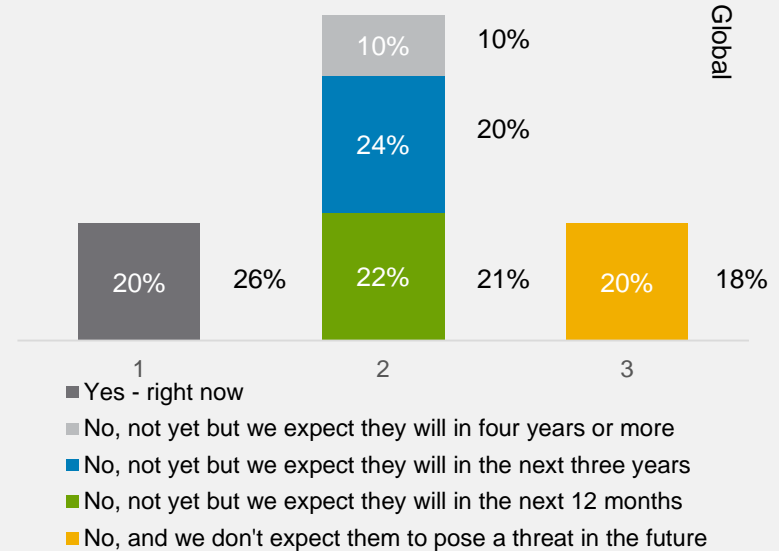
Respondents in financial services are least likely to say that non-traditional start-ups pose a threat (20%) to their organization

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Insurance

Customers in insurance (72%) organizations are more likely to demand faster access to services

Respondents in the insurance sector are more likely to agree that a centralized strategy should be a priority (81%)

Customer demand for faster access to services, 24/7

Centralized technology strategy should be more of a priority

65% Global

72% Insurance

73% Global

81% Insurance

DELLTechnologies
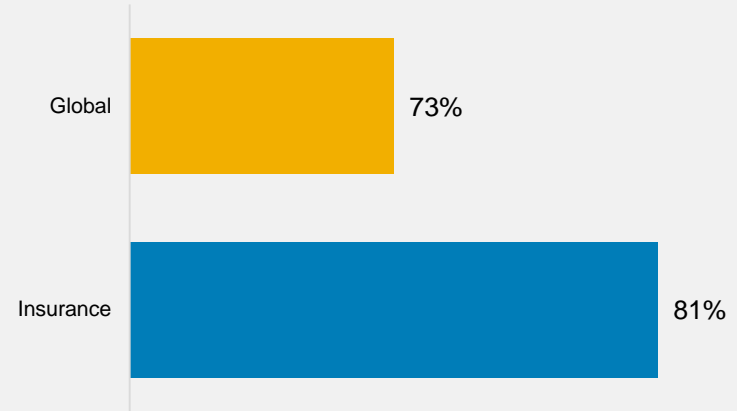
Insurance

More than half (52%) of respondents from insurance organizations agree that their company may become obsolete in three to five years' time
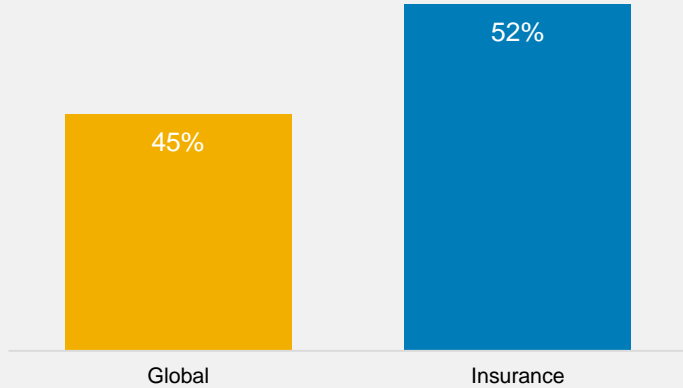
The majority of respondents in the insurance organization (53%) do not know what their industry will look like in 3 years' time

There is a possibility our company may become obsolete in three to five years' time

52%

45%

Global   Insurance

We do not know what our industry will look like in three years' time

53%

48%

Global   Insurance

Automotive, Financial Services, Public healthcare, Private healthcare, Technology, Insurance, Life sciences, Manufacturing, Media & entertainment, Oil & Gas, Retail, Telecommunications, Other commercial

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Oil and Gas

Respondents from the Oil and Gas sector most likely to agree that digital transformation could be more widespread in their organization (78%)

Digital transformation could be more widespread throughout the organization
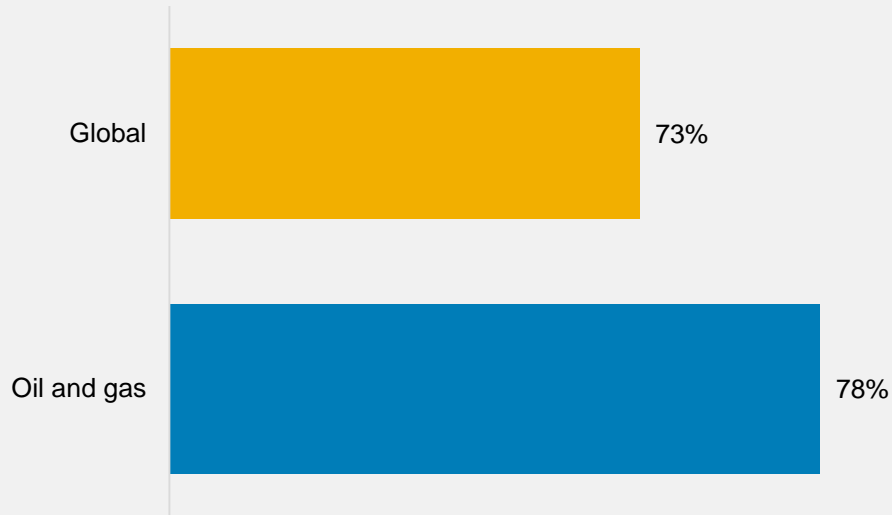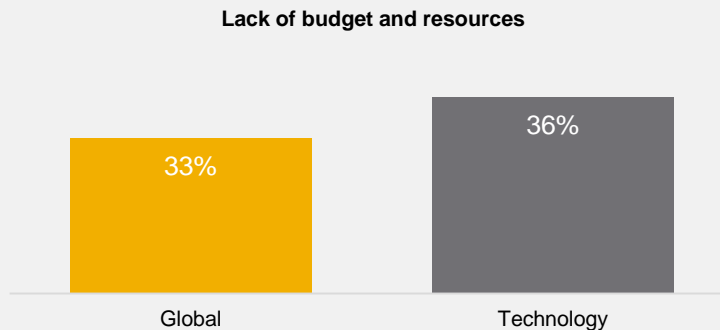

Global — 73%

Oil and gas — 78%

Automotive, Financial Services, Public healthcare, Private healthcare, Technology, Insurance, Life sciences, Manufacturing, Media & entertainment, Oil & Gas, Retail, Telecommunications, Other commercial

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Oil and Gas

Oil and gas respondents most likely to agree that their organization could become obsolete in three to five years' time (52%)
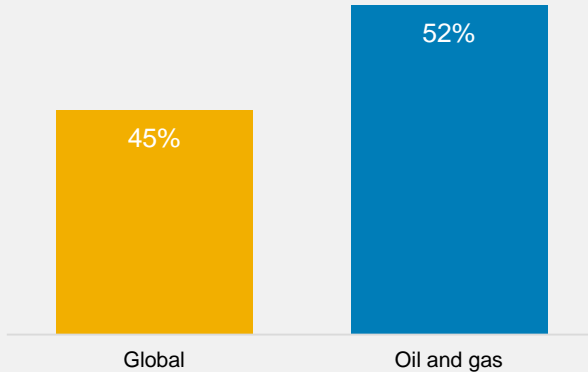
Majority of oil and gas sector respondents (54%) do not know what their industry will look like in 3 years' time

There is a possibility our company may become obsolete in three to five years' time

We do not know what our industry will look like in three years' time
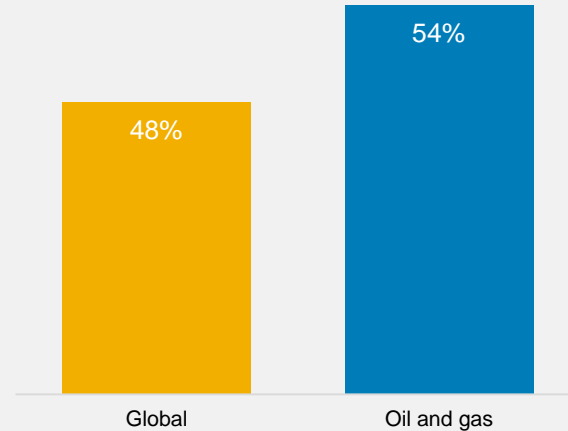
45% Global
52% Oil and gas

48% Global
54% Oil and gas

Automotive, Financial Services, Public healthcare, Private healthcare, Technology, Insurance, Life sciences, Manufacturing, Media & entertainment, Oil & Gas, Retail, Telecommunications, Other commercial

DELLTechnologies

Technology

81% of respondents from technology organizations believe their strategy and vision could be improved
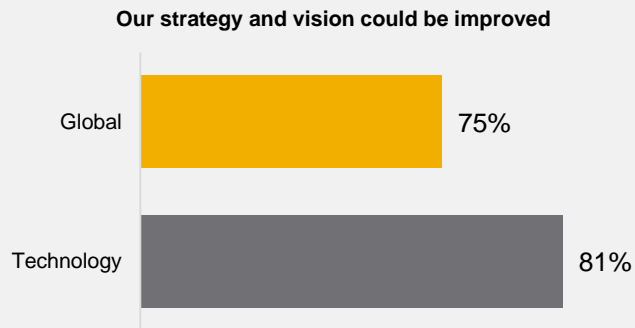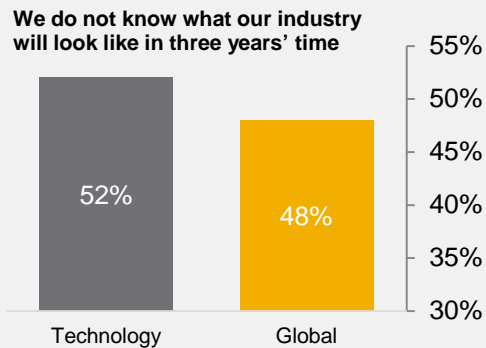
36% of technology respondents report that their organizations face a lack of budget and resources as a barrier to digital business – higher than the global average

Our strategy and vision could be improved

Global	75%
Technology	81%

Lack of budget and resources

Global	33%
Technology	36%

Automotive, Financial Services, Public healthcare, Private healthcare, Technology, Insurance, Life sciences, Manufacturing, Media & entertainment, Oil & Gas, Retail, Telecommunications, Other commercial

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Technology

52% of technology respondents do not know what their industry will look like in three years' time (52%)

Technology respondents are more likely to agree that their industry has seen new competitors (73%) of late

We do not know what our industry will look like in three years' time

My industry has seen the entrance of new competitors as a result of digital technologies and initiatives
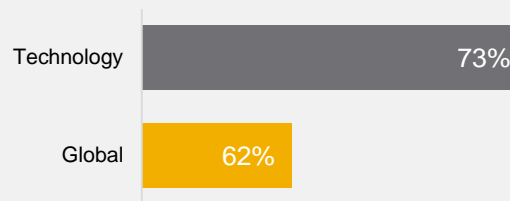
Automotive, Financial Services, Public healthcare, Private healthcare, Technology, Insurance, Life sciences, Manufacturing, Media & entertainment, Oil & Gas, Retail, Telecommunications, Other commercial
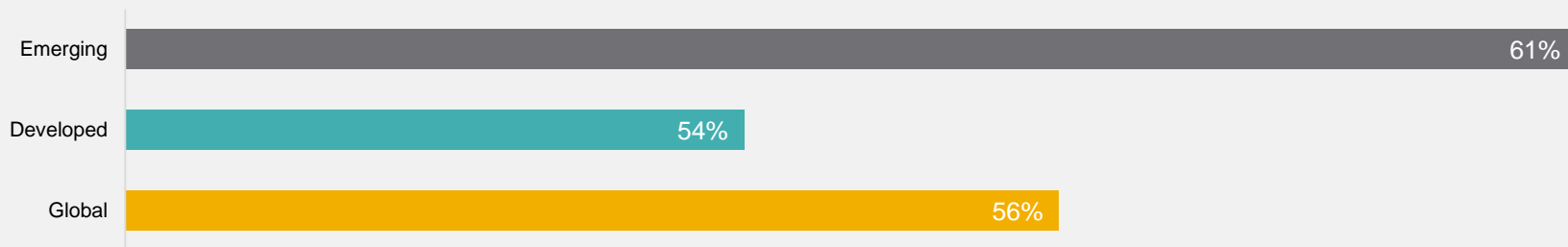
DELLTechnologies

Developed vs. emerging differences

Developed vs. emerging

Where are digital demands coming from?

Organizations in emerging markets are most likely to have
customers as their main influence driving digital transformation (61%)

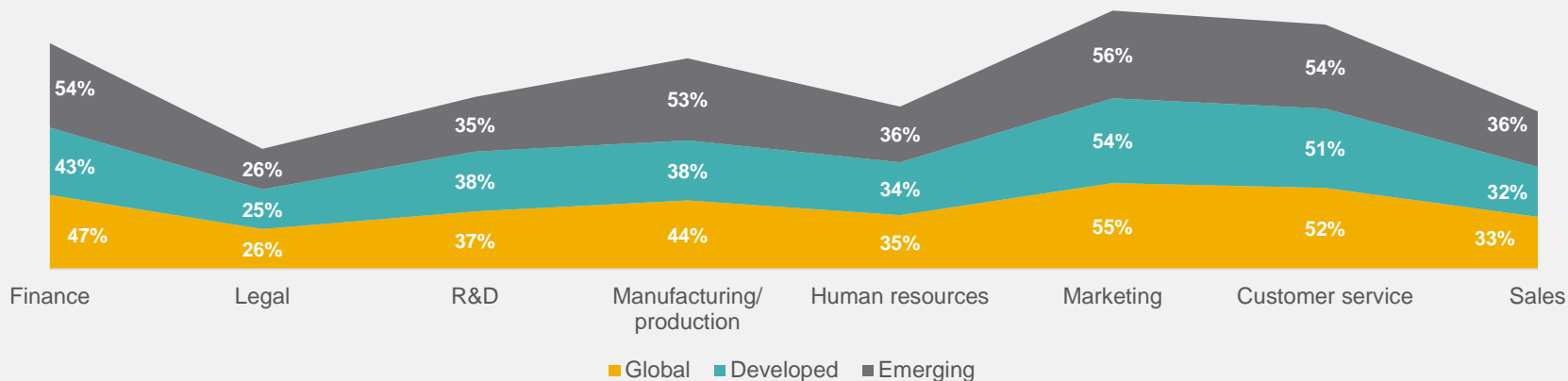**Customers as a key influence on digital transformation**

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

D∅LL Technologies

Developed vs. emerging

Where are digital demands coming from?

In emerging markets, finance (54%) and manufacturing (53%) are much more likely to be driving digital transformation outside of the IT department

Functions outside of IT driving digital transformation

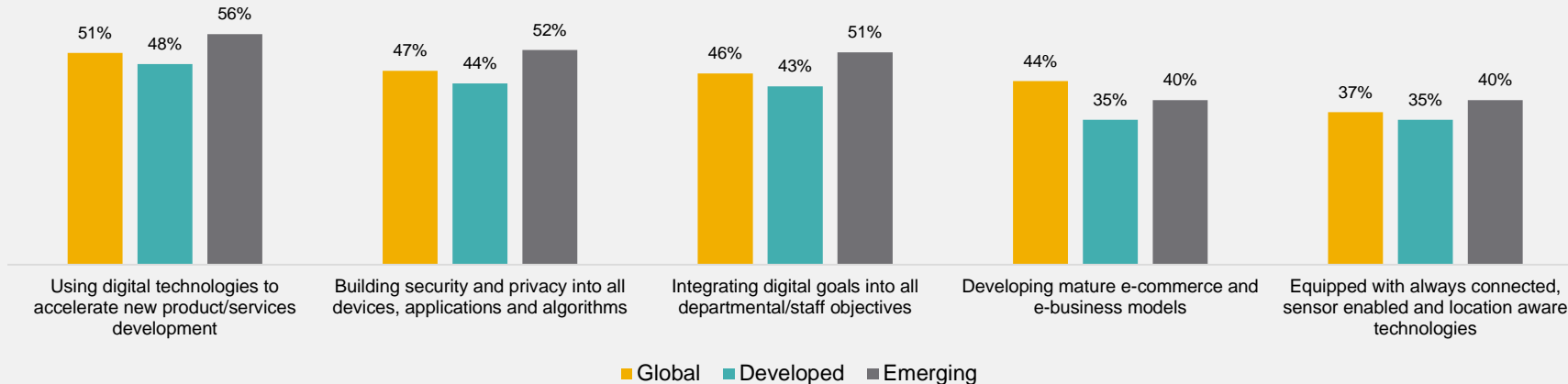|	Finance	Legal	R&D	Manufacturing/production	Human resources	Marketing	Customer service	Sales
Emerging	54%	26%	35%	53%	36%	56%	54%	36%
Developed	43%	25%	38%	38%	34%	54%	51%	32%
Global	47%	26%	37%	44%	35%	55%	52%	33%

■ Global ■ Developed ■ Emerging

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

D∉LL Technologies

Developed vs. emerging

How are organizations doing it?

As part of their digital transformation approach, emerging markets are more likely to be using digital technologies to accelerate development (56%), build security into all devices (52%) and integrate digital goals in objectives (51%)

Thinking about what a digital business looks like, which of the following is your organization doing? Showing global top five elements

	Global	Developed	Emerging
Using digital technologies to accelerate new product/services development	51%	48%	56%
Building security and privacy into all devices, applications and algorithms	47%	44%	52%
Integrating digital goals into all departmental/staff objectives	46%	43%	51%
Developing mature e-commerce and e-business models	44%	35%	40%
Equipped with always connected, sensor enabled and location aware technologies	37%	35%	40%

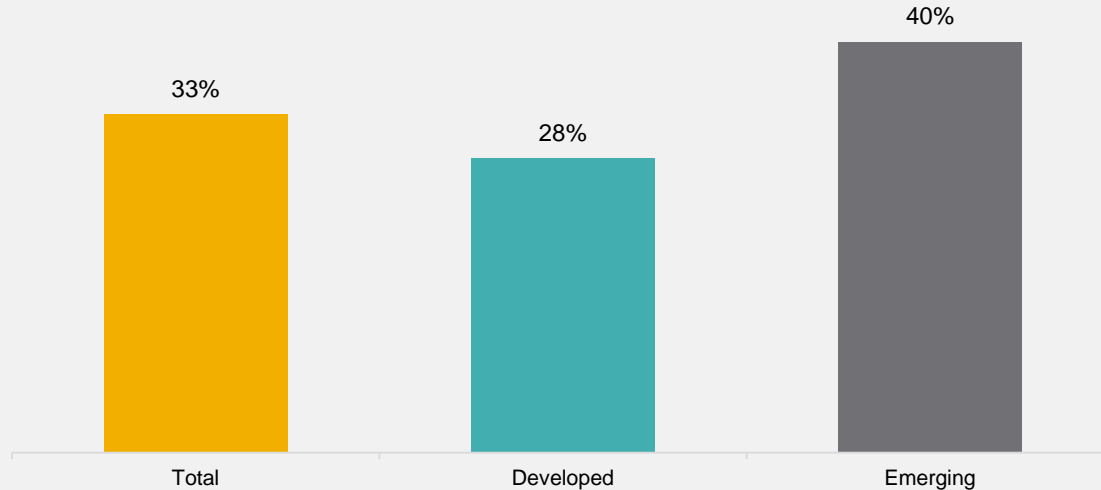■ Global ■ Developed ■ Emerging

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

D∕∕LL Technologies

Developed vs. emerging

How are organizations doing it?

The CEO is much more likely to be leading digital transformations in emerging markets (40%) compared to developed markets (28%)

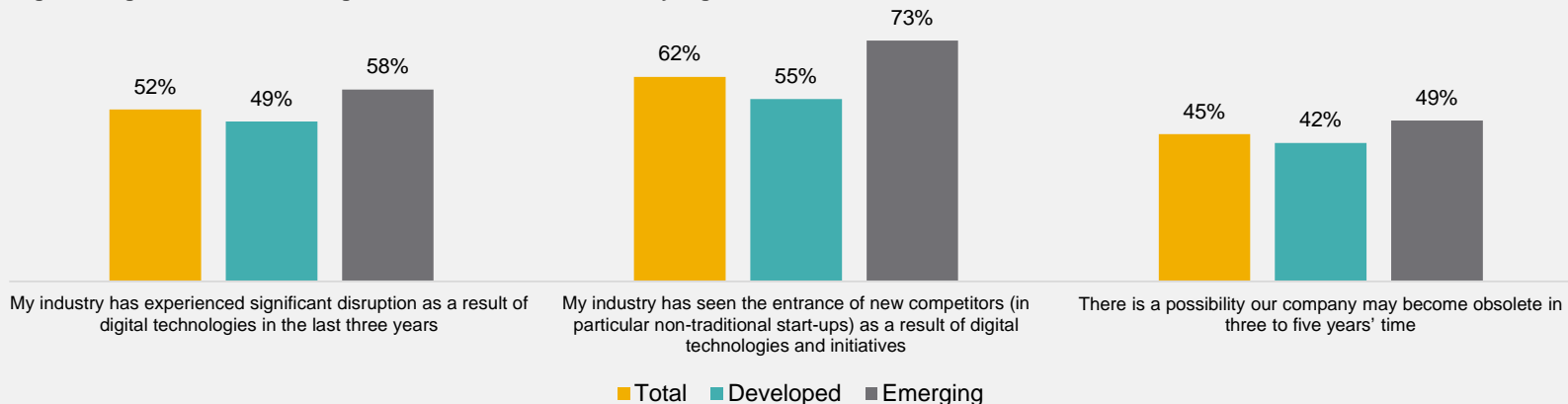**CEO (Chief Executive Officer) as the leader of digital transformation**

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

DELLTechnologies

Developed vs. emerging

The future and disruptive trends

Emerging markets are more likely to have experienced significant disruption from digital technologies (58%) and the entrance of new competitors (73%). A larger proportion (49%) question their organization's prospects in three to five years' time

%age who agree with the following statements about their industry/organization

My industry has experienced significant disruption as a result of digital technologies in the last three years

My industry has seen the entrance of new competitors (in particular non-traditional start-ups) as a result of digital technologies and initiatives

There is a possibility our company may become obsolete in three to five years' time
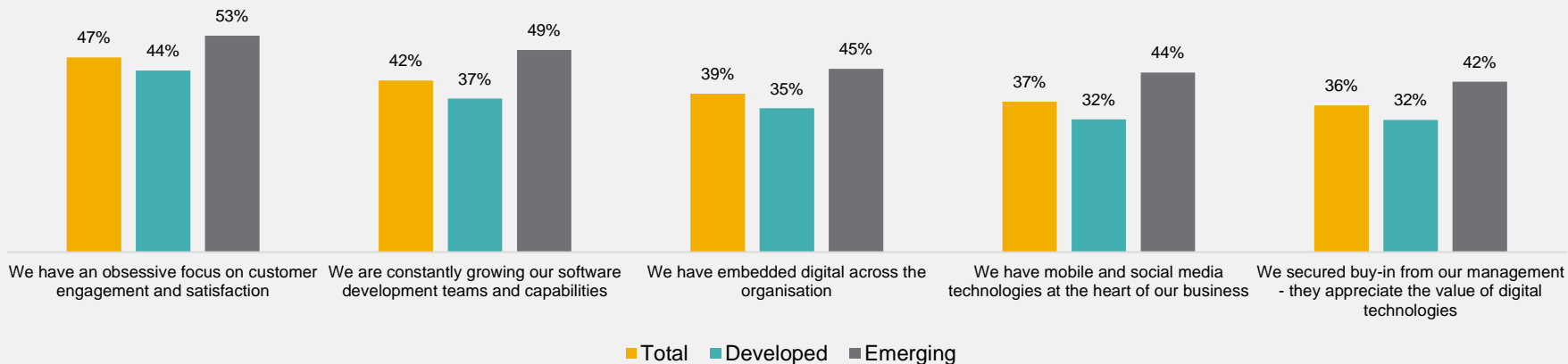
■ Total ■ Developed ■ Emerging

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

D∈LL Technologies

Developed vs. emerging

The future and disruptive trends

Organizations in emerging markets are more likely to take actions to counter the threat of non-traditional start-ups, including having an obsessive focus on the customer (53%), constantly growing software development (49%) or placing mobile and social technologies at the heart of the business (44%)

What is your organization doing to counter the threat from the non-traditional start-up? Showing global top five actions

	Total	Developed	Emerging
We have an obsessive focus on customer engagement and satisfaction	47%	44%	53%
We are constantly growing our software development teams and capabilities	42%	37%	49%
We have embedded digital across the organisation	39%	35%	45%
We have mobile and social media technologies at the heart of our business	37%	32%	44%
We secured buy-in from our management - they appreciate the value of digital technologies	36%	32%	42%

Developed: UK, France, Germany, Italy, Switzerland, Netherlands, US, Canada, Australia, Japan
Emerging: UAE and Saudi Arabia, Mexico, Brazil, India, China

DELLTechnologies