PwC Middle East 2025 Capital Projects & Infrastructure Survey

A decade of transformation - the Middle East's capital projects enter a new era

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01

Executive summary: From ambition to commitments

In the past decade, capital projects in the Middle East, especially within the GCC, have transformed significantly. In the early 2010s, the UAE led with state-driven initiatives, while Qatar focused on infrastructure and economic diversification. Saudi Arabia's Vision 2030 has further driven regional change, creating a strategic, performance-oriented market, shaped by global dynamics, national visions and evolving fiscal realities. Other GCC nations, such as Oman and Kuwait are also advancing their transitions, aligning with broader GCC trends.

Since 2014, the Middle East has shifted from oil-funded infrastructure to strategic, high-impact investments aligned with national visions and economic diversification. While the COVID-19 pandemic caused delays, disrupted momentum, and reshaped priorities, it was quickly followed by pent-up demand, bold policy resets, and a global CAPEX cycle, sparking a new wave of giga-projects, infrastructure expansion, and digital-first initiatives.

The capital projects market is now entering a new phase defined by performance, accountability and private sector involvement. Governments are moving from announcing projects to delivering them, backed by regulatory reforms and better governance with an emphasis on long-term outcomes. New commitments like Saudi Arabia's FIFA World Cup 2034, Expo 2030 Riyadh, Dubai 2040 Urban Master plan and net-zero pledges are aligning priorities across infrastructure, tourism, renewable energy developments and wider sustainability goals.

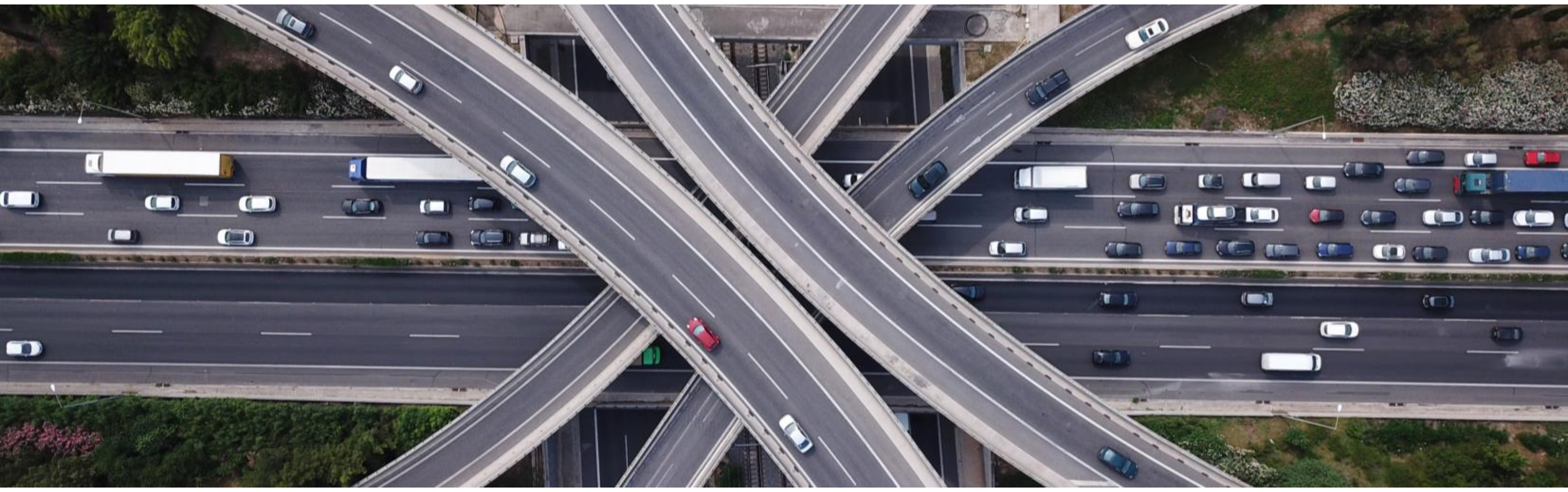
"Confidence in capital projects across the region remains unshaken, but the definition of success is evolving. Organisations are no longer measuring project health solely by deadlines and budgets - they're now prioritising financial returns, quality outcomes, and long-term strategic impact. As investment appetite continues to grow, particularly in Saudi Arabia, the UAE and Qatar, so does the role of private capital, digital innovation, and collaborative partnerships. Industry leaders are shifting from vision to execution - embracing new technologies, rethinking delivery models, and redefining performance around resilience and efficiency."

Sari Kalakesh

Partner, Capital Project Services, PwC Middle East

The region is now leveraging privatisation, public private partnership (PPP) frameworks, streamlining permits and incentivising digitalisation and industrial localisation. Although progress varies across Middle Eastern and GCC countries, the goal is clear - unlock private capital and speed up delivery to drive outcomes. The Middle East's capital projects ecosystem, especially in the GCC is evolving from top-down, oil-funded megaprojects to integrated, investment-attractive developments to align with national objectives, including economic diversification, industrial and human capital development and climate resilience.

But with new ambitions come new challenges - rising expectations, shifting regulations and new layers of complexity for industry leaders. This report draws on insights from over 100 capital projects and infrastructure specialists across the region, surveyed between December 2024 and January 2025. It explores the evolving dynamics of the sector, providing insights into where market is headed and what it takes to deliver capital projects effectively.



Our analysis follows a three-tiered approach:

At the macro level, it examines funding shifts and growing private sector involvement

01

At the project level, it focuses on performance, governance and value delivery

02

At the micro level, it highlights success enablers like digital tech, talent and managed services shaping future project outcomes

03

To succeed, the Middle East must align funding with execution, integrate public and private investment, strengthen regulation and deliver with efficiency and impact.

10 key findings

Saudi Arabia, UAE and Qatar remain the top three countries for capital project and infrastructure investment - mirroring 2014 trends

75%

of respondents expect increased capital and infrastructure spending - reflecting strong sector confidence and a renewed investment upswing reminiscent of 2014

73%

plan to pursue partnerships, joint ventures, or alliances as their primary investment approach over the next two to three years

80%

of respondents see private sector funding as vital, with a third citing its role in timely delivery and a quarter saying it ensures budget control

63%

now rank financial performance as the top metric for project success - highlighting a growing focus on cost control and competitiveness in the GCC

45%

see regulatory complexity as the main barrier to investment, with nearly half citing it as a cause of cost overruns and more than a third (38%) linking it to project delays

65%

of respondents rank digital technology among their top three investment priorities for the next two to three years

89%

are adopting cloud technologies, fuelled by regional data centre investments, while 33% plan to pilot GenAI within the next year

41%

cited shortage of skilled resources as a major barrier to investment and growth

49%

of respondents currently use managed services, with another 25% planning adoption within a year to boost tech capabilities, streamline operations and improve service quality

02

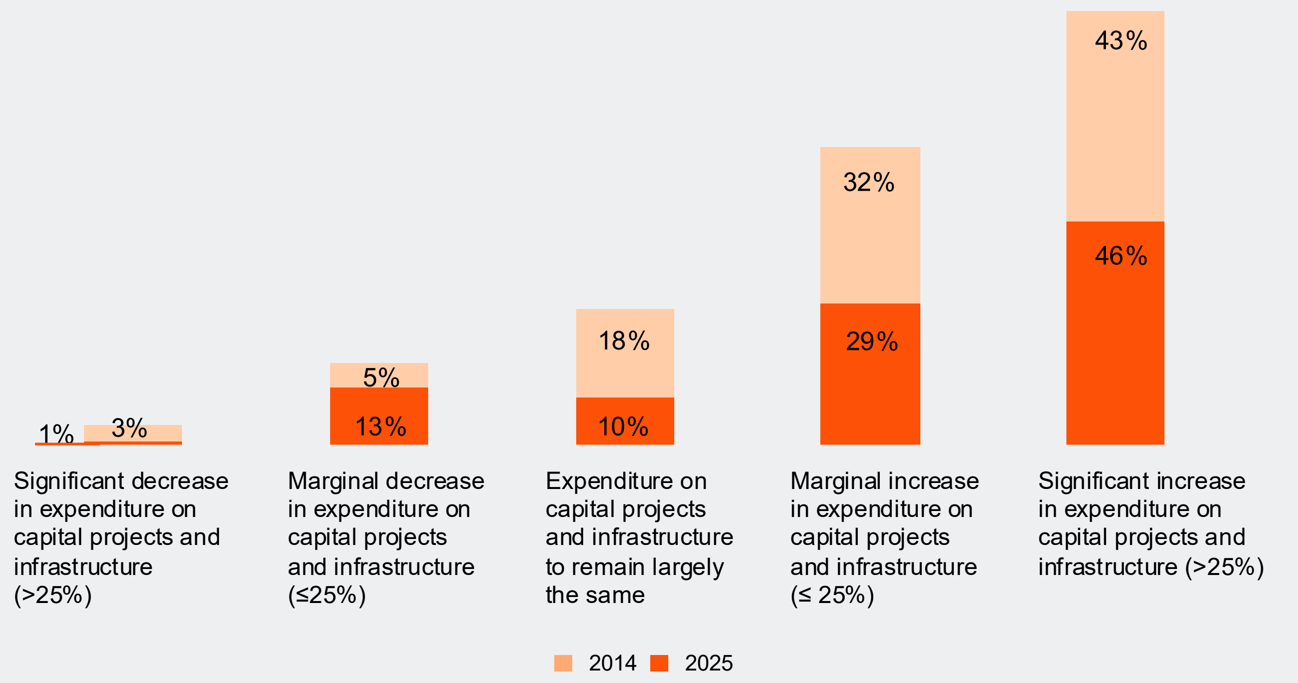
Market sentiment and strategic shifts in capital investment

Capital projects and infrastructure investment in the Middle East are entering a pivotal phase where the market is no longer defined solely by state-led spending and oil-driven optimism. Investor sentiment is now shaped by private capital, innovation, sustainability and an evolving regulatory landscape. The following sections explore how sentiment is shifting, where investment is headed and what it now takes to deliver successful projects.

2.1 Confidence in sustained growth

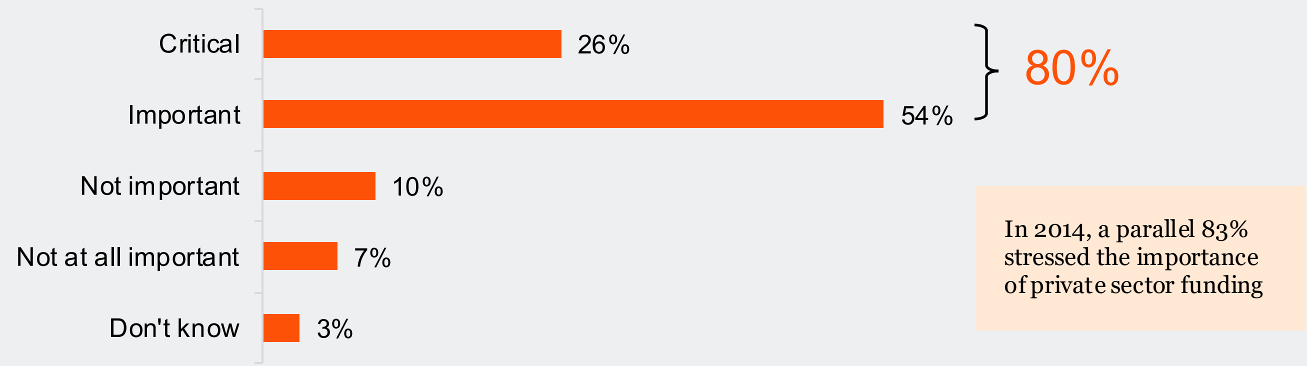
The outlook for capital projects and infrastructure investment in the Middle East remains strong, with industry leaders expressing confidence in sustained growth. Our survey indicates that 75% of respondents anticipate higher capital project spending over the next two years, mirroring the optimism seen in 2014.

Expected change in expenditure on CP&I over next 2 years:



Growth now relies more on private financing, with 80% of respondents considering it important for project delivery. This is a significant increase from 50% in our 2022 CP&I survey. Companies are balancing infrastructure expansion with financial sustainability, aligning projects with long-term economic strategies.

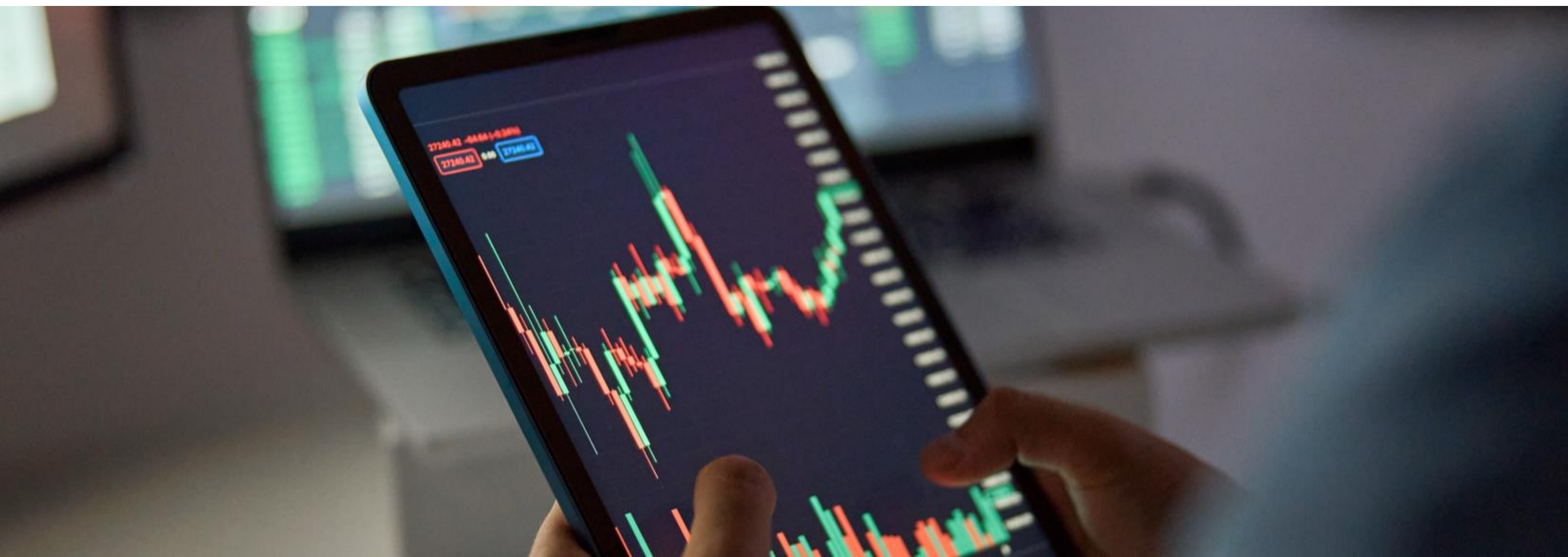
Importance of private sector financing:



The contrast between 2014 and 2025 highlights how investment sentiment has evolved. A decade ago, optimism was closely tied to oil revenues and expansive government budgets. In 2014, governments played a dominant role in project initiation and funding. In 2025, confidence remains, but the environment is more complex. Today, government-funded and government-backed companies operate in a more intricate investment landscape – one requiring greater agility in financing, regulatory compliance and integrating digital and sustainability targets.

Compared to 2014, there are more external challenges to contend with, where the complexity of modern-day projects, the subjectivity of implementing certain regulations in the absence of enforcement frameworks by governments and the adoption of construction technology/digitisation, are now creating external challenges.

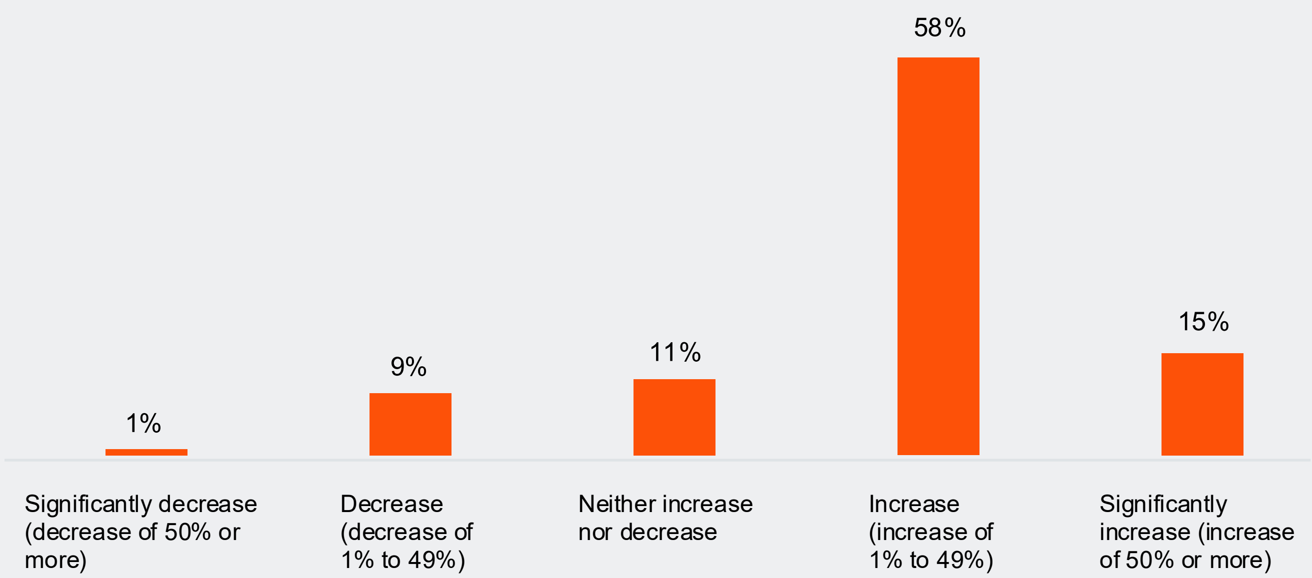
Despite these shifts, growth expectations remain strong, highlighting infrastructure's central role in the region's development strategy. The sector is poised for continued evolution, with transformation, sustainability-led investments and new funding models set to define the next phase of capital investment across the Middle East.



2.2 Investment priorities

Investment focus across the Middle East has shifted over the past decade, reflecting evolving national strategies and economic diversification efforts. The 2025 CP&I survey shows that 73% of respondents expect to increase their investment in capital projects over the next two years, indicating continued confidence in the sector's long-term potential

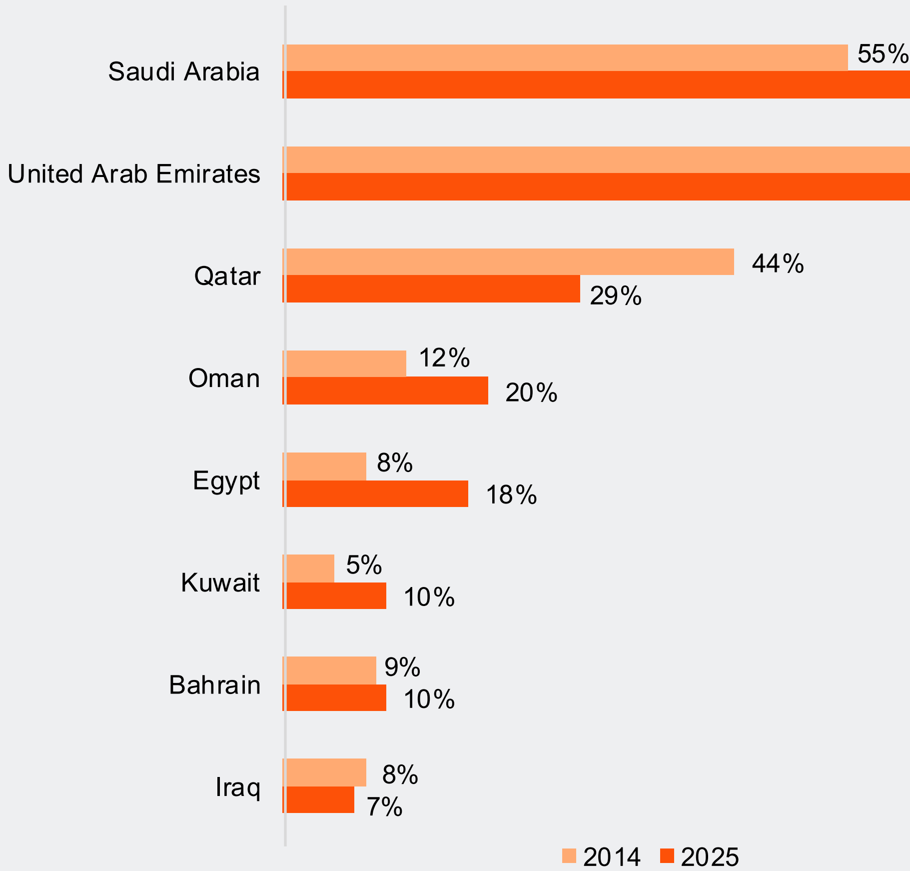
Capital projects investment outlook for next 2 years:



In 2014, the UAE, Saudi Arabia and Qatar were the primary markets for capital projects, driven by state-led infrastructure expansion, transport investments and energy sector growth. The UAE attracted significant investor interest, supported by its strong regulatory environment and preparations for Expo 2020.

In 2025, Saudi Arabia leads as the top investment market, with 78% of respondents citing it as a key investment destination. The Kingdom's Vision 2030 agenda and ambitious giga-projects and commitments, including the FIFA World Cup 2034 & Riyadh Expo 2030, have made it a leading hub for large-scale infrastructure investment. The other key markets in the region that have regained investor confidence, reflecting emerging opportunities include UAE (65%), Qatar (29%) Oman (20%) and Egypt (18%) This trend aligns with broader CEO sentiment in the region, where findings show that Saudi Arabia, the UAE and Egypt are the top three countries where Middle East CEOs are planning to invest in beyond their existing markets, highlighting alignment between sector-level priorities and broader business strategy.[1]

Countries targeted for investment:



The top 3 countries for investment are:

01 Saudi Arabia

02 UAE

03 Qatar

2.3 Efficiency, quality and innovation

As investment in urban development and sustainable infrastructure grows, companies are seeking more efficient project delivery methods that uphold high-quality standards. With an evolving financial landscape and increasing complexity in project delivery, cost efficiency and quality improvements have become primary drivers of innovation.

65%

industry respondents identified cost efficiency as a key priority

63%

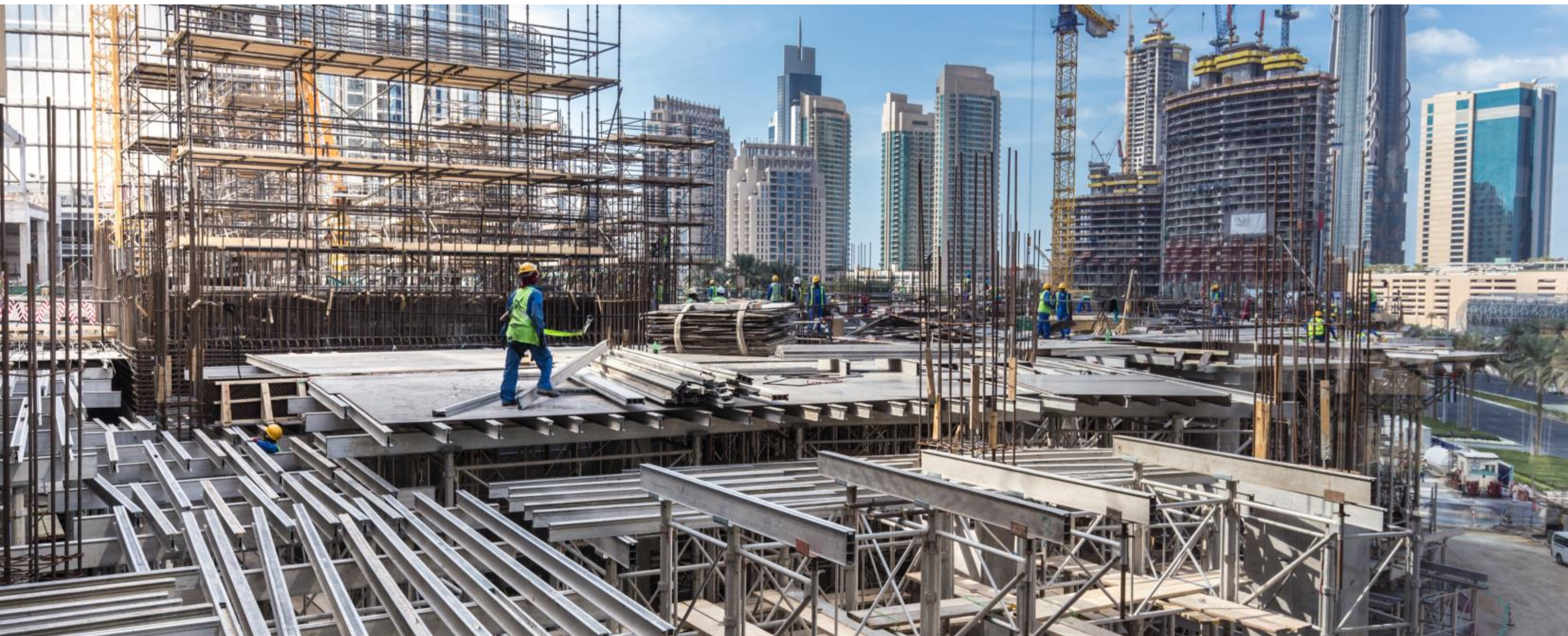
emphasised the need for improved quality management

In 2025, 65% of industry respondents identified cost efficiency as a key priority, while 63% emphasised the need for improved quality management to meet evolving regulatory and sustainability requirements. This reflects a broader consensus that financial performance, customer satisfaction and quality as the primary metrics for evaluating project performance.

Digital transformation is now central to efficiency in the region, with business leaders viewing AI - alongside tools like cloud servers, BIM, GIS and wearables - as a catalyst for innovation, streamlining processes and accelerating results.

Simultaneously, enhanced governance, improved planning processes and stronger talent strategies are increasingly essential for maintaining a competitive edge. Organisations are focusing on workforce upskilling to ensure teams have the technical expertise to integrate and manage new technologies.

Strategic collaborations are also shaping the industry. Joint ventures and partnerships combine expertise, share financial risks and enhance capabilities. These partnerships drive innovation, enabling the private sector to contribute technical expertise and efficiency while supporting government infrastructure goals.



2.4 Barriers to growth

45%

of respondents now see regulatory complexity as a major obstacle

41%

of respondents highlighting difficulties in attracting and retaining talent.

38%

of respondents noting growing pressure from regional and international firms.

Governments continue to drive large-scale investments, but the private sector now faces a more complex landscape that demands greater agility, compliance and innovation to sustain continuous growth.

Findings of the 2025 CP&I survey indicate that 45% of respondents now see regulatory complexity as a major obstacle - while it wasn't a key concern in 2014.

The shortage of skilled resources remains an issue, with 41% of respondents highlighting difficulties in attracting and retaining talent. As projects become more technology-driven, the demand for specialised digital construction and sustainability skills is outpacing supply.

Market competition is also intensifying, with 38% of respondents noting growing pressure from regional and international firms. New entrants are reshaping project pricing, introducing new bidding techniques like performance-based and bundled contracts that improve risk sharing and leveraging new delivery models and alternative supply chains to capture market share This is supported by digital tools that enhance transparency, and integrated and modular methods, alongside digital workflows, improving efficiency and reducing risk.

This transformation is prominent in sectors like renewable energy, infrastructure and specialised industrial projects, driven by technological innovation and niche expertise. These shifts challenge traditional practices and increase agility and competitiveness in capital projects across the region, prompting established companies to evolve in project pricing, bidding and delivery. In this environment, building trust and long-term relationships is increasingly important, whether between clients and contractors, or across joint ventures and delivery partners. Success requires transparent collaboration, consistent delivery and managing shared risks in a crowded market.

03

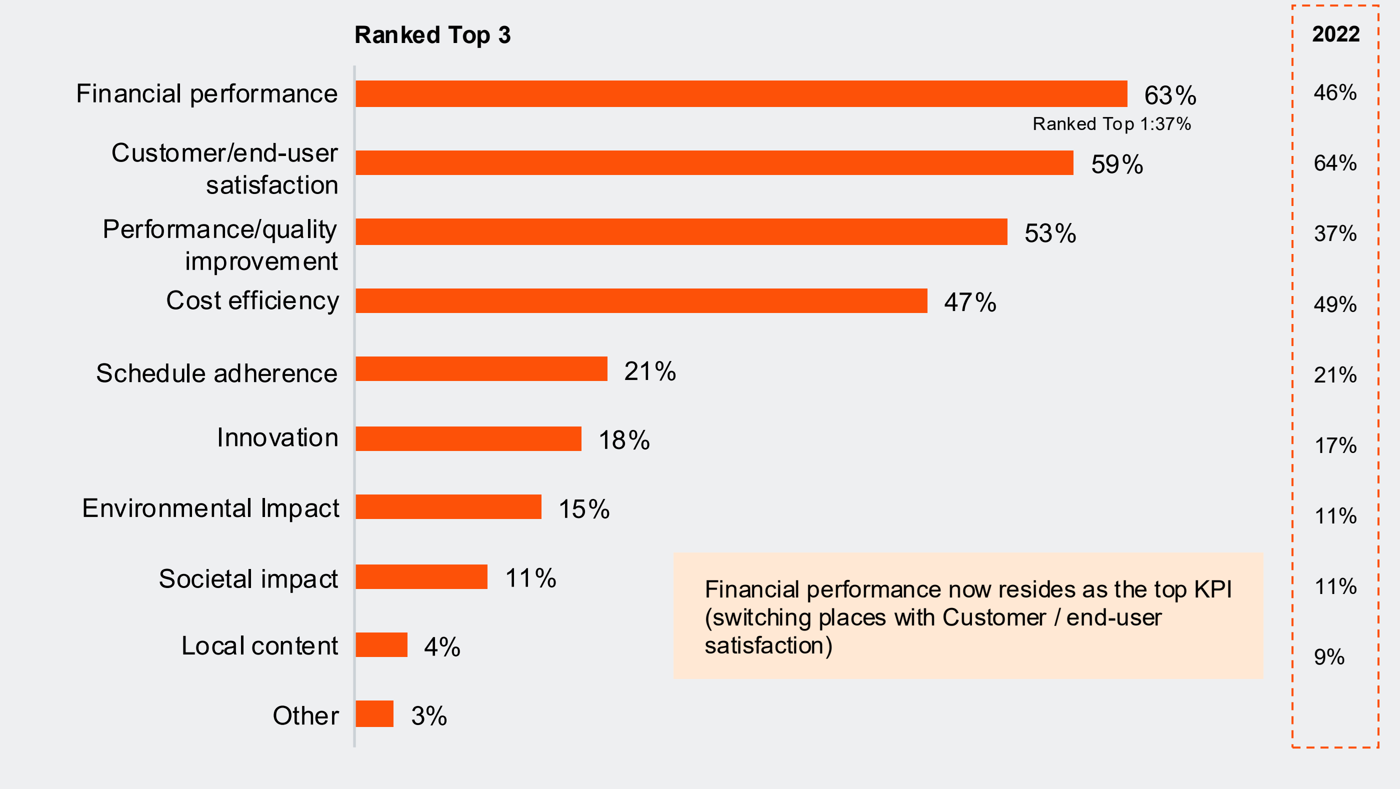
Project performance under pressure: From delivery delays to strategic execution

Project performance is crucial for maintaining investor confidence, especially in capital-intensive regions like the GCC. Effective capital allocation and disciplined project execution show investors that resources are being deployed strategically to maximise returns and manage risks.

3.1 The new measure of success

The 2025 CP&I survey reflects this, with an increasing focus on financial returns in measuring the health and performance of projects. Respondents identified financial performance, customer satisfaction and performance/quality improvement as the top three KPIs for measuring project performance and health. Notably though, whereas customer/user satisfaction (64%) was the top metric used to assess project performance in 2022, it has significantly fallen in the last two years, replaced by financial performance. This reflects a direct response to the current market dynamics, where increased cost oversight and intensified competition are reshaping how organisations define and measure success.

Metrics used to assess project performance:



The survey shows an improved perception of project health, reflecting regional optimism around delivering projects tied to national transformation agendas. A notable 93% of respondents revealed that their major projects were in line with, or exceeded, expectations of project delivery, up from 76% in 2022. However, respondents belonging to larger organisations, particularly those with more than 1,000 employees, reported challenges in managing extensive project portfolios, increasing the likelihood of underperformance.

To improve project outcomes, respondents identified five key priorities:

- Strengthen planning and design
- Proactively manage scope changes
- Enhance governance and risk management
- Attract and retain skilled talent
- Improve contracts, procurement and cost forecasting

"Financial performance and value are more critical than ever, yet regulatory complexity is a growing barrier to investment and growth. At the project level, delivery teams face mounting pressure to go beyond on-time, on-budget execution and show clear alignment with national goals and investor expectations. Navigating this landscape requires tighter stakeholder coordination, stronger risk management and a sharp focus on value realisation throughout the project lifecycle."

Maria Lalousis
Partner, Capital Project Services,
PwC Middle East

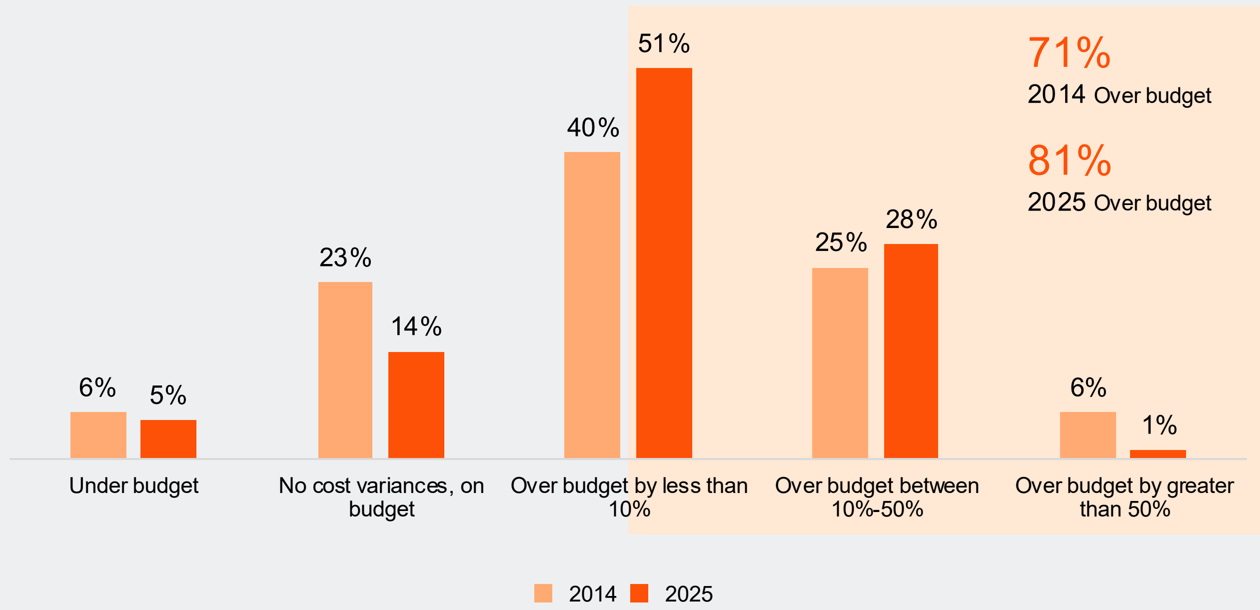
3.2 Continued delays and overruns

Programme delays and cost overruns continue to be common challenges across projects. The underlying causes of these issues have evolved, driven by shifts in the market landscape and increasing project complexity.

Cost overruns

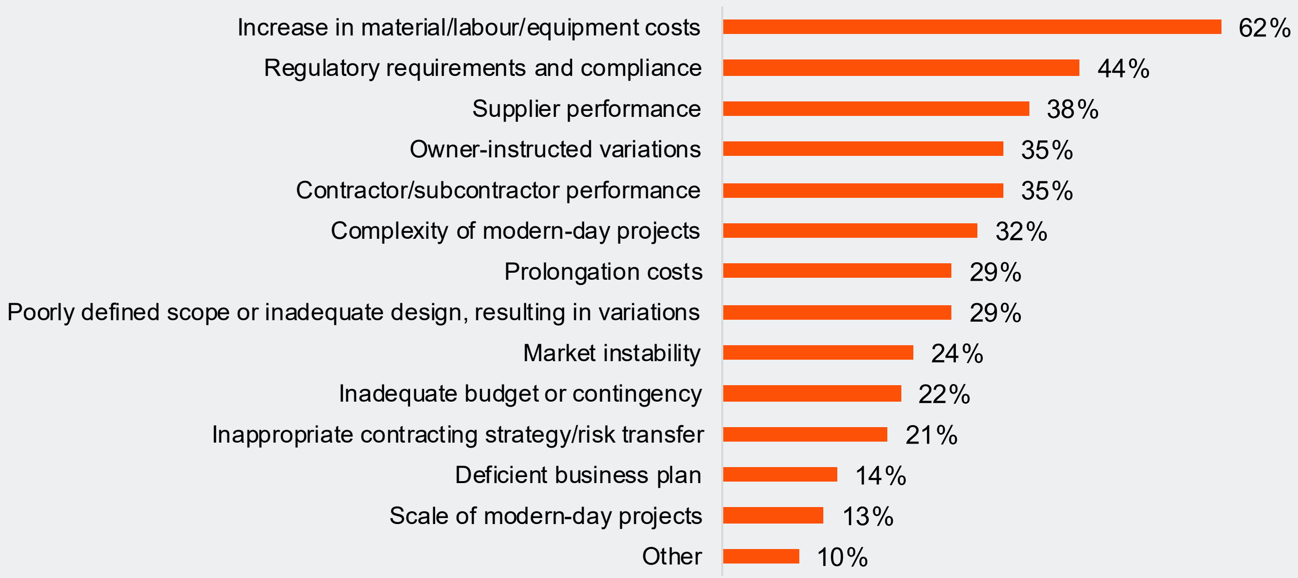
Cost overruns are prevalent, with 81% of respondents experiencing them in the past year. We see more than half of the respondents reporting relatively minor variances, while others faced more substantial budget impacts.

Extent of project cost variances:



Aside from poor capital planning - frequently identified as a core issue, particularly in complex and specialised or first-of-their-kind projects where reliable benchmarks are limited. The most cited reasons for overruns include increased material, labour and equipment costs (62%), regulatory compliance (44%), supplier shortages (38%), owner-imposed variations (35%), contractor and subcontractor performance issues (30%) and the complexity of modern projects (30%). These findings highlight the need for proactive cost management and improved contractor performance to mitigate financial risks.

Reason for cost overruns:



Time delays

Time delays remain a critical concern, with almost eight out of ten (79%) respondents stating that their projects have experienced delays in the past year. A comparison between 2014 and 2025, however, reveals that while delays between one and six months rose from 45% to 66%, there has been a notable decline in long-duration delays, with the percentage who experienced delays of more than six months dropping from 47% in 2014 to just 16% in 2025.

This could be driven by factors including:

01 Increased pressure to meet national commitments is driving stricter timelines and stronger delay mitigation.

02 Projects now face higher accountability and transparency, with reduced tolerance for overruns.

03 Milestone-based contracts are linking funding to progress, incentivising on-time delivery.

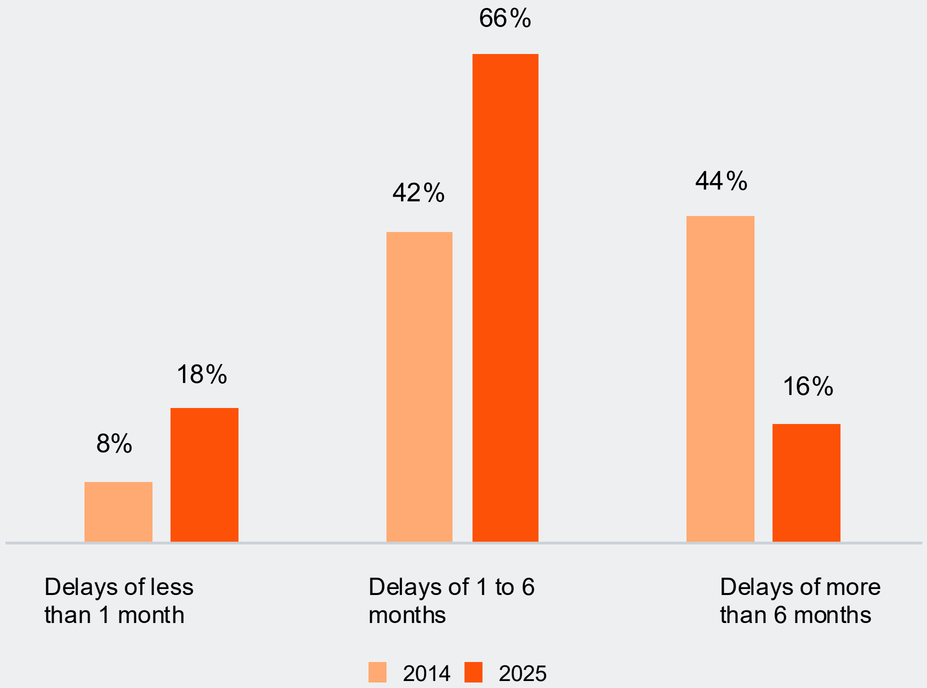
04 Timely execution is key to maintaining reputation and winning future work in a competitive market.

"Project delivery today demands the right blend of agility and discipline - across people, processes and tools. It requires flexible planning, adaptive models and robust controls. Success starts with the fundamentals: early stage planning, mature design stage gates and using procurement as a strategic enabler. All of this must be underpinned by operating models, governance structures and performance management, that evolve with the pace and complexity of delivery."

Nour Dandache

Director, Capital Project Services, PwC Middle East

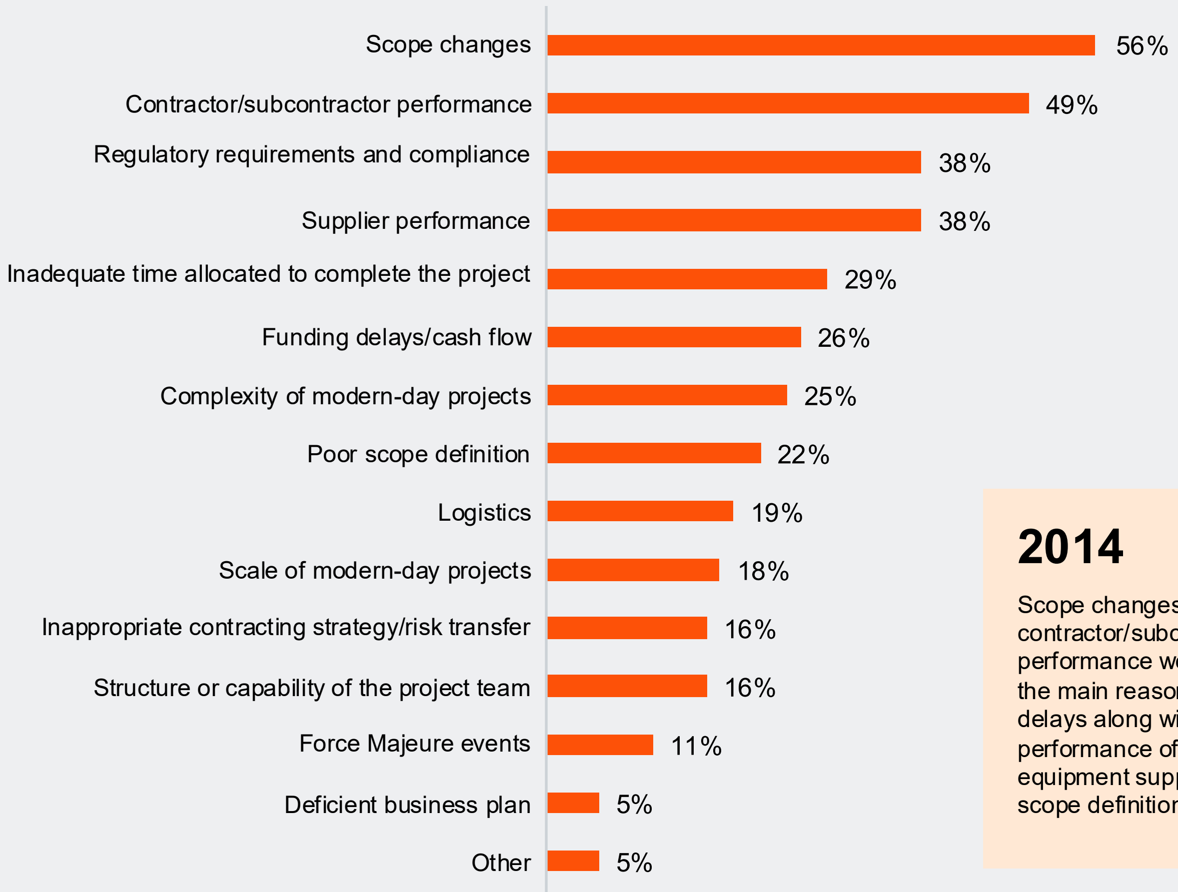
Extent of project delays:



Focus shifts to risk management

The major causes of project delays align with our 2014 findings. According to survey participants, the main reason behind this remains scope changes (50%) and vendor performance (46%). Additionally, regulatory compliance, namely those associated with project delivery, i.e. planning and permitting approvals, Environmental and Health Safety standards, labour laws, procurement regulations, building codes and project governance and audit obligations, supplier shortages (36%) and inadequate time allocation (29%) are also contributors.

Reasons of project delays:



2014

Scope changes and contractor/subcontractor performance were the main reasons for delays along with the performance of material/ equipment suppliers and scope definition.

Despite reporting cost and time overruns, many respondents still view their projects as healthy - reflecting a broader, more business-oriented definition of project success. Rather than judging project performance solely by budgets or timelines, organisations are increasingly measuring project success based on financial performance, product quality and stakeholder satisfaction. In many cases, particularly in large, complex projects, delays and overruns are absorbed or justified by changes in scope, evolving requirements, or long-term strategic value and project health is ultimately judged by the project's ability to deliver commercial, operational, and/or reputational outcomes — not just whether it was completed on time or on budget. These challenges are hence regarded as inherent risks to be managed and mitigated rather than entirely avoided.

3.3 Increased project complexity

74%

of respondents stated that capital project challenges have increased in complexity over the past decade.

A significant 74% of respondents stated that capital project challenges have increased in complexity over the past decade. Among them, 23% say projects have become significantly more complex, while only 9% noted a decrease. This underscores the need for improved project governance, risk management and technological integration.

The most significant internal challenges are time performance (37%), regulatory requirements and cybersecurity (30%) and financial performance (28%). External obstacles include client decision-making and project changes (42%), availability of skilled resources (30%) and supply chain capacity and performance (27%). While contractual disputes were a major challenge in 2014, their impact seems to have declined over the past decade, driven in part by more collaborative contracting approaches.

3.4 Project success hinges on planning, people and process

Survey participants identified key strategies to boost project performance, with top priorities being improved planning and design (36%), attracting and retaining talent (35%) and effective change management (34%).

The focus has shifted from skilled labour, cost accuracy and governance in 2022 to planning and design, with growing recognition of early-stage decision-making in project success. The emphasis is now on governance frameworks for aligned operations, integrated systems and efficient processes. Planning, change management and talent development remain key areas of focus.

The survey shows that inadequate early planning, shifting client decisions and unclear scope definition cause cost and schedule overruns in major projects. Regulatory compliance challenges, rising material and labour costs, inflation and supply chain disruptions further increase budgets.

4.5 Skills for project success

46%

invested to attracting talent.

Sentiment remains high regarding investing and retaining talent. Approximately 71% of respondents answered yes to being invested in developing internal talent (capability and capacity) to meet the demands of the modern major project environment, and a 46% invested to attracting talent.

- **71%** Yes – invested to develop/retain internal talent
- **46%** Yes – attracted talent from the market
- **4%** No – inability to develop/retain internal talent
- **5%** No – inability to attract talent from the market

However, there is a shift in skills required for development. Respondents identify leadership, problem solving and decision making as crucial for high-performing teams. This marks a further move from vision/strategic thinking to implementation.

Soft functional skills required:

2025

51% Leadership 01

42% Problem solving 02

29% Decision making 03

2022
01 Leadership
02 Vision/strategic thinking
03 Decision making

04

Funding and finance: Bold ambition meets capital reality

Despite optimism and positive trends in forecasted capital projects expenditure, funding remains increasingly complex, with 28% of respondents expecting capital constraints to negatively impact their projects in the near term. As ambitions grow, so too does the imperative to rethink how projects are funded, delivered and sustained.

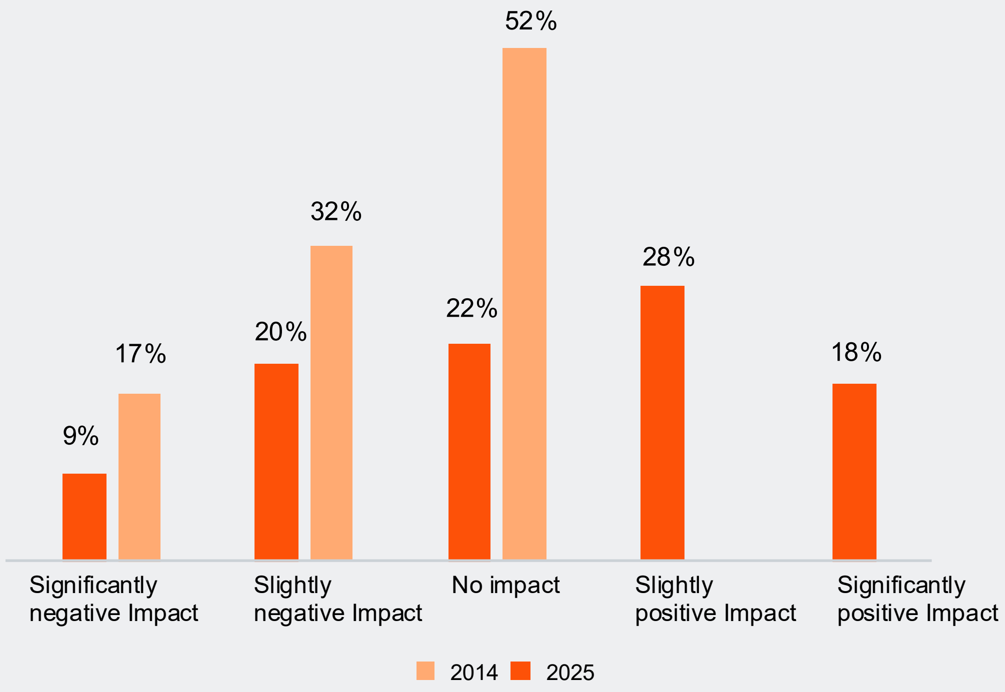
To unlock capital, we must first unlock confidence. The Middle East can lead in capital project delivery by aligning funding with execution through integrated public-private investment, regulatory support and operational efficiency. Success depends on strong funding strategies, clear capacity analysis and a shift in focus from ambition to delivery, ensuring projects are viable, impactful and bankable.

Companies with 1000+ employees are more likely to state negative impact

42% -vs- 28%

Overall strategies to reallocate project portfolio in response to a lack of funding availability include:

- Prioritising high impact projects
- Delaying or cancelling low priority projects



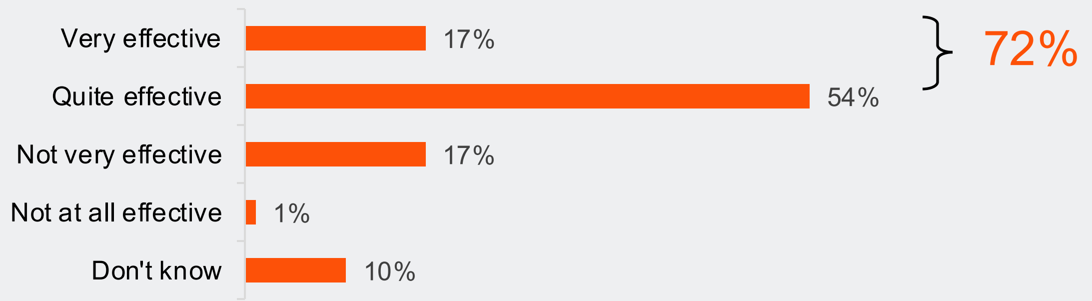
Capital constraints are shifting strategies towards value-based portfolio management. Low-priority or high-risk projects are being deferred or scaled down in favour of those with a strong commercial rationale or national alignment. Capital allocation now prioritises risk-adjusted returns and financial viability. This recalibration marks a shift in funding focus towards capital efficiency, resilience to volatility and alignment with longer-term economic goals. This is seen as a pragmatic shift toward value-driven delivery.

73%

of respondents plan to use partnerships

Almost three-quarters (73%) of respondents plan to invest through partnerships, joint ventures or alliances in the next two to three years. The Middle East supports these models with significant investment volumes and opportunities. However, only 72% view the environment as effective for using private capital.

Effectiveness of private sector finance deployment:



Private capital in infrastructure is hindered by non-standardised PPP frameworks, inconsistent bankability of projects and unclear long-term revenue models. These issues often inhibit the flow of institutional and international financing, especially in emerging markets with high early-stage project risks and underused mitigation mechanisms.

Addressing these gaps requires collaboration between public institutions, regulators and project sponsors. Enhancing private capital readiness involves enhancing the entire project lifecycle, from pipeline development to transparent procurement and standardised contracts.

Integrating private capital reshapes how the region plans, funds and manages infrastructure. Strengthening this channel expands financing options for governments and developers through policy reform, capacity building and investor engagement.

4.1 Aligning regulation with capital strategy

45%

see regulatory changes as the main barrier to investment and growth

One of the most consistent themes across the CP&I 2025 findings is the role of regulation. Nearly half of survey respondents (45%) see regulatory changes as the main barrier to investment and growth. Similarly, 44% cite regulatory compliance as a reason for cost overruns and 38% attribute project delays to regulatory requirements.

In capital financing, regulation significantly impacts financial risk models and investment decisions. Inconsistent governance, unclear permitting processes and changing compliance requirements can create uncertainties in project costs and timelines, potentially affecting investor confidence. The absence of standardised approval processes adds variability, complicating project structuring and funding.

4.2 From funding models to financing ecosystems

The Middle East faces a pivotal moment, merging infrastructure goals with evolving funding realities. There are opportunities to transition from fragmented funding decisions to integrated, long-term financing ecosystems encompassing public and private capital, regulatory support and financial risk management.

Four priorities to be considered:

Rebalance portfolios with purpose:
Move from volume to value through data-driven capital allocation. A strong framework can guide project evaluation, funding and monitoring throughout the entire lifecycle, prioritising high-impact projects while deferring less critical ones.

Enhance regulatory enablement:
Create clear, predictable regulations to attract capital by streamlining approvals, harmonising processes, standardising contracts and establishing stable legal frameworks. Independent regulatory bodies in sectors like energy, transport and utilities are needed to boost investor confidence.

Strengthen private sector deployment:
Transition from intent to action with clear PPP laws, standardised tenders and enforceable contracts. Develop institutional expertise, risk-sharing mechanisms and credible project pipelines to attract private investment.

Optimise cost governance and risk management:
Adopt integrated cost control measures and lifecycle budgeting to address rising costs. Using digital tools for real-time monitoring and probabilistic risk models can bolster financial resilience and transparency.

These shifts signify a transformation in the region's approach to infrastructure development. The focus is now on creating resilient and adaptive financial systems, rather than funding individual projects.

> There is a growing demand for infrastructure development and project finance across the region. This shift towards more flexible models, such as PPPs, helps to distribute risk and attract private capital. This will encourage innovation, increase efficiency and improve the quality of infrastructure projects – creating long-term economic value. We're also seeing the financing landscape evolving with project sponsors no longer relying solely on commercial banks. Sovereign wealth funds, institutional investors and private developers are also playing a bigger role - bringing more focus on commercial viability, long-term value returns, higher expectations for transparency and accountability. This will ultimately reshape how capital flows into the region's most strategic projects.

Mazen Singer

Partner, Infrastructure Finance,
PwC Middle East

05

From tools to transformation

As giga-projects grow and stakeholder demands rise, companies must transition from fragmented technology adoption to comprehensive digital integration. Technology should be viewed as a strategic tool for performance, funding and talent. Success depends on integrating data from legacy systems and on-premises servers into unified hybrid-cloud platforms that combine BIM, AI-driven analytics and real-time IoT telemetry to support design, construction and operations. Enterprise-wide transformation, not tool-centric deployment, will define future success, evolving isolated projects into unified ecosystems.

Our survey shows higher adoption of office-based technology solutions than site-based solutions, yet scaling office uptake and accelerating site adoption are still vital to unlock the significant value at stake.

88%

48% respondents currently utilising fully integrated data platforms with a further 40% planning on implementing in the next 12 months

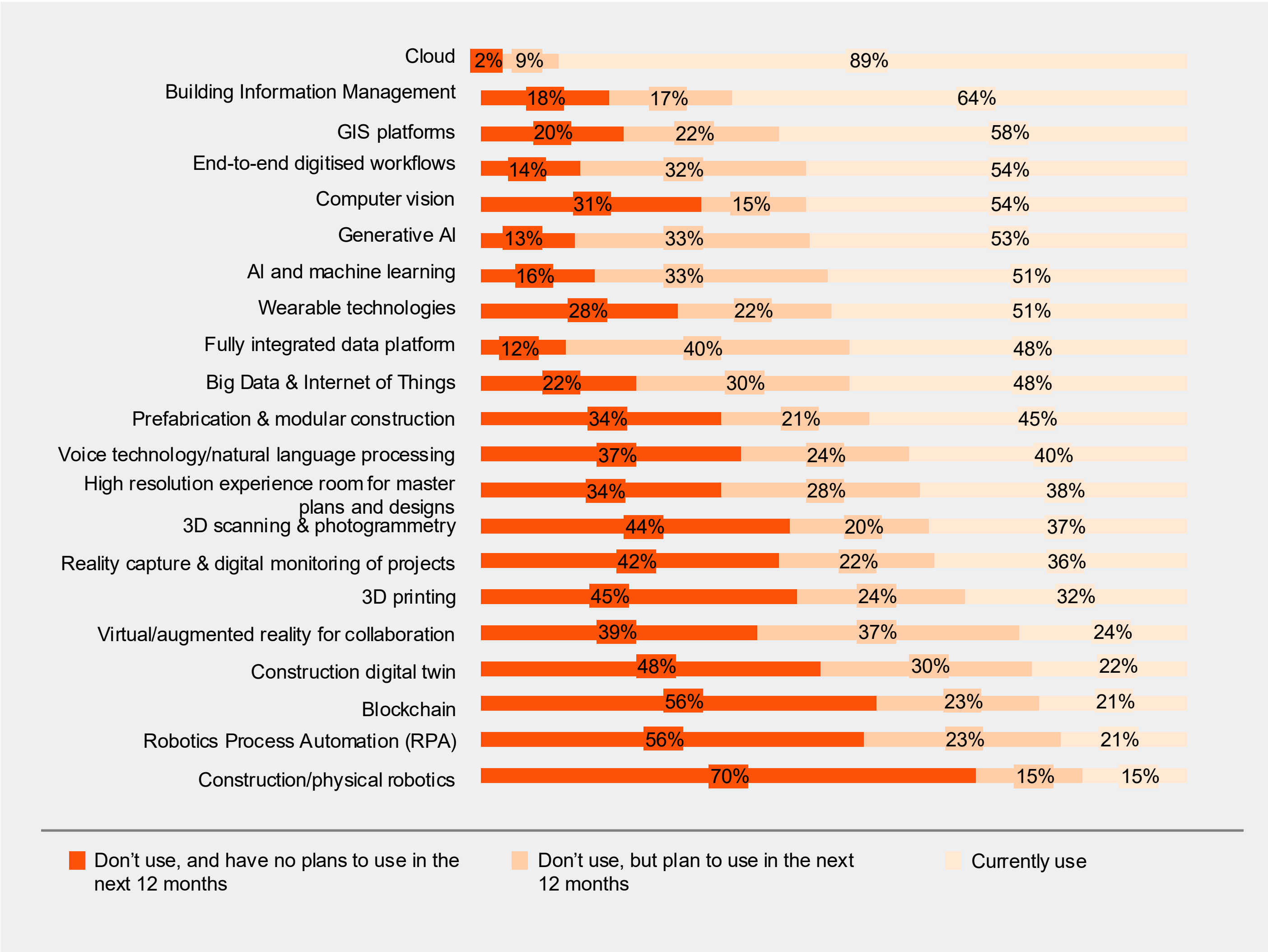
98%

89% of respondents currently utilising cloud platforms with a further 9% planning to implement in the next 12 months

56%

56% of respondents Don't use Robotics Process Automation (RPA) and don't plan on using in the next 12 months

Technology adoption is set to accelerate: on average, 25 % of respondents plan to roll out new solutions in the next 12 months, led by fully integrated data platforms (40 % planning uptake) and virtual/augmented-reality collaboration tools (37 %)



5.1 A decade of digital transformation (2014–2025): From pilots to pillars

In 2014, digital tools in CP&I were fragmented and largely experimental. Building Information Management was mostly confined to design studios, cloud adoption was limited and project data was stored on-premise. Public cloud use was rare.

Fast-forward to 2025 and the picture is very different. Cloud platforms are now used by 89 % of respondents, thanks to new regional data centres. BIM adoption has jumped to 64 % and is embedded in both design and construction. AI and machine-learning tools are in live use at 51 % of organisations, and a further 53 % use generative-AI solutions while a further 33 % expect to pilot generative-AI in the next year.

The industry has moved from isolated pilots to broad-based deployment—laying the foundation for the next wave of data-driven delivery.

Compared to their largely nascent state in 2014, digital capabilities - such as cloud, BIM, and AI - have become core, enterprise-level tools by 2025, embedded in both day-to-day delivery and strategic decision-making.

Indicator	2014	2025
Cloud adoption	Minimal	89% currently use
BIM adoption	Early stage	64% currently use
Digital as top three investment priority	Not tracked	65% in 2025
Use of AI/ML	Non-existent	51% currently use
Use of GenAI	Non-existent	53% currently use
Perceived tech benefits	Minimal	72% cite efficiency
Main tech barrier	Cultural, cost	Skills gap, unclear strategy

Moreover, since 2014, alternative construction techniques have gained awareness and adoption, highlighting technology's role in efficiency and productivity across execution and implementation of capital projects. Notably, 66% of respondents use, or plan to use, prefabricated or modular methods, while 56% indicate interest in 3D printing. Whereas these methods promise improvements in speed, cost and sustainability, modular construction methods is seeing increasing adoption – particularly in housing & healthcare, while 3D printing remains at a pilot or experimental stage, with limited widespread use in large-scale capital projects and infrastructure.

89%

of respondents report the use of Cloud computing

5.2 The current state of adoption: maturity, momentum and strategy

The sector continues to progress in its adoption of digital technologies. Cloud computing has become commonplace, with 89% of respondents reporting its use. BIM is used by 64%, while big data and the internet of things (IoT) are utilised by 48%.

54%

of respondents already running end-to-end digital workflows

There is significant interest in next-generation technologies with 54 % of respondents already running end-to-end digital workflows, and another 32 % say they will adopt them within the next year. Artificial-intelligence tools are live at 51 % of organisations, while one-third 33 % plan to pilot generative-AI solutions to streamline design, reporting and decision-making. Digital twins are in use at 22 % of firms, with another 30 % piloting or preparing deployments, enabling teams to simulate performance, optimise construction sequencing and monitor assets in real time after hand-over. However, technologies like robotics, blockchain, immersive collaboration tools like AR/VR and gaming engine technology remain in the early stages of adoption, with limited deployment.

Despite these advances, data silos persist because organisations maintain separate on-premises servers, project-controls platforms, BIM repositories and cloud services without a unified data-governance framework, fragmenting workflows. Fragmented systems - such as separate BIM platforms, cloud services and project controls - lack unified data governance. While BIM enhances design collaboration, it often isn't linked to cost, schedule or IoT data. Even though 48% use IoT telemetry, only 20% integrate it into predictive maintenance. Bridging these gaps requires digital strategies with clear interoperability standards, governance models and alignment to national vision KPIs.

5.3 Why it matters - the payoff from digital maturity

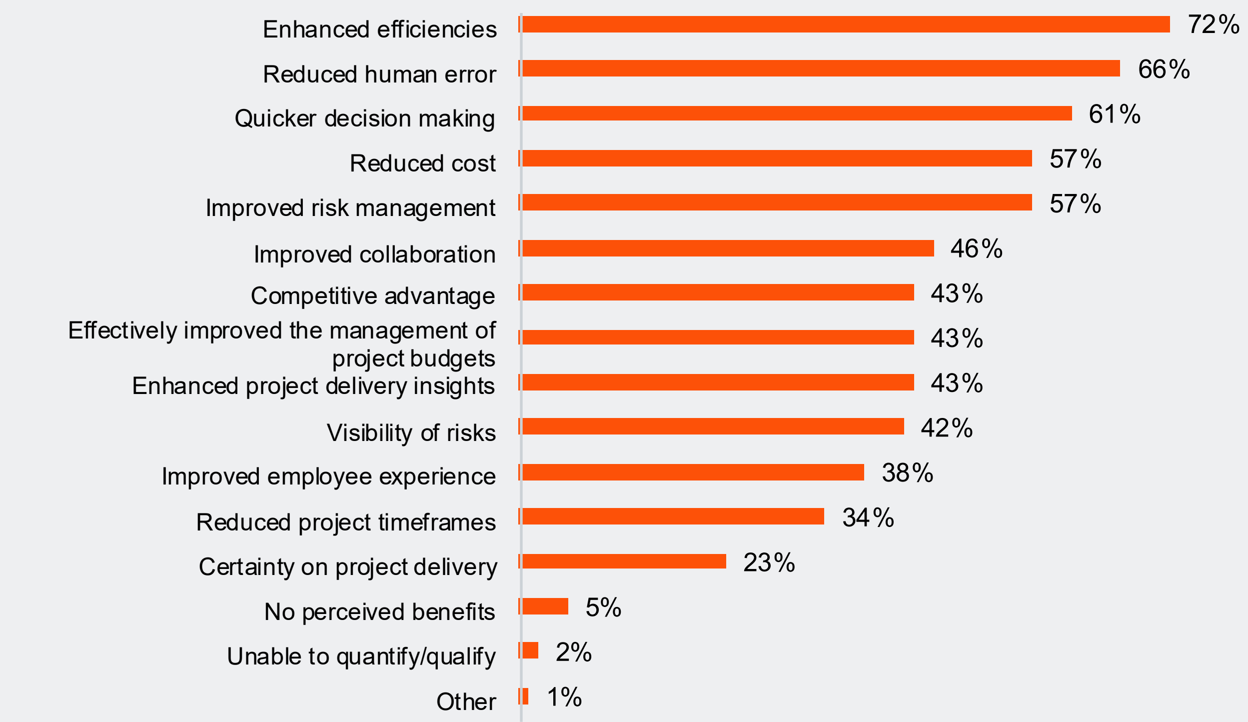
72%

report efficiency gains

Digital maturity provides measurable value throughout a project. Organisations achieve 15-20% cost savings per project through tighter risk controls, automated compliance checks and streamlined approvals. A significant majority of respondents (72%) report efficiency gains, while 66% note fewer human errors due to standardised digital processes. Real-time dashboards enhance decision-making for 61% of teams, enabling faster responses to design changes, budget issues and risks. Additionally, 57% of respondents cite direct cost avoidance and improved risk mitigation as outcomes of their digital investments. These capabilities also increase stakeholder transparency, shorten review cycles, improve schedule adherence and ensure predictable handovers. Collectively, they enable accountability and waste reduction.

Additionally, given the significant skills shortage and funding constraints this region is experiencing, similar to other geographies, there is a real need to do more with less. Digital and technology is a real and practical solution to addressing both of these challenges, which makes it an imperative.

Benefits of technology use:



Capital projects in the region need a new approach due to their growing scale, complexity and urgency. Building new capabilities and adopting integrated, technology-enabled methods is essential. Project owners must drive this change by using digital tools to speed up delivery, control costs and improve overall outcomes. With advanced technology more accessible and abundant data to be utilised, we must embrace digitised processes, focusing on high-impact use cases across the value chain to support better decision-making, boost productivity and strengthen collaboration."

Le Tilahun,

Partner, Capital Project Services,
PwC Middle East

53%

of respondents cite a lack of in-house expertise in AI, machine learning and data analytics

5.4 Barriers to integrated adoption

Despite clear returns, several barriers hinder digital integration. Over half (53%) of respondents cite a lack of in-house expertise in AI, machine learning and data analytics, while 48% point to inadequate training programmes. The absence of standardised procedures and clear strategies also limits effective implementation.

Quantifying return on investment is a concern for 43% due to challenges in tracking benefits. Without strong frameworks, connecting technology to tangible outcomes is difficult. Establishing metrics like cost avoidance, schedule compression, safety-incident reductions and sustainability gains, alongside automated dashboards, allows ongoing project performance monitoring. This transparency strengthens business cases, speeds up funding approvals, drives accountability, prioritises high-impact initiatives and enables real-time course corrections.

Many organisations have yet to establish a unified digital roadmap that connects technology deployment with performance objectives, funding priorities and workforce strategies. Leadership engagement and cross-functional alignment are essential to address these challenges.

5.5 How to unlock digital ROI

The top four drivers identified by survey respondents for accelerating digital innovation and construction technology adoption are:

01 A focus on ROI 61%

Clear metrics and dashboards help track digital impact and justify investment.

02 Standardisation of client requirements 57%

Mandated BIM and data protocols boost interoperability and drive platform adoption

03 Government support 38%

Incentives in the UAE and Saudi ease adoption of cloud and BIM at scale.

04 Improved payment behaviour 37%

Improved payment behaviour to support investment and unlock capital for digital investment.

5.6 The importance of tech-ready talent

Technology adoption and workforce capability are interconnected, with progress in one depending on readiness in the other. Survey respondents cite project management and controls (37%) as the top core functional skill required. Cost control and commercial management (32%) along with engineering and design, were joint-second. Yet only 29% of respondents' organisations have developed structured digital-skills curricula. In contrast, 71% of respondents' companies investing in continuous upskilling, report faster adoption and more successful outcomes.

37%

Cite project management and controls as the top core functional skill required.

32%

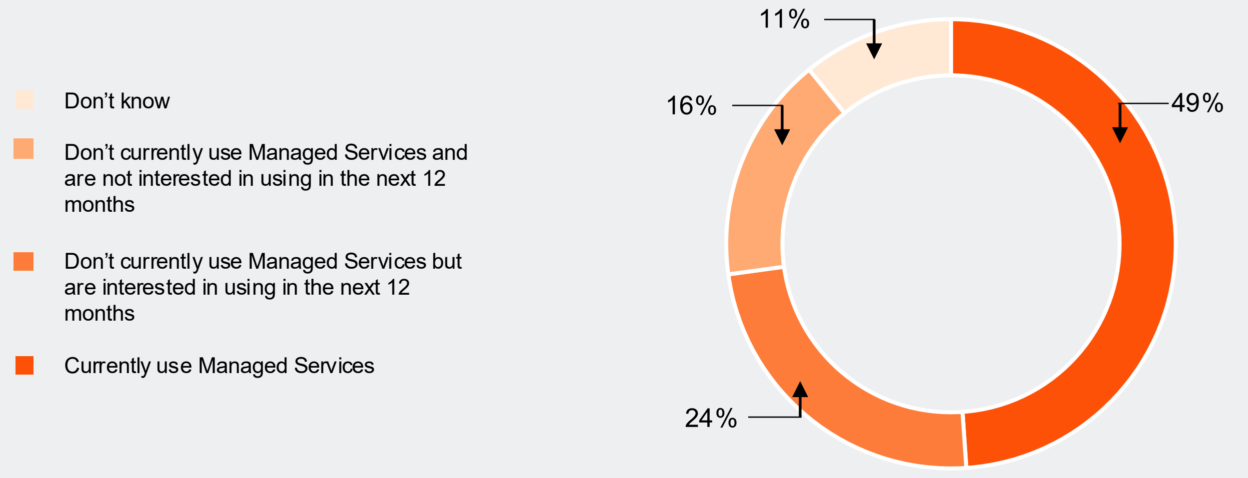
Cite cost control and commercial management, along with engineering and design.

06

Managed services: Enabling operational agility

Organisations face increasing pressure to meet complex regulatory demands, deliver at speed and innovate, all while maintaining efficiency. Managed services provide technology-powered operational support for core business functions, combining expertise, advanced tools and strong delivery models to address dynamic challenges.

Our survey shows that the adoption of managed services is increasing rapidly in the region. Currently, 49% of respondents use managed services and a further 25% plan to adopt them within the next year.



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As Capital Projects across the region move into delivery, clients face an unprecedented need for qualified project controls and delivery professionals while also having to navigate increasing project complexity and compressed timelines. Managed services - with strategic use of near-shore and remote delivery centres - is emerging as a critical solution to balance human interaction with operational excellence."

Marwan Daher

Director, Capital Project Services, PwC Middle East

This growing interest is driven by three primary factors:

Efficiency and service quality:

Over half of respondents are looking to improve operational and cost efficiency while enhancing the quality of service delivery.

Faster decision-making:

48% believe managed services can help drive better, faster decisions and enable quicker execution.

Access to innovation:

39% see managed services as a way to tap into the latest technologies and innovations that may not be readily available internally.

6.1 The importance of tech-ready talent

Survey findings highlight growing demand for specialised support across key areas of capital project delivery, with 33% of respondents indicating a need for stronger project controls and development support, 27% citing sourcing and procurement as a critical area requiring external expertise, 16% expressed the need for support in managing large-scale claims and contract issues on major developments.

These findings reflect shifting priorities as organisations seek more targeted, outcome-driven support, such as a development management office, capital procurement services and claims management services to manage complexity and improve delivery.

33%

of respondents indicating a need for stronger project controls and development support,

27%

citing sourcing and procurement as a critical area requiring external expertise

16%

expressed the need for support in managing large-scale claims and contract issues on major development

6.2 Navigating challenges with development management office and project controls services

Managing large, complex projects requires advanced tools, specialist skills and agile delivery models. Our survey identified five main challenges where project controls make a significant difference:

43%
cited the need for better technologies and tools

37%
pointed to financial performance issues

34%
highlighted time performance concerns

33%
emphasised the importance of risk and change management

30%
stressed the need for better management information

Effective project controls managed services are evolving to meet rising complexity, with a focus on technology, talent, partnerships and outcomes, an approach outlined in the blog series 'power of PwC's capital project controls managed services'.[2]

The report highlights four essential features: AI-powered tools for predictive insights, a flexible talent model blending on-site and hub-based resources, strong delivery partnerships and outcome-focused contracts tied to measurable KPIs. This shift supports more efficient, data-driven and value-oriented project delivery.

07

Looking ahead: Key takeaways for industry leaders

Capital project delivery must evolve rapidly in response to shifting industry demands, economic fluctuations and technology disruptions. Our survey shows performance is now tied more closely to financial returns, customer satisfaction and quality - reflecting a shift in how success is measured. The next decade will be defined by how effectively organisations leverage technology, governance and financial discipline to deliver complex, high-impact projects.

This growing interest is driven by three primary factors:

01 At the macro level, rethink capital and financing

Private financing is no longer optional - it is now a strategic imperative and central to reducing public sector exposure. Capital allocation must be more strategic, prioritising transformative impact, cross-sector synergies and resilience over traditional spend efficiency.

02 At the project level, raise the bar on delivery

- **Prioritise early-stage planning** that enables better cost certainty and less delays and design change risk. Embedding design, engineering and procurement considerations at outset is critical to avoid downstream rework, cost overruns and delays.
- **Assess and actively manage design maturity** at key stage-gates - ensuring clarity on scope, appropriate level of definition, constructability and interfaces early on. This upfront alignment enables faster approvals and smoother execution.
- **Consider procurement as strategic levers** with collaborative approaches and modern delivery models - such as PPPs and integrated project delivery - enabling better risk-sharing and improved outcomes.
- **Evolve operating model and governance** to accelerate decision-making and enable agile program oversight
- **Align with regional transformation and national visions**, becoming vehicles for long term economic, social and environmental value.

03 Turn execution into a strategic differentiator

- **Capability building is essential,** with technical expertise, strong project leadership, and commercial acumen serving as key differentiators for driving delivery performance.
- **Technology is redefining execution models,** with digital twins, AI driven analytics and predictive tools enabling better forecasting, real time decision making and risk mitigation across the project life cycle. Leaders can upskill teams by embedding digital champions in project offices and use innovation labs to test new tools. Mentorship programmes can accelerate digital learning and foster a tech-savvy culture.
- **Implement advanced construction methods including modular**, offsite and alternative construction methods, 3D printing and robotics help address workforce constraints and efficiency in delivery. These should be embedded early in planning and procurement, to unlock their full value across the asset lifecycle.

About the survey

For over a decade, the PwC Middle East Capital Projects and Infrastructure survey has been conducted to provide a “pulse check” on investment and execution of capital projects across the Middle East. A 15-minute survey used both an external B2B panel provider and PwC Middle East contacts. Data collection took place between 19 December 24 and 26 January 2025.

Historical trend data is shown - where available - for 2022 and 2014, to enable a 10-year analysis. In 2022 there were 101 responses to the survey and in 2014, there were 130 responses.

Due to structural differences in how questions were asked, references to historic data may be at the theme level only. Where appropriate, data may have been recalculated for comparative purposes and this is noted on the relevant slides. Reporting percentages may not always equal 100% due to rounding.

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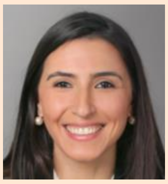

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