Tech Survey Saudi Arabia

Insights from technology leaders on digital transformation progress and digital maturity

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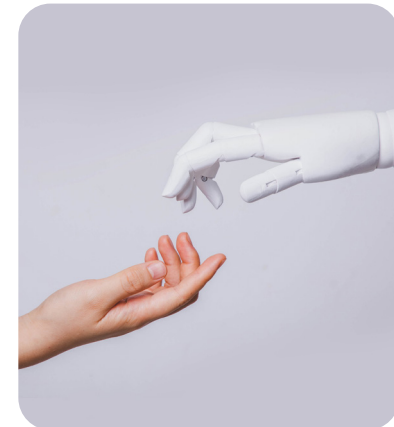
Foreword

Public and private sector organizations in Saudi Arabia have been investing heavily in digital transformation. Inspired by Vision 2030 and government digital transformation initiatives, companies have set their ambitions high. Aiming to harness technology to outperform their global counterparts, they have been quick to embrace artificial intelligence, data transformation and emerging technologies.

For the global version of this report, KPMG surveyed more than 2,200 executives and conducted a series of in-depth discussions with industry experts to uncover the technology strategies businesses are using to help outsmart their competitors in a time of unprecedented global change. This report focuses on the responses from 51 surveyed technology leaders in Saudi Arabia, compared with the global outcomes.

The Tech Survey Saudi Arabia finds a resilient, forward-looking attitude among technology professionals in the Kingdom and their global peers. Moreover, Saudi organizations also demonstrate that they are not risk adverse in adopting tech at the cutting edge, in some cases moving farther and faster than their peers.

It is the breathtaking pace of change and widespread commitment of organizations to leverage technology to transform their businesses that defines today's technology market. Our survey highlights that key technology projects in the Kingdom enjoy a high degree of leadership support and funding, indicating that confidence in technology solutions has never been higher.

Robert Ptaszynski
Head of Digital & Innovation

The headline numbers

Quantum computing

2 years

the expected timeframe for most Saudi organizations to invest in quantum computing.

Digital transformation

100%

of executives have generated returns from digital investments.

Data & Analytics

7 in 10

businesses indicate they are advanced in their adoption of data and analytics systems.

Cybersecurity

51%

of organizations face cultural challenges in achieving their cybersecurity goals

Talent shortages

#1

challenge complicating the adoption of digital technologies.

Data compliance

53%

of executives in Saudi Arabia find security and compliance requirements to be the top challenge their organization faces in their cloud journey.

Application security

63%

of organizations plan to increase investment in application security, 20% more than the global average.

Tech enthusiasm for customer engagement burns brightly
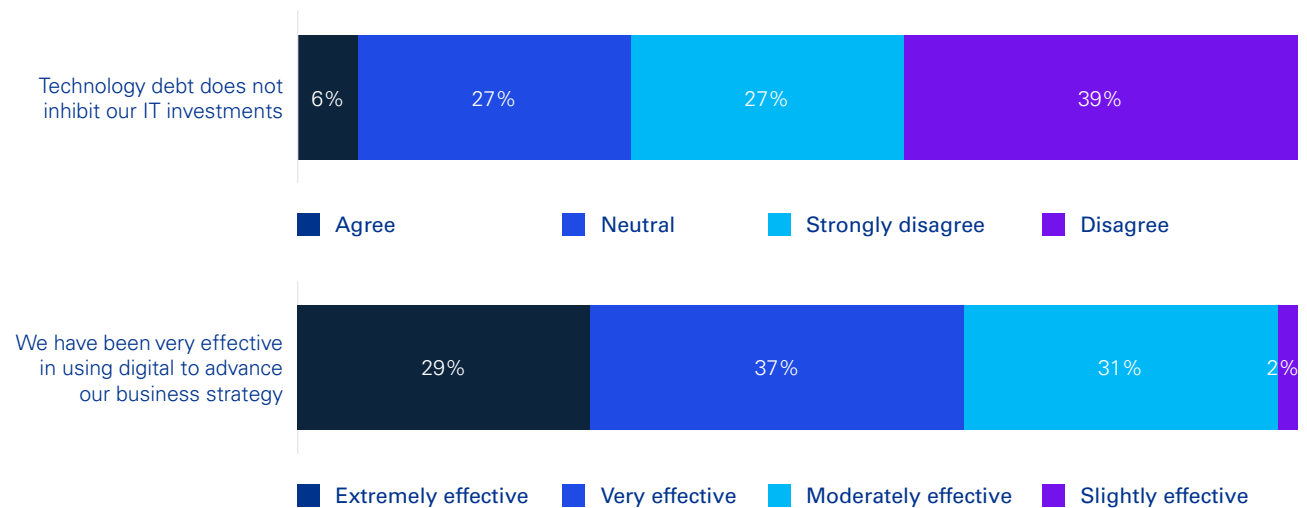
KPMG

Most technology leaders in Saudi Arabia are upbeat and confident about what they can achieve through digital transformation. In common with their global counterparts, 66 percent of Saudi-based respondents believe their organizations are either extremely or very effective at using tech to advance their business strategies.

This year marks the highest confidence level in this research series, suggesting that effective digital transformation is less of a differentiator than in previous years. Respondents' confidence is supported by high return on investment (ROI). Almost all businesses have successfully used digital transformation to improve their profitability or performance over the past two years, although most have only grown by between 1 and 5 percent in this period.

Eighteen percent of the respondent have extremely effective transformation programs that have generated at least an 11 percent uplift in profit or company performance. These digitally advanced organizations are 5 percentage points more likely to take a proactive approach in executing digital-transformation strategies.

Eighty percent of organizations in the Kingdom are at an advanced stage of their digital transformation strategies, with the leadership support and funding required to drive their program forward. Although 41 percent admit that progress is slower than expected, in general digital transformation programs have put Saudi organizations in the Kingdom in an advantageous position to embrace new technologies.

Sixty-six percent of technology leaders in Saudi Arabia today identify as digital leaders. Digital transformation is less of a differentiator than it was.

Technology debt does not inhibit our IT investments

6%	27%	27%	39%

- ■ Agree
- ■ Neutral
- ■ Strongly disagree
- ■ Disagree

We have been very effective in using digital to advance our business strategy

29%	37%	31%	2%

- ■ Extremely effective
- ■ Very effective
- ■ Moderately effective
- ■ Slightly effective

Respondents indicate that return on investment is extremely high — hardly anyone says returns are flat.

18%
45%
37%
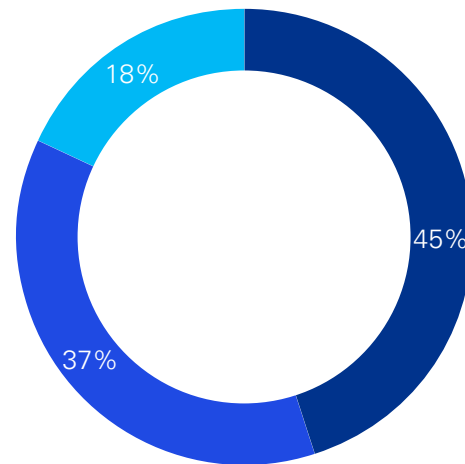
To what extent has digital transformation had a positive impact on profitability or performance in last two years?

- ■ Yes, 1-5% increase
- ■ Yes, 6-10% increase
- ■ Yes, 11% or more increase

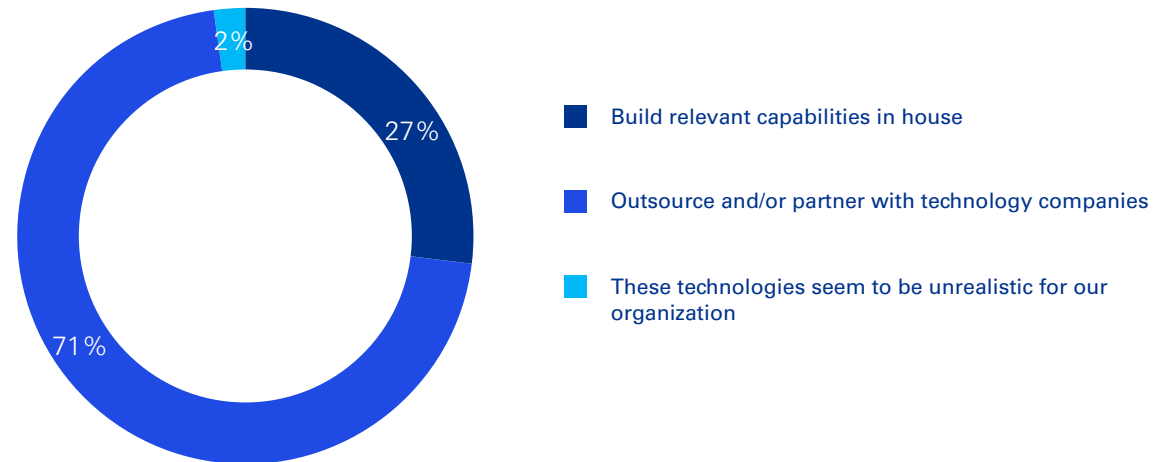## Businesses are pressing ahead with emerging technology

Respondents globally acknowledge the potential of emerging technologies and are laying the foundations for their implementation. However, our research indicates that organizations in Saudi Arabia may be pressing ahead faster with emerging technologies than elsewhere, with 22 percent of those surveyed indicating that they are implementing (compared with a global average of 10 percent).

Meanwhile, in common with global averages, Saudi organizations are positive about the opportunity to embrace the metaverse and Web3, but most are waiting for these technologies to become more developed and widely adopted before investing. Globally, the financial services sector appears to have the biggest appetite for investing in the metaverse within the next year, while energy and chemicals markets expressed the least appetite to invest in the concept.

Although much of the market is adopting a wait-and-see approach to the metaverse, 16 percent of respondents (globally and locally) indicated that they have already committed to Web3 projects or plan to do so during the next twelve months.

There are signs that in-house capabilities around emerging tech are in short supply. Forty-four percent more businesses in Saudi Arabia are looking to partner with tech companies to tap into the metaverse and Web3 than to build capabilities in-house. Overall, those who are extremely effective at digital transformation and are seeing the highest ROI are 5 percent more confident, than the market average in their ability to build metaverse and Web3 features in-house.

Regarding metaverse and Web3 technologies, how would (or are) you planning to build and deploy these assets?

2%
27%
71%

- Build relevant capabilities in house
- Outsource and/or partner with technology companies
- These technologies seem to be unrealistic for our organization

Nine in ten businesses (88 percent) indicate they are advanced in their adoption of cloud.

6%
10%
4%
80%
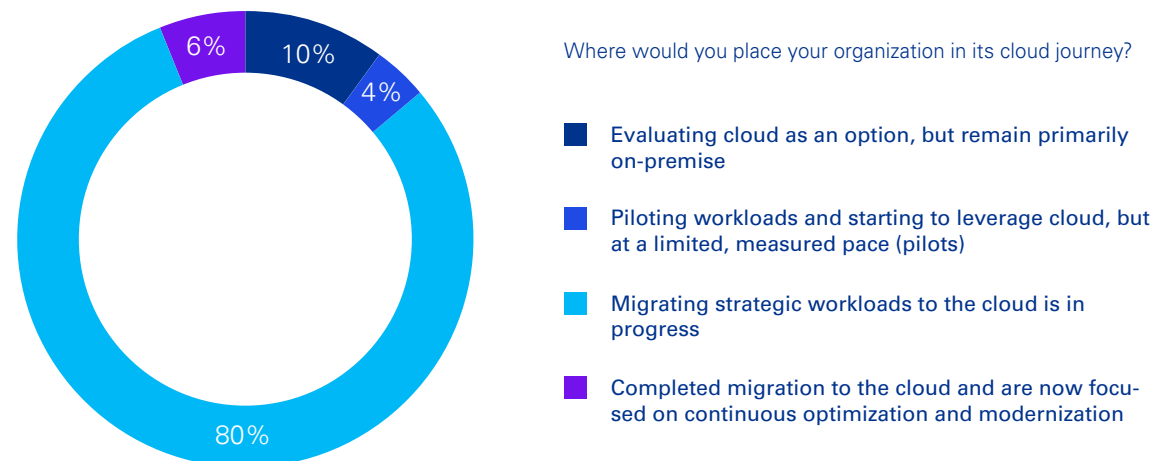
Where would you place your organization in its cloud journey?

- Evaluating cloud as an option, but remain primarily on-premise
- Piloting workloads and starting to leverage cloud, but at a limited, measured pace (pilots)
- Migrating strategic workloads to the cloud is in progress
- Completed migration to the cloud and are now focused on continuous optimization and modernization

Three-quarters of Saudi respondents indicate that technology debt (the long-term maintenance costs attached to technology systems), has little-to-no impact on their IT ambitions. Just over half of total respondents (53 percent) usually address enterprise IT upgrades in line with an agreed schedule. Poorly managed tech debt can trigger integration issues and lower overall productivity levels.
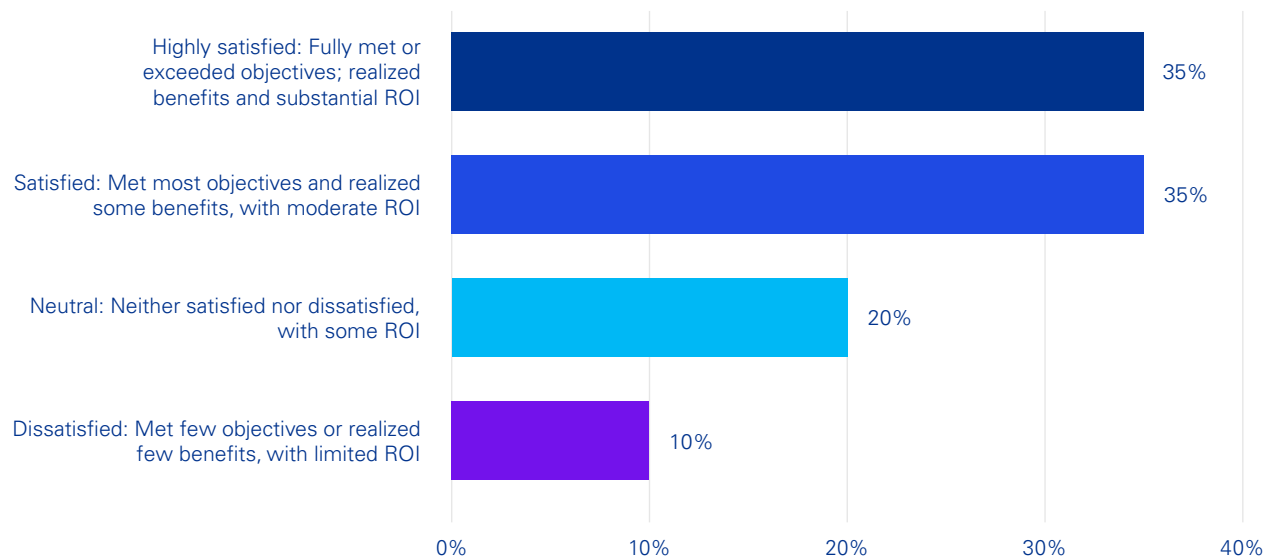
To avoid creating fragmentation that could harm customer interactions, blueprints for emerging technologies should not overlook the importance of minimizing tech-debt responsibilities.

Cloud adoption is no longer the mark of a digital leader, merely the logical evolution of IT

The move to the cloud is well underway. Reflecting wider confidence levels, 86 percent of Saudi respondents say they are advanced in their adoption of the technology, with 80 percent saying they are migrating strategic workloads to the cloud and 6 percent saying they have already completed migration and are looking to optimize their systems.

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Some government organizations and companies in Saudi Arabia have already identified metaverse and Web3 as a new potential channel to deliver services to their customers. However, government departments are naturally being careful to be sure that they pick the right pilot projects.

Maz Hussain
Head of Digital Lighthouse

Positive returns from cloud are high, especially around total cost of ownership (35 percent) and efficiency gains (33 percent).

How satisfied are you with the success of your cloud transformation programs?

Response	Percentage
Highly satisfied: Fully met or exceeded objectives; realized benefits and substantial ROI	35%
Satisfied: Met most objectives and realized some benefits, with moderate ROI	35%
Neutral: Neither satisfied nor dissatisfied, with some ROI	20%
Dissatisfied: Met few objectives or realized few benefits, with limited ROI	10%

> " Cloud adoption is now considered the logical next step in the playbook of the technology leader; how they advance to substantiate the desired outcomes remains the key strategic imperative.

Adib Kilzie
Head of Customer Experience, Cloud & Enterprise Solutions

The survey results point to a correlation between digital transformation and cloud programs; those organizations that managed the transformative programs effectively were able to realize the highest ROI.

Seventy percent of Saudi respondents are satisfied with the returns their cloud transformation programs have achieved to date. Overall, Chief Information Security Officers (CISOs) in the respondent base worldwide mostly agree with this, with 76 percent saying they are happy with the success of their cloud transformation programs. Fifty-seven percent of Saudi respondents have either been very effective or extremely effective in their migration from legacy applications to SaaS solutions.

The top advantage that tech executives in Saudi Arabia cited as a gain from their cloud programs was an improvement in security and compliance (39% percent). In contrast, the top advantage cited globally was lowering the total cost of ownership in comparison to end-to-end on-premises IT infrastructure. However, Saudi respondents did rank lowering TCO highly (33 percent), along with improvements in system performance (27 percent), and driving innovation (25 percent) as key benefits delivered via their cloud programs.

Organizations that are extremely digitally effective and seeing the highest ROI are more likely to tap into the cloud's ability to improve efficiency and sustainability than the wider respondent base.

Talent and culture are areas that are likely to slow transformation and optimization plans

The biggest challenge businesses face in their adoption of digital technologies both globally and within Saudi Arabia is the lack of talent. Broadly in sync with the global average, 41 percent of Saudi respondents identified lack of capable talent to carry out key roles as one of their biggest challenges.

With digital tools embedded into almost all aspects of business operations today, organizations increasingly require employees that embody a strong blend of business-domain acumen and digital skills. For many, it is proving a challenge to find individuals who hold the required depth in technical knowledge and business understanding to implement digital tools in a sophisticated manner.

third biggest challenge (27 percent) after lack of talent (44 percent) and high costs of systems (35 percent). Although there is recognition from large business and government organizations in the country that digital governance policies have a key role to play, it has been tough to set long term policies whilst government regulations are still falling into place.

For example, data governance is a key component of any organizations digital policy, with security and data protection being top priorities. It will prove to be easier to set organizational data policies when the regulations for Saudi Arabia's first Personal Data Protection Law (PDPL) are finalized. Until then, those responsible for legal compliance will find it difficult to advise on data governance policy.

While the challenge to find, hire and develop the right talent remains a real one, many large Saudi organizations are taking a proactive approach to acquiring talent, investing heavily in programs to train and develop local talent. Meanwhile, at a government level, the past three years has seen a massive push to create education and training programs that help to significantly increase the number of Saudi's entering the workforce with up-to-date digital and technology skills.

Risk-averse corporate cultures were ranked among the top five digital-transformation challenges globally, holding back initiatives for 24 percent of respondents. However, only 12 percent of organizations in the Kingdom felt a risk-averse culture was a big challenge.

For Saudi respondents, the lack of clear and transparent digital governance policies throughout the organization presented far more of a problem, ranking it as the

> " Top organizations recognize that talent is going to remain one of IT's greatest challenges for the foreseeable future and are investing heavily in developing their own talent.

Fadi Alsheikh
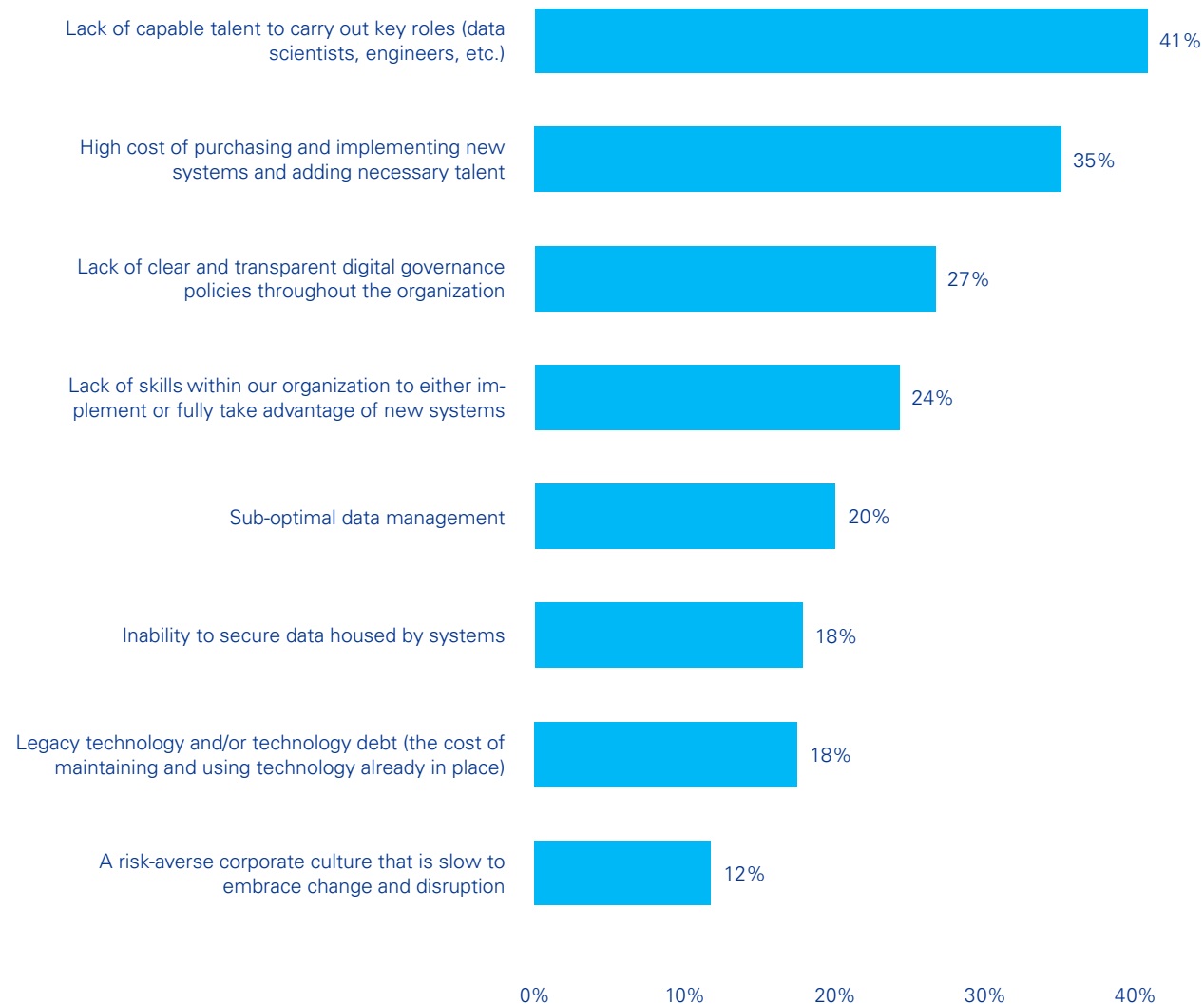Head of CIO Advisory & Business Continuity Management

Budget inadequacy is an issue

The second-biggest challenge in pursuing digital transformation is the high cost of purchasing and implementing new systems and sourcing necessary talent. Most annual tech budgets sit at between 10 and 20 percent of their company's overall annual budget, and a significant minority (46 percent) are less than 10 percent.

Just over a fifth of Saudi organizations (22 percent) say that lack of investment approval or executive buy-in is limiting progress with emerging tech. While this appears to be more of a challenge globally than within the country, a higher proportion of Saudi respondents cited legacy technology and technology debt as a challenge then the global average (18 percent versus 14 percent).

This said, available budget does not seem to present an obstacle for organizations to update and adopt the latest software versions and features. Fifty-three percent of Saudi respondents indicated that software changes were adopted relatively quickly, according to schedule, while 25 percent indicated that updates are made as soon as they are available.

What are the biggest challenges you face in your adoption of new digital technologies?

Challenge	Percentage
Lack of capable talent to carry out key roles (data scientists, engineers, etc.)	41%
High cost of purchasing and implementing new systems and adding necessary talent	35%
Lack of clear and transparent digital governance policies throughout the organization	27%
Lack of skills within our organization to either implement or fully take advantage of new systems	24%
Sub-optimal data management	20%
Inability to secure data housed by systems	18%
Legacy technology and/or technology debt (the cost of maintaining and using technology already in place)	18%
A risk-averse corporate culture that is slow to embrace change and disruption	12%

The government's **Cloud Computing Regulatory Framework** (CCRF) and more recently the interim data governance regulations issued by the National Data Management Office have made it possible Saudi organizations to create governance frameworks. However, for legal and compliance teams hope that the upcoming **Personal Data Protection Law** (PDPL) will provide the remaining detail they need to set more robust data policies.

Confidence in ability to face cybersecurity threats

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> The shift in mindset to customer centricity has led to rapid digital transformation of the customer experience. This makes cyber security even more critical, not just for safe, secure customer engagement and data protection, but also as a key pillar of customer trust.

Ton Diemont
Head of Cybersecurity & Data Privacy

Cybersecurity teams are under pressure to keep up with evolving threats, with cultural obstacles and limited funding getting in the way of security efforts. However, most Saudi organizations are confident of their ability to prevent or mitigate security risks. Even so, over half (55 percent) admit they are behind schedule with their position on cybersecurity, possibly reflecting the team's growing responsibilities across the business.

This should remind companies that they need to maintain momentum in cyber projects to help ensure they are not left exposed to fast-emerging cyber risks. Organizations that are extremely effective and seeing the highest ROI from implementing digital technologies see cultural obstacles as a more pressing challenge than consensus from the market average.

As technologies evolve, CISOs find themselves surrounded by additional systems and features, each of which requires attention. In fact, the growing complexity of operational technology and industrial control systems was ranked the third greatest cybersecurity challenge amongst respondents to our survey.

Cyber investment strategies should prioritize the areas of highest risk and return. An evidence-based framework of this nature can help ensure that cyber projects are advancing at the fastest rate possible.

How would you describe your organization's position today in your cybersecurity journey?

- 33%
- 67%
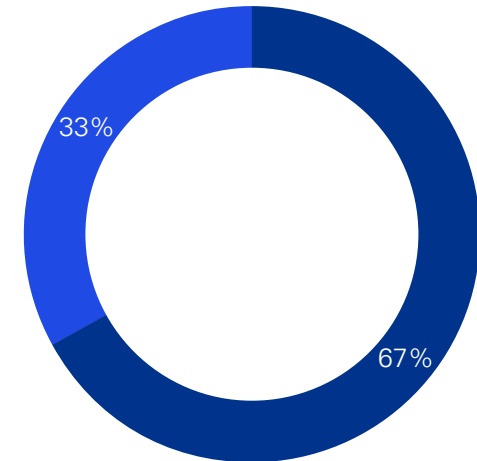
■ We are proactive in progressing against our strategy and are continually evolving

■ We are behind schedule, even if plans and a vision are in place

Digitalization of customer channels creates cyber challenges that jeopardize trust

The digitalization of customer channels and the adoption of hybrid working are the two biggest cybersecurity challenges faced by Saudi organizations, with almost half of respondents (47 percent) citing the need to improve customer experience as the top driver of their cybersecurity spending.

These findings are consistent with the idea that working practices adopted and investments made in response to Covid-19 have redrawn the cyber threat

landscape. Most Saudi organizations (63 percent) chose application security as a key area for increased investment over the next two years, highlighting the critical need to provide users with secure access to company data and applications, wherever they are.

These weak spots should guide companies as they use new digital and disruptive technologies to reimagine the customer experience.

Without the necessary oversight, new vulnerabilities could enter the system, potentially harming the customer relationship. According to KPMG's 2022 Cyber tust insights publication, concerns about data protection are the leading factor undermining stakeholder trust in businesses and their data management.

To help ensure that tech innovations enhance customer trust and loyalty, rather than put it at risk, security should be incorporated into planning from the beginning, rather than added later as an afterthought.

Confidence to navigate the terrain ahead

Despite the challenges, survey respondents in Saudi Arabia are confident in their cyber capabilities. More than 50 percent are either very or extremely confident in combatting various cyber threats, including from organized crime groups, insiders and compromised supply chains. In several threat categories this confidence level increased to over 60 percent.

Digital customer-interaction points create security risks, but the digitalization of contact channels requires a higher degree of risk protection. For example, customers no longer need to provide handwritten signatures on contracts and then email them as PDFs; instead, they can sign legal documents in encrypted, secure digital environments.

> "
> With remote employee access, omnichannel retail and even more integration with supply chain partners, data protection has never been more important. Organizations must adopt a holistic view to develop strategy for identity, data protection, privacy and cyber resilience.

Ton Diemont
Head of Cybersecurity & Data Privacy

Seven defining traits of today's digitally-mature organizations

To date, most technology leaders report positive returns from their transformative efforts to improve their competitive edge through technology. Almost all businesses have enhanced their profitability or other metrics of performance over the past two years through digital transformation. With confidence levels around digital effectiveness at a record high, our study shows us that digital-transformation success is fast becoming a baseline requirement for businesses.

In previous KPMG CIO studies we defined digital leaders as any organization that was either very or extremely effective at using digital technologies to advance their business strategies. This surge in digital competency will help reshape our definition of digital leaders in future instalments of this research series.

To begin our journey of mapping out the new definition of digital leadership, here we present seven traits we have observed in today's most digitally advanced organizations. These traits work together to optimize the output of IT, ensuring digital-transformation efforts are sustainable and continue to add value and contribute to loyalty-winning customer experiences in the long term.

Today's digitally-mature organizations...

1   **Tear down silos so the voice of the employee can be heard between departments**

Tech investments should remove points of friction from customer journeys and build convenience into points of interaction. However, when tech-implementation plans fail to incorporate feedback from key stakeholder groups, new digital investments can create inefficiencies that inflate operational costs and irritate customers.

To avoid creating unnecessary inefficiencies with tech-innovation efforts, digital leaders are tearing down siloes so projects can draw continually on employee feedback from key stakeholder groups. Here, the voice of the employee guides innovation efforts away from flawed implementations that could damage customer experiences. Early strategy calls include involving the likes of cyber, procurement, IT and business functions to achieve a holistic perspective on the best path forward.

This spirit of collaboration lives on through the daily operations of digitally advanced businesses. As IT expertise is increasingly required across various business functions, routine cross-departmental collaboration and education allow business and IT employees to resolve misunderstandings and gain clarity on each other's perspective. This healthy dynamic enhances team productivity and can identify opportunities to introduce more convenience into customer experiences.

2   **Are part of the solution for the talent crisis**

The talent crisis is not going to resolve itself, especially when it comes to in-demand skills in new and emerging technologies. For technology teams, the short-term challenge is likely to worsen as businesses review their hiring plans to mitigate the impact of economic uncertainty and consider putting a freeze on new hires.

Progressive businesses are recalibrating their approaches to hiring and training specialist talent from the ecosystem. Long-term talent strategies should encourage organizations to widen their perspectives and expand the universe of talent.

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Large organizations must take ownership of the tech talent challenge and turn it to their advantage. It's an opportunity for organizations to develop their ideal employees, support employees achieving their full potential and align people to strategy, rather than relying on recruiting new specialists.

Fadi Alsheikh
Head of CIO Advisory & Business Continuity Management

Companies become part of the solution by restocking the talent pools available. Outreach programs with colleges and universities can educate and inspire individuals approaching entry-level jobs to develop the most in-demand skills.

At the same time, mature businesses must ensure their staff feel supported in their professional growth.

Technology leaders are looking to automation to address staff shortages and repair skill gaps. By automating workflows to take on the low-complexity, high-volume tasks, companies can redeploy staff and upskill teams to fill more strategic gaps elsewhere in the business.

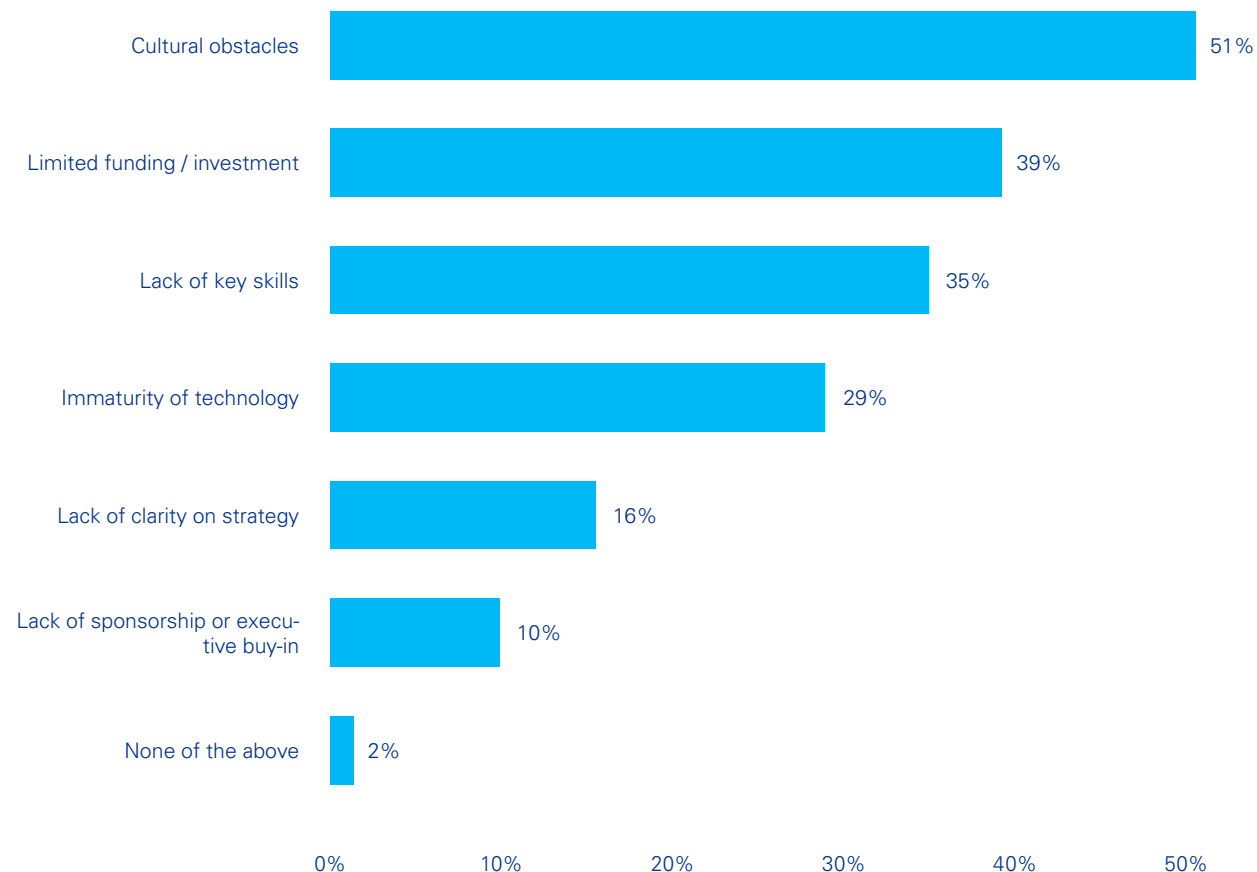**3 Build airtight alignment between cloud stakeholders**

Technology leaders are capitalizing on cloud's efficiency and cost benefits by optimizing their ways of working, with addressing stakeholder conflicts a key focus area.

Stakeholder misalignment is a major factor holding back cloud migration for the majority of businesses. CISOs say that stakeholder misalignment on outcomes is a bigger cloud challenge than security and compliance requirements.

Misalignment tends to occur between the IT team's vision of how cloud capabilities should be enabled and the cloud priorities of other business departments.

Some digitally-mature businesses are making progress in this area by appointing a dedicated head of cloud who considers the requirements of each stakeholder group and creates a strategy to optimize the business's cloud journey.

What are the major internal challenges to achieving your organization's cybersecurity goals?

Challenge	Percentage
Cultural obstacles	51%
Limited funding / investment	39%
Lack of key skills	35%
Immaturity of technology	29%
Lack of clarity on strategy	16%
Lack of sponsorship or executive buy-in	10%
None of the above	2%

> The many different type of cyber threats and the widespread disruption that they can cause, mean that CISOs should work to build multidisciplinary teams that support digital- transformation security. As a broad business issue, accountability for cyber resilience should be democratized and involved the participation of many stakeholders across the enterprise.

Ton Diemont
Head of Cybersecurity & Data Privacy

4 Ensure cyber specialists have early involvement in tech selection and staff education

This year's research suggests that businesses increasingly see cyber security as a golden thread running through growth and success, rather than just a compliance requirement. Enhancing corporate trustworthiness can increase profitability, as well as the size of the customer base.

Digitally-mature businesses operate with tech-innovation workflows that include cyber specialists early on. In our research, CISOs say the internet of things (IoT) is highly likely to receive investment attention over the next year, but they also admit that IoT services can present a major cyber security risk. As such, to show digital maturity, organizations should ensure CISOs and their cyber teams engage in early-stage discussions about how and where the technology is going to be used, and what this means for customer experiences.

With staff behavior and low cyber security awareness constituting significant sources of risk, digitally mature companies empower CISOs to conduct regular education in risk management.

Security teams in these organizations educate staff through a variety of teaching mechanisms, training sessions and simulations.

5 Allow the voice of the customer to guide emerging-technology strategies

To retain customers and market share, companies must continuously improve their digital capabilities and think differently about how to use technologies to meet, and exceed, expectations.

This means constantly evaluating whether technology selection and workflow design is aligned with customer needs and expectations. Cross-functional workshops can provide real-life insights that stress-test the value of certain technologies. These sessions can test prototypes and assess a technology's potential to provide meaningful value to target audiences.

Digitally mature businesses direct their emerging-technology investments towards capabilities that have the potential to deliver the outcomes that are of most value to customers. This approach can help keep more customers loyal to a brand in times of economic uncertainty.

6 Are prepared to switch platform providers to enhance customer experiences

There is a desire within corporate digital ecosystems to find one platform, or at least a reduced stack of enterprise technologies, which will meet business needs. This simplification of enterprise-system networks would have various benefits, including the reduction of technical debt. However, this aspiration to consolidate tech stacks will always be complicated by how capabilities advance and solution-provider landscapes shift.

As a result, even though it is a complex skill to master, the ability to move between platforms is becoming increasingly important for digitally mature businesses.

As business' tech stacks depend on a spread of systems from various providers, technology leaders are committed to ensuring the infrastructure of enterprise platforms is highly integrated, delivering seamless interaction points in customer experiences. Application programming interface (API) integration is assessed carefully to avoid creating silos that introduce fragmentation into customer journeys.

7 **Aren't afraid to experiment wisely**

Digitally mature companies ensure that their success does not create an overly protective or perfectionist culture that stifles innovation. This involves moving away from traditional investment frameworks that are structured to achieve benefits only at the very end of the initiative.

It is important to recognize that some avenues may turn out to be dead ends.

> Cross-functional workshops are invaluable to uncover how data, AI and other emerging technologies can provide business value. Working closely with functional teams and, importantly, those with insight on customers, can help identify the right use cases, assess technologies and concepts and set clear goals for emerging tech projects.
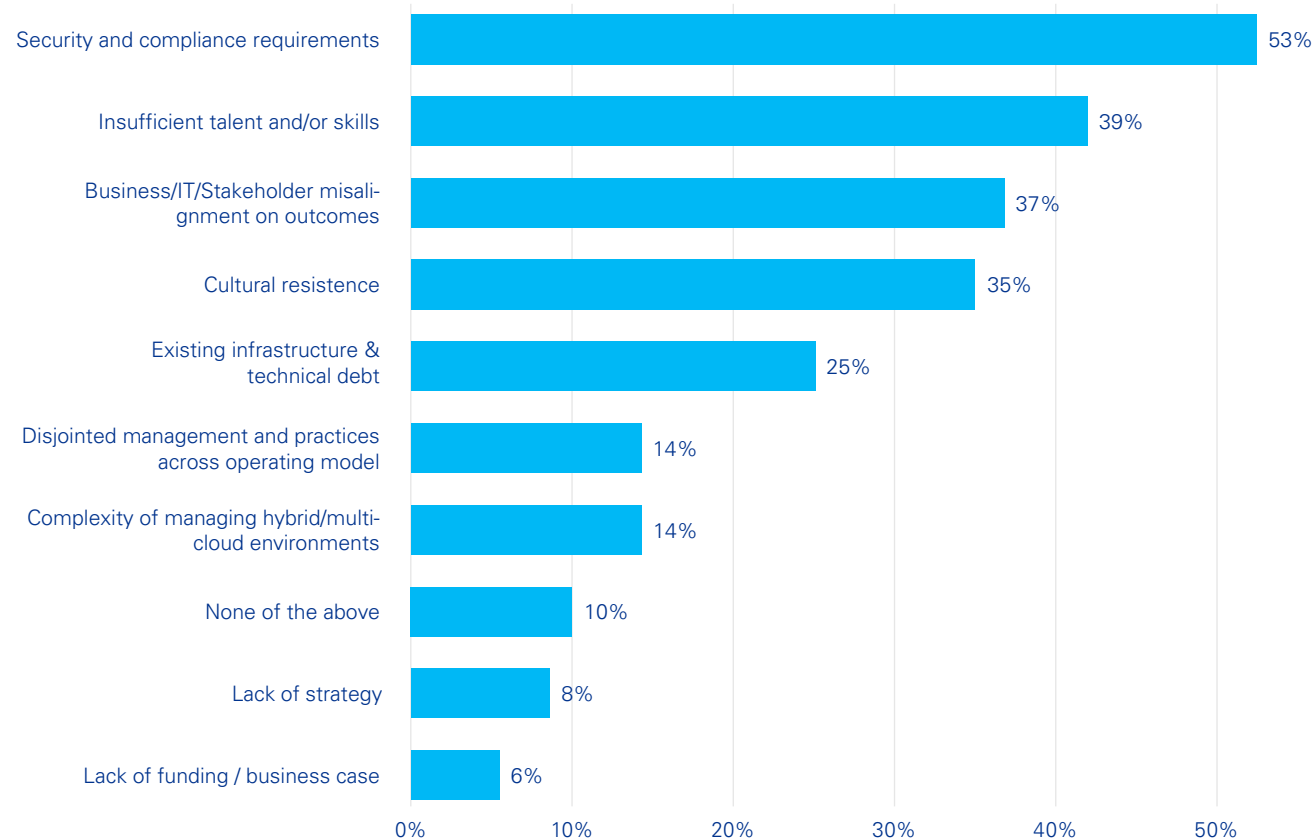
Maz Hussain
Head of Digital Lighthouse

What are the top challenges your organization is facing or has faced in your cloud journey?

Challenge	Percentage
Security and compliance requirements	53%
Insufficient talent and/or skills	39%
Business/IT/Stakeholder misalignment on outcomes	37%
Cultural resistence	35%
Existing infrastructure & technical debt	25%
Disjointed management and practices across operating model	14%
Complexity of managing hybrid/multi-cloud environments	14%
None of the above	10%
Lack of strategy	8%
Lack of funding / business case	6%

> As important as setting clear goals for new technology projects, is learning from them along the way. New milestones, goals and beneficial outcomes can often be discovered during pilots and proof of concepts, which sometimes end up changing your original strategy for the better.
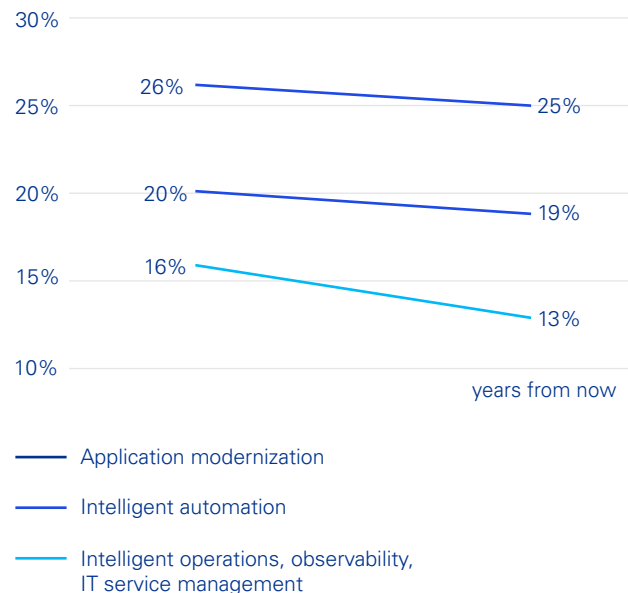
Digital transformation is living up to its promise
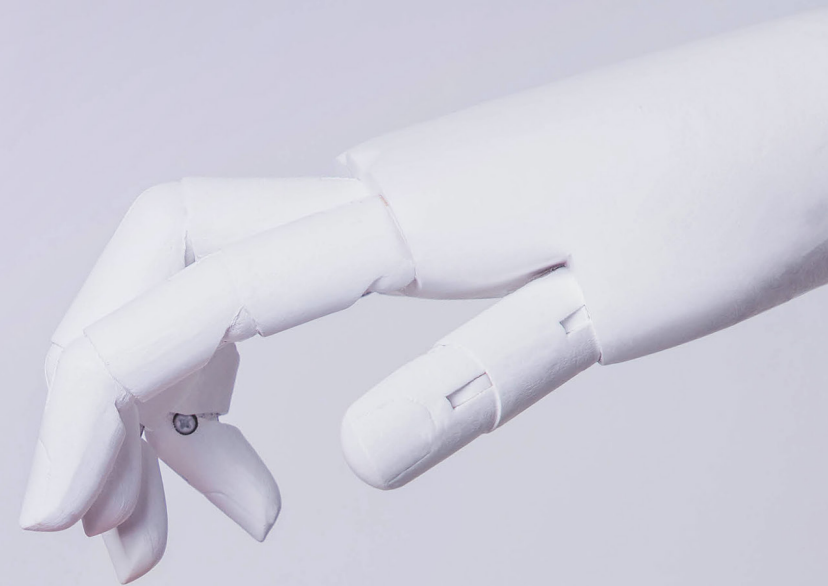
Digital transformation is living up to its promise. Our research finds that claims of significant progress, in line with Vision 2030, are well-founded. In recent years, leadership teams have tasted success as a result of their transformation activities and remain optimistic about what they can achieve in the future.

Businesses expect to downscale over time, after hitting implementation milestones.

Where will your organization invest the most over the next year and years from now?

- Application modernization
- Intelligent automation
- Intelligent operations, observability, IT service management

Almost all respondents to our global survey say that their organizations' digital transformations have improved profitability and/or performance over the past two years. They also appear to be reaching key implementation milestones sooner than expected. Some organizations in the Kingdom are clearly ahead of the maturity curve, with significantly more tech executives in Saudi Arabia planning to prioritize intelligent automation during the next year (51 percent), compared with the global average (38 percent).

Our survey reveals widespread appetite for new technology, even if it is untried and potentially disruptive. Fifty-one percent of Saudi respondents expect to embrace the Metaverse within two years, while 61 percent plan to invest in non-fungible tokens (NFTs) and 61 percent in Web3. Seventy-two percent expect to have invested in quantum computing within the same timeframe.

Vision 2030 drives digital transformation momentum

Saudi Arabia's relentless quest to modernize government and industry is evidently promoting both widespread change and acceleration of digital transformation across the country. Our survey clearly shows the great focus that Saudi organizations have put on improving efficiency, enterprise agility and reducing risk.

Sixty-nine percent of business leaders questioned cited driving growth, efficiency and resiliency as primary drivers of their organization's digital transformation. Meanwhile, 57 percent identified reducing risk as a key driver and 53 percent identified improving enterprise agility and modernization. The weighting of these factors as drivers of digital transformation among Saudi respondents was significantly higher than the overall global averages. This finding, coupled with openness that leadership

Saudi organizations prioritizes Intelligent Automation

51 percent of respondents plan to invest in Intelligent Automation during the next twelve months and 49 percent in the next three years, compared with the global average of 38 percent and 30 percent respectively.

teams seem to have towards embracing emerging technologies, indicates that momentum continues to build for digital transformation in the Kingdom.

Built around three core themes; a vibrant society, a thriving economy and an ambitious nation, Vision 2030 identifies accountability, transparency and effectiveness as fundamental to the government's transformation. The national development strategy has given rise to a wide variety of programs that aim to transform government, the business and industrial sector and the Kingdom's education system.

Technology investment has been recognized as a critical success factor, at the most senior level.

There is no doubt that digital transformation has become a key pillar of Vision 2030, giving organizations the ability to dramatically increase efficiency and productivity. This has further boosted Saudi Arabia's status as an investor in technology. According to a comment by Ahmed Mohammed Al-Suwaiyan, Governor of the Digital Government Authority at the 2022 Global Entrepreneurship Conference in Riyadh, government spending on technology is the highest globally and is expected to account for SAR93 billion (US$24.8 billion) by 2025, or 21.7 percent of national spending.

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Leaders allocate funding for AI, but many projects face delays

78 percent of survey respondents are at an advanced stage with their AI and automation strategies, proceeding with funded projects, well supported by leadership. However, 45 percent of those say that implementation has been slower than expected.

Clear government directives underpin key trends

More than perhaps anywhere else in the world, government policymaking in Saudi Arabia has had a direct impact on both public and private sector adoption of new technologies. It's no coincidence that our technology survey shows most Saudi organizations already have the vision, leadership and funding for artificial intelligence, cloud, data and digital transformation programs, in line with national initiatives announced by the government in those areas.

For example, the announcement of a cloud-first policy by the Ministry of Communications and Information Technology in 2019, has led to the creation of one of the world's largest government clouds. Two years later the ministry called for US$18 billion worth of investment in hyper-scale data centers by 2030, to increase capacity over 1.3GW.

Our survey highlights that more than half of respondents are in advanced stages of their cloud computing plans, proactive in progressing their strategies and continually evolving their cloud usage. Similarly, Saudi respondents said they were also in an advanced stage with the implementation of AI and automation, data and analytics and cybersecurity programs. However, despite the fact that organizational leaders feel the confidence to allocate funding and greenlight such programs, 45 percent said that their AI and automation programs were behind schedule, 37 percent had cybersecurity programs behind schedule and 29 percent faced implementation delays with cloud programs.

In common with their global counterparts, enterprise technology seems to be playing a key role in the strategic ambitions of organizations in Saudi Arabia to enrich customer experiences. Most organizations in our survey prioritize investment in customer experience, both during the next twelve months (59 percent) and looking forward to three years' time (61 percent).

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Saudi organizations have truly risen to the digital transformation challenge, driving faster progress than many of their global counterparts and putting themselves in an ideal position to become more agile and data-driven.

Dr. Samer Abdallah
Head of ICT Sector

Closing remarks

Digital-transformation triumphs are empowering today's businesses to face the uncertainty ahead with a confident spirit. The returns and performance improvements earned to date have branded customer-centric technology strategies as lifesaving tools in any business' survival kit.

The widespread surge in digital transformation effectiveness redefines what it means to be a digital leader in today's economy. Deeper examination of the behaviors we observed in many digitally advanced companies will be a key consideration for future editions of the KPMG global technology research series.

As you progress through the challenging business landscape, you can help maximize your company's resilience and performance by considering these the seven traits of today's digitally-mature organizations:

1	Tear down siloes so the voice of the employee can be heard between departments
2	Be part of the solution to the talent crisis
3	Build airtight alignment between cloud stakeholders
4	Ensure cyber specialists have early involvement in tech selection and staff education
5	Allow the voice of the customer to guide emerging-technology strategies
6	Be prepared to switch platform providers to enhance customer experiences
7	Experiment wisely

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