

Middle East
**Property &
Construction
Handbook**
2025



Foreword

Amidst the current geopolitical events and challenges faced by the global economy in 2024, the Middle East region, specifically the Gulf Cooperation Council (GCC), has remained optimistic as diversification plans continue.

Like in previous years, the outlook within the region remains positive. However, with ongoing geopolitical uncertainty, moderate inflation levels and higher interest rates compared to pre-pandemic, the forecasted economic growth for 2024 has been lower than anticipated.

This edition of AECOM's Middle East Property & Construction Handbook assesses trends and new opportunities that presented themselves during 2024. The handbook also reviews the impacts of events experienced over the last 12 months on local, regional and international markets.

At AECOM, our goal has always been to develop and adapt our knowledge to the ever-changing trends in construction markets and to provide agile, innovative and industry-leading solutions to our clients.

Within our detailed round-up, we discuss the global and Middle East regions' current economic and construction performance and identify potential challenges and opportunities..

We have carefully selected articles written by AECOM specialists focusing on prevailing themes within the property and construction



market. These articles aim to provoke thought concerning the growing opportunities within the Middle East. Our first article, *'Harnessing Artificial Intelligence to decarbonize the property and construction sector,'* explores the potential of Artificial Intelligence as the construction industry looks to decarbonize. In our second article, *'Delivering vision through Strategy+,'* we outline the benefits of AECOM's Strategy+ services and how we are working with clients to deliver projects successfully.

In our third article, *'Middle East Sports Stadiums,'* we detail the commercial considerations for constructing large stadiums in the region.

Furthermore, we explore *'Sustainable Legacies,'* our ESG strategy and how we work in partnership with our clients to leave a positive, lasting impact on communities and our planet.

Finally, through *'Digital is part of who we are,'* we delve into the recent chapter of AECOM's digital transformation journey by highlighting how our focus on innovative and transformative solutions is improving outcomes for our clients and communities.

As with previous years, we include a synopsis of typical regional procurement routes, forms of contracts and building regulation compliance across the Middle East as a point of reference.

The reference data section provides averaged international and regional cost data within the built environment. This data offers an indicative high-level cost guide and comparison of building asset costs.

For specific current and benchmarked cost data, please contact AECOM's Program Cost Consulting team for assistance in obtaining relevant and specific advice.

We hope that you find our review, analysis, and construction market evaluations beneficial and valuable. We look forward to working together to deliver a better world.

As always, we continue to seek your feedback to support our drive for improvement. Please contact Marc Gibbons and Christina Raju via bi_middleeast@aecom.com for further information.

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Global economic review

Following a period of uncertainty regarding global economic growth and prospects, the World Bank—Global Economic Prospects Report (June 2024) projected that global growth would hold steady at 2.6 percent in 2024 and increase marginally to 2.7 percent in 2025.

Furthermore, the World Bank reports that Emerging Market and Developing Economies (EMDEs) are forecasted to decline from 4.2 percent in 2023 to 4.0 percent in 2024, representing a 0.2 percent fall.

According to the World Bank—Global Economic Prospects Report (June 2024), the prospect of ongoing regional conflicts remains a significant risk to many vulnerable economies, and some will be poorer in 2024 than in the period leading up to the pandemic in 2020.

The World Bank note that ongoing regional geopolitical conflicts and rising tensions may result in continued volatility within commodity markets leading to price volatility. Furthermore, the report outlines that other risks include weaker-than-anticipated activity in key economies and



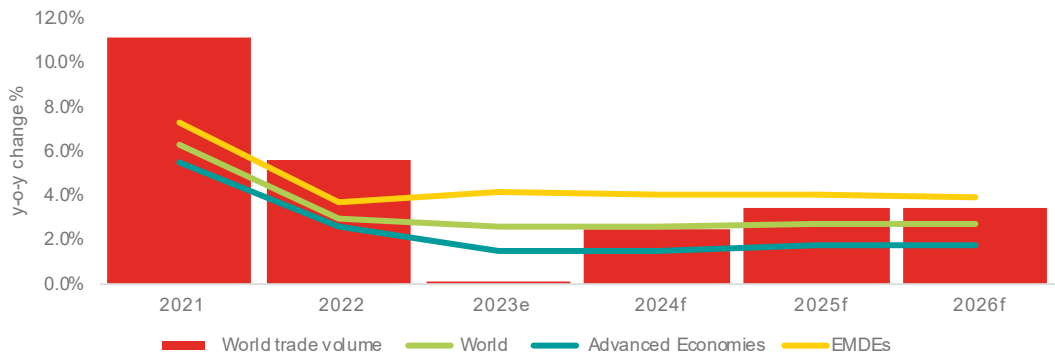


disasters related to climate change. Consequently, the report by the World Bank outlines that policy makers face significant challenges and that governments across

the globe should work together to safeguard trade, support green and digital transitions, deliver debt relief and improve food security.

The graph below, based on data from the World Bank, outlines forecasted real GDP growth across Advanced Economies, Emerging Markets and Developing Economies.

Real GDP growth



Source: World Bank Economic Prospects, June 2024

Global inflation

According to the World Bank—Global Economic Prospects Report (June 2024), global inflation is expected to moderate at a slower pace and average 3.5 percent in 2024. Considering some global improvements, the outlook remains cautious, with several central banks across advanced economies and EMDEs likely to remain cautious in easing policy.

Accordingly, the World Bank sees that markedly higher interest rates, compared to pre-pandemic levels, are set to sustain for an extended period.

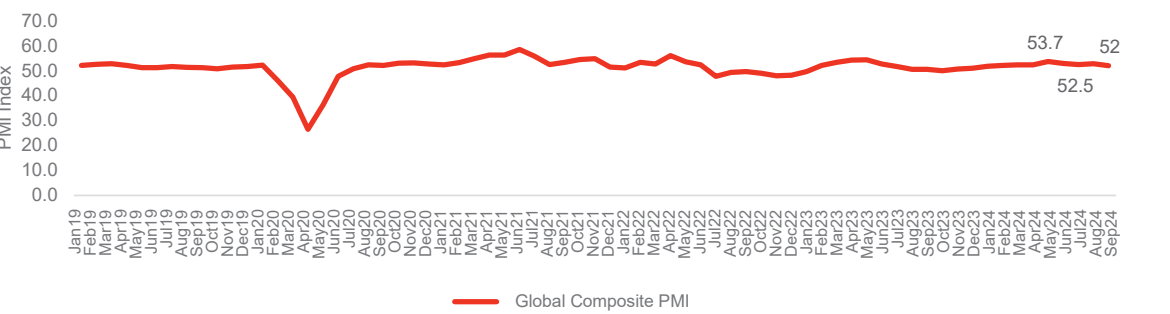
The World Bank report also outlines the need for the monetary policies of EMDEs to remain focused on price stability due to persistent inflation risks. Additionally, high debt and elevated debt-servicing costs

will require policymakers within EMDEs to balance sizable investment needs with fiscal sustainability. According to the World Bank, policies are necessary to raise productivity growth, improve the efficiency of public investment, build human capital and close gender gaps in the labor market in order to meet development goals.

Purchasing Managers Index (PMI)

The global composite Purchasing Managers Index (PMI) for 2024 has remained above the 50-point mark throughout the year and rose to 53.7 in May 2024 before falling back to 52.5 in July and stood at 52 in September 2024.

Global Composite PMI



Source: S&P Global Market Intelligence



Commodity prices

The World Bank —Global Economic Prospects Report (October 2024) expects prices to decrease by 5.0 percent in 2025 and 2.0 percent in 2026 after falling back 3.0 percent during 2024 and to their lowest levels since 2020. The projected declines are primarily due to the fall in oil prices but offset by price increases for natural gas and a stable outlook for the price of metals.

As the World Bank report outlines, the Brent crude oil price

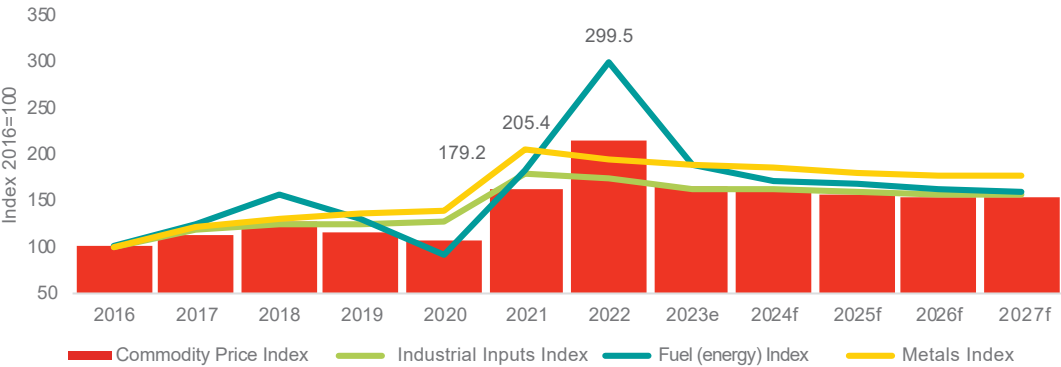
is projected to average USD 80/ bbl in 2024 before falling back to USD 73/ bbl in 2025 and lowering to USD 72/ bbl in 2026. The annual average oil price is expected to fall for the fourth consecutive year through 2026 and reach marginally above the 2021 level.

However, the same World Bank report outlines that the ongoing possibility of escalating conflict in the Middle East represents a substantial risk to energy prices. Also, falling global oil demand,

mostly from within the Chinese economy, as well as diversifying oil production and ample oil supply capacity held by OPEC+, remain downside risks to oil prices.

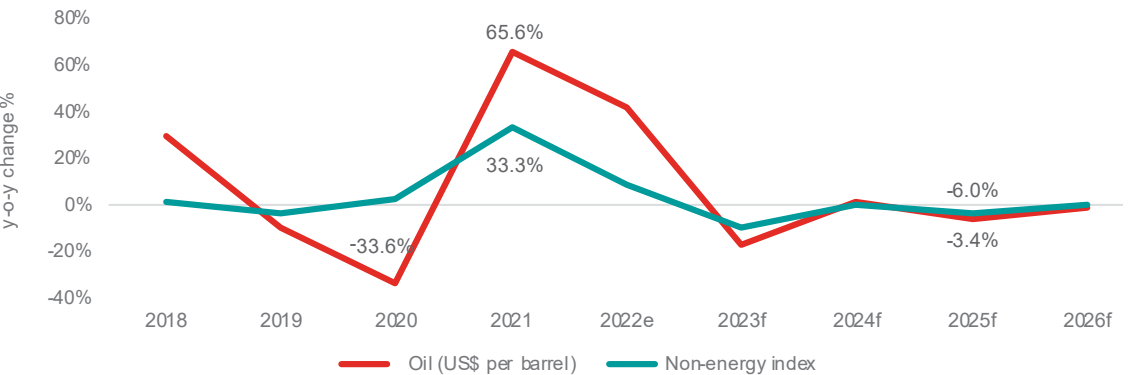
Outlined below is data from both the IMF and the World Bank, which outlines the forecasted commodity price index during the period 2024 to 2027, with prices forecasted to stabilize at similar levels seen in 2021, following a spike in prices witnessed in 2022.

Commodity Price Indices



Source: IMF, World Economic Outlook Database, October 2024

Growth in Commodity Prices



Source: World Bank Economic Prospects, June 2024

Energy

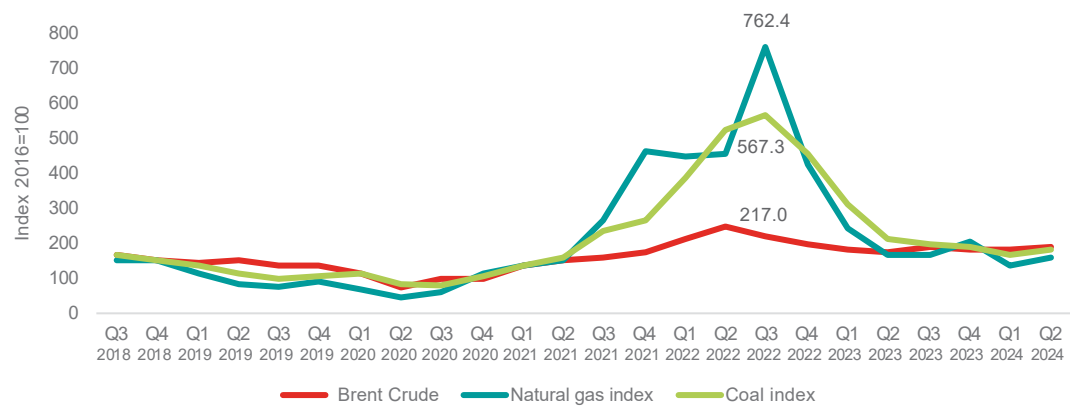
According to the World Bank—Commodity Markets Outlook Report (October 2024), it is noted that the energy price index is projected to decline by 6.0 percent during 2024 (y/y). Furthermore, the energy price index is projected to decline by a further 6.0 percent in 2025, with a decline of 2.0 percent projected in 2026.

The World Bank outlines that the forecast is based on no further escalation of regional conflicts and that the outlook for global economic growth remains stable, with oil supply from non-OPEC+ producers steadily expanding. Furthermore, the World Bank outlook is based on the OPEC+ countries maintaining spare

capacity and delaying the reversal of supply cuts.

As outlined by recent IMF data, the graph below illustrates how energy prices have continued to plateau during 2024 at similar levels seen in 2021, following price increases in 2022.

Changes in energy prices



Source: IMF Primary Commodity Prices

Oil

According to the recent World Bank Commodity Markets Outlook Report (October 2024), the global oil supply could reach approximately 105 mb/d in 2025. The World Bank outlines that countries such as Brazil, Canada, Guyana and the US will drive such growth.

The same report from the World Bank outlines that global oil consumption is forecasted to rise by about 1 mb/d per year from 2024 to 2025, representing an annual growth rate below 1.0 percent. Consequently, the

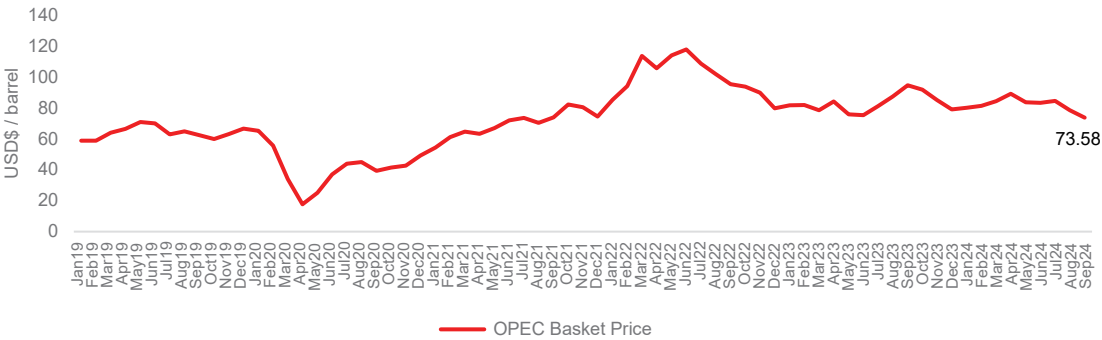
World Bank outlines that this would represent a significant slowdown from an increase of 2 mb/d in 2023, continuing a global deceleration in the oil demand. It is worth noting that the World Bank outlines that between 2015 and 2019, the growth of global oil consumption averaged 1.4 percent. As a result, the World Bank projects global oil supply to exceed demand by an average of 1.2 mb/d in 2025.

The World Bank outlined that the economies of China and India make up almost 50 percent

of the increase projected in 2025, with demand from within advanced economies due to fall, albeit marginally. Looking further towards 2026, the World Bank outlines that global oil consumption growth is expected to be mostly unchanged in comparison to 2024 and 2025.

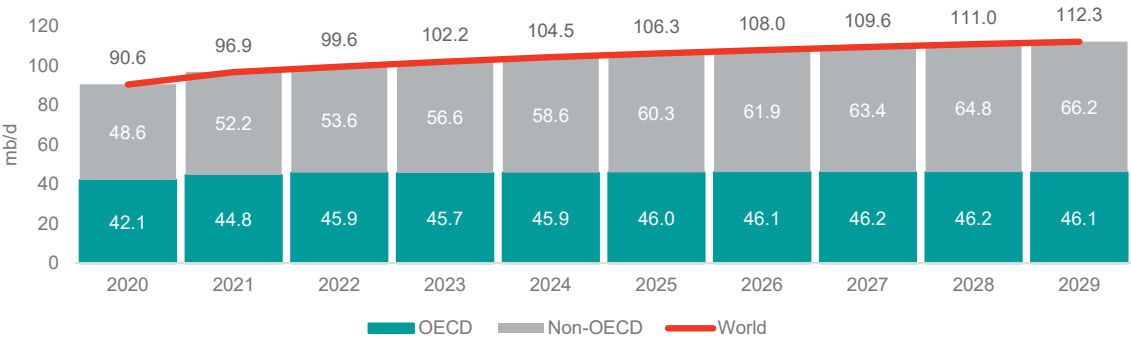
The graph below, based on data from OPEC, illustrates how oil prices in 2024 started at USD 80/bbl in January, reached USD 89.10/bbl in April, and dropped back to USD 73.58 in September 2024.

OPEC basket price



Source: OPEC

Medium-term oil demand



Source: OPEC 2024 World Oil Outlook 2045

Natural gas and coal

As outlined by the World Bank —Commodity Market Outlook Report (October 2024), the European natural gas benchmark is projected to be lower in 2024 by an average of 18.0 percent when compared to 2023 prices; the same report outlines that natural gas prices in Europe are expected to increase by 7.0

percent in 2025 (y/y) and then fall back in 2026 by a marginally more significant percentage as supply increases. According to the Report, the price of natural gas in the US is expected to decline in 2024 due to increased production and supplies across the country. However, the price of natural gas in the US market

is expected to rise in 2025 and 2026 as new infrastructure allows US exports to increasingly serve growing global demand, generating upward pressure on domestic prices. With respect to the price of coal, it is expected to fall as the global demand falls.

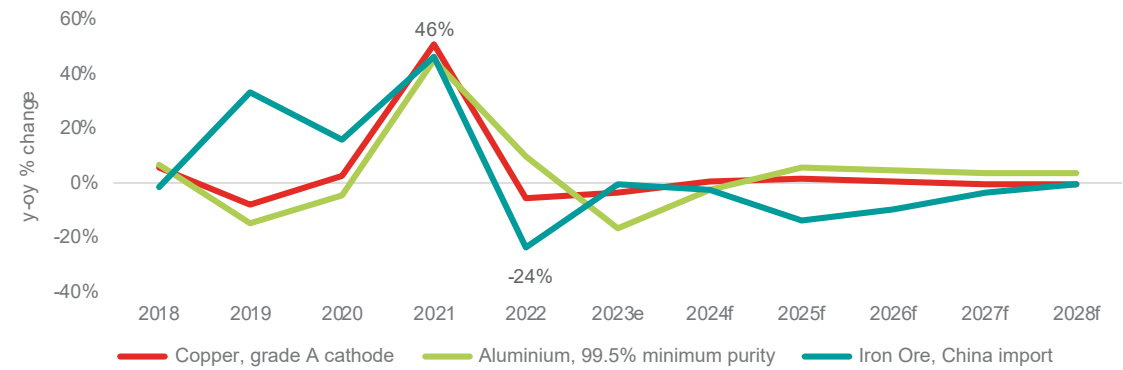
Metals

As outlined in the recent World Bank—Commodity Market Outlook Report (October 2024), the price index of metals is projected to decline in 2025 and 2026. In 2024, the price index increased by 6.0 percent (y/y). The World Bank Report outlines that after a 10.0 percent drop in

2024, the price is expected to decline further in 2025 and 2026 due to an increase in output by major producers in addition to a decline in the number of new facilities commencing production.

The graph below shows that iron prices are forecasted to fall in 2024, with copper prices and aluminum prices expected to rise, albeit marginally..

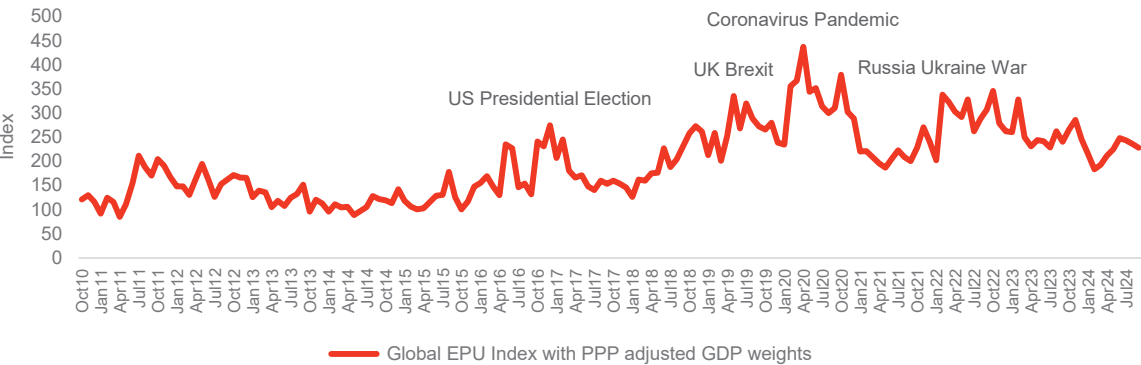
Changes in metal prices



Source: IMF, World Economic Outlook Database, October 2024

Global economic risks

Economic policy uncertainty



Source: Economic Policy Uncertainty

Major economic risks



Global inflation

According to the World Bank—Global Economic Prospects Report (June 2024), global inflation is expected to moderate slowly and average 3.5 percent in 2024. Considering some global improvements, the outlook remains cautious, with several central banks across advanced economies and EMDEs likely to stay cautious in easing policy. Accordingly, the World Bank sees that markedly higher interest rates, compared to pre-pandemic levels, are set to sustain for an extended period.



Adverse weather and climate change

Extreme weather caused by climate change will require governments to renew and increase their commitment to reduce their countries' emissions and assist those countries most affected by adverse weather but without the financial means to combat the risk and respond to events. A continued focus will be placed on the oil, gas, airline and automotive industries, in addition to the food industry, as this will remain a prevailing risk in 2025 and beyond.



Geopolitical conflict

Geopolitical conflicts continue to be a significant risk to global economies, with ongoing conflicts threatening the stability of markets. There also remains a risk to global stability if conflicts were to escalate beyond specific regions.



Biodiversity loss

Climate change, pollution, deforestation and habitat loss contribute to biodiversity loss. This risk threatens global ecosystems, affects livelihoods, food supplies and income, and may lead to disease outbreaks.



US Tariffs

Trade tension between the US and many leading global economies will continue to pose a risk in 2025.



Digital cyberattacks

With new technologies reshaping economies and the drive towards artificial intelligence, autonomous vehicles and drones, the digital world will be vulnerable to cyberattacks. This is already seen with critical infrastructure (energy, healthcare and transportation) and geopolitical and economic uncertainties due to a lack of suitable governance.



Natural disaster

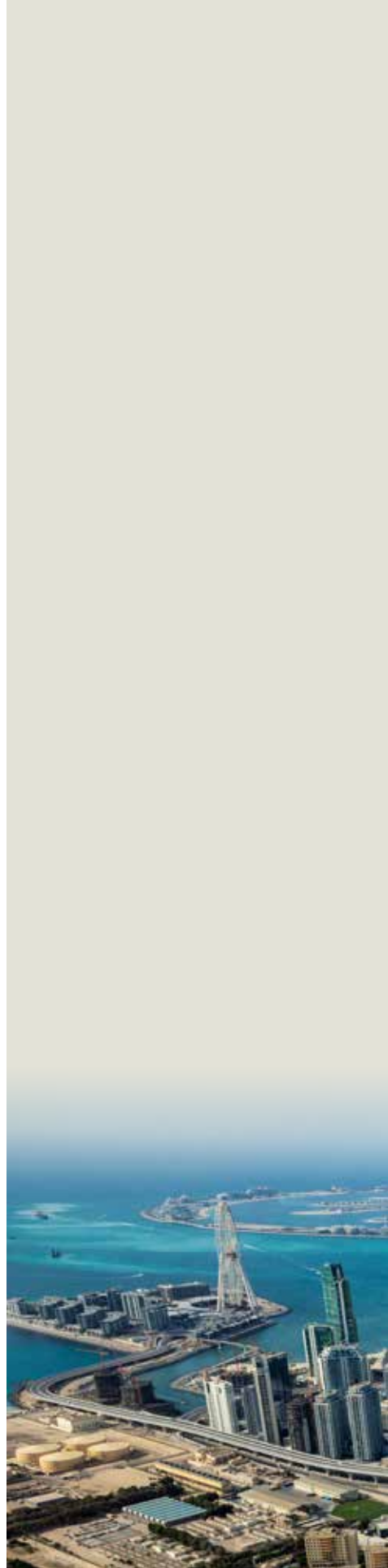
Natural disasters can be preventable; solutions such as reforestation, education, technology governance and economic support could help mitigate and reduce the risks caused by global warming, pollution and mining.

Global construction prospects

This review is for the period covering 2024 to 2028, analyzing anticipated construction growth during this time.

As outlined by the Business Research Company the global construction market is expected to reach USD 15.97 trillion in 2024 from USD 15.19 trillion in 2023 at a compound annual growth rate (CAGR) of 5.1 percent.

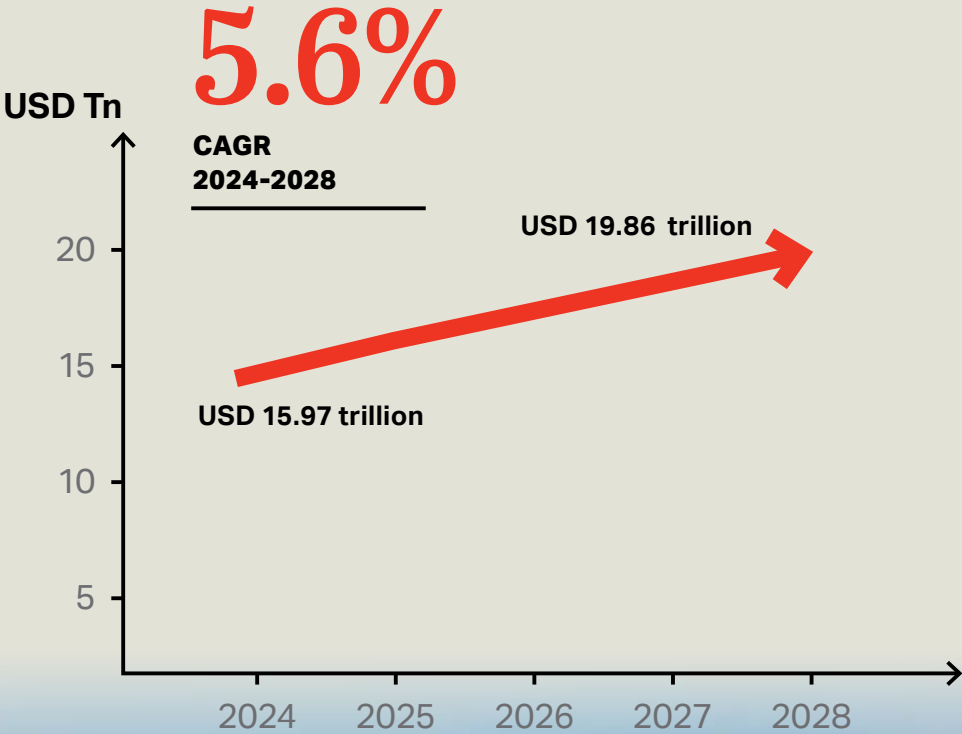
They also outlined that the market is expected to reach USD 19.86 trillion in 2028 at a compound annual growth rate (CAGR) of 5.6 percent.



The RICS Global Construction Monitor for Q2 2024 outlines that activity across global markets showed modest growth, with the Construction Activity Index level at +15, as outlined during Q2 of 2024. At regional levels, Europe saw increased activity during Q2 2024, while activity held steady in the Middle East, Africa and the Americas.

The Monitor also outlined the growth within the global infrastructure sector continues to lead the way. However, most global economies and construction markets are impacted and constrained by increasing material prices, fiscal pressures and continuing skills shortages.

According to the Business Research Company, the global construction market is witnessing significant growth, with strong market activity in China, Brazil, India, Saudi Arabia and Indonesia.





North America

GDP from construction across the main economies is expected to reach USD 978 billion across North America in 2024, with the US accounting for USD 856 billion. For the US market, this equates to circa 3.08 percent of all GDP generated from within the US economy. The remaining output value of USD 122 billion relates to the Canadian market, which accounts for 5.83 percent of total Canadian GDP.

A recent GlobalData review outlines that the US dominates the North American construction market ahead of Canada when comparing output values. GlobalData anticipates that the US market will reach USD 2.585 trillion in 2024 and grow by more than 3 percent CAGR over the forecast period of 2019-2028.

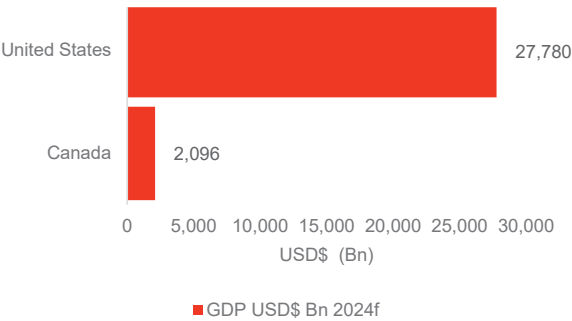
In addition, as per GlobalData, the residential sector is expected to lead the construction market with government-led initiatives across transportation, energy and social infrastructure also contributing to market output.

Additionally, manufacturing sectors are drawing investments to produce semiconductors, electronics, EVs, batteries and clean energy. Sectors such as biomanufacturing and heavy industry are also attracting inward investment.

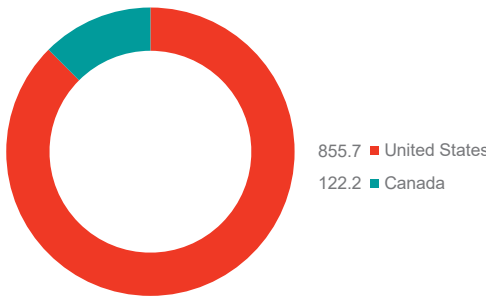
Furthermore, RICS’ recent Global Construction Monitor suggested that infrastructure projects remain the key driver of market activity. Other findings include the continued skills shortages and increased caution regarding credit conditions in the US.

As per GlobalData, the Canadian construction market activity is projected to decline during 2024 due partly to a slowdown within the residential sector. However, according to RICS’ Global Construction Monitor, current workloads have begun to increase within the infrastructure sector. Like in 2023 the construction market in Canada continues to experience a shortage in skilled labor. The same RICS publication indicates a sentiment within the Canadian market that easing credit conditions will provide support to businesses.

North America GDP



GDP from Construction USD Bn



Source: IMF, Trading Economics, World Bank



Latin and South America

GDP from construction across the main economies is expected to reach USD 97 billion across Latin and South America in 2024, with Mexico accounting for USD 84.6 billion. This equates to circa 6.44 percent of all GDP generated from within the Mexican economy. Chile accounts for USD 3.6 billion of the overall construction market (1.09 percent of GDP). Peru accounts for a further USD 3.1 billion (1.27 percent of GDP), with Brazil contributing USD 3.09 billion (0.14 percent of GDP). The construction market of Colombia contributes USD 2.61 billion (0.74 percent of GDP).

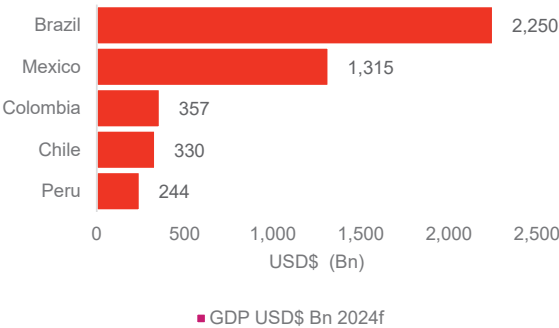
According to the World Bank —Global Economic Prospects Report (2024), growth is forecast to reduce from 2.2 percent in 2023 to 1.8 in 2024 across the region. However, it is expected to rebound in 2025 to 2.7 percent. Looking further into the factors driving the reduced forecast it is evident that weakened economic

activity in Argentina is the main reason for the 2024 forecast decline.

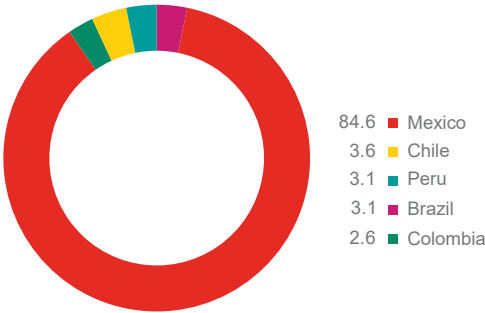
The same report outlines that further tightening of global financial conditions and increased debt levels would further impact economic prospects across the region.

Like in other regions, economic prospects across Latin and South America are vulnerable to a slowdown in economic activity in China and to climate change. Conversely, improved economic activity in the US could potentially lead to improved regional economic conditions.

Latin and South America GDP



GDP from Construction USD Bn





Europe

GDP from construction across the main economies is expected to reach USD 185.3 billion across Europe in 2024, with the UK accounting for USD 47.2 billion. This equates to circa 1.40 percent of all GDP generated from within the UK economy. Following the UK, Germany accounts for USD 36 billion of the overall construction market (0.81 percent of GDP). France accounts for a further USD 33.7 billion (1.10 percent of GDP), with Italy contributing USD 26.1 billion (1.08 percent of GDP). The construction markets of Spain, Netherlands and Turkey make up the remaining output of the region’s main economies.

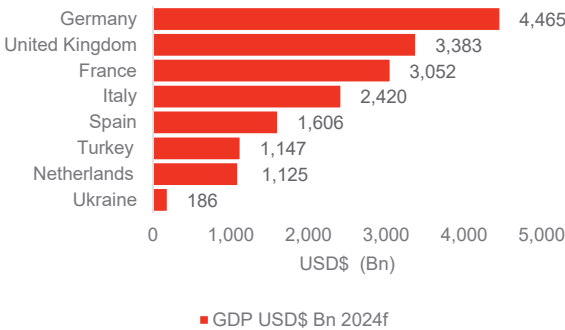
As outlined by the World Bank —Global Economic Prospects Report (2024), it is projected that growth across Europe and the Central Asian region will ease to 3.0 percent during 2024, with a further reduction projected across 2025 to 2.9 percent. The main reasons cited for the easing in growth relate to lower output levels from Russia and

Turkey. However, the same report outlines that if Russia, Turkey and Ukraine are excluded from consideration, the growth levels for 2024 and 2025 will look stable due to the continued easing of post-Covid inflation, interest rates and the growing export levels. Nevertheless, the ongoing regional and global geopolitical issues remain a risk factor.

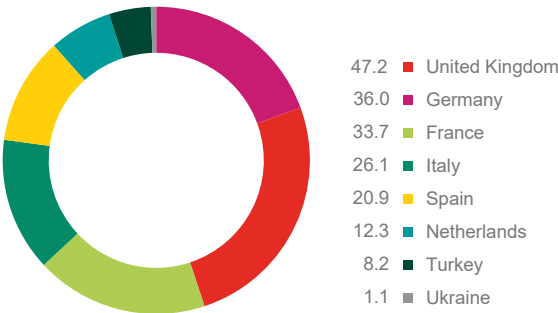
A recent RICS Global Construction Monitor publication outlines how the European market has seen improvements, albeit at modest levels with the

Construction Activity Index rising to +12 as outlined during Q2 of 2024, up from +6 during the preceding quarter.

Europe GDP



GDP from Construction USD Bn





Africa

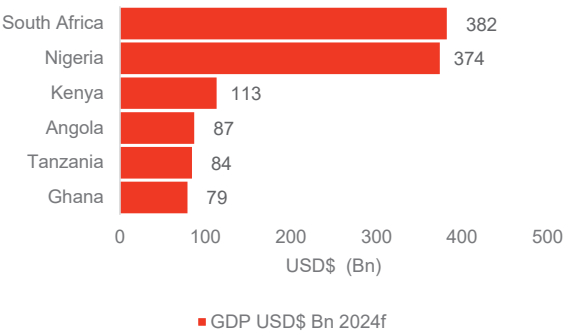
GDP from construction across the main economies is expected to reach USD 10.1 billion across Africa in 2024, with South Africa accounting for USD 6.2 billion. This equates to circa 1.62 percent of all GDP generated from within the South African economy. Following South Africa, Tanzania accounts for USD 2.1 billion of the overall construction market (2.45 percent of GDP). Kenya accounts for a further USD 1.21 billion (1.07 percent of GDP), with Nigeria also contributing USD 0.5 billion (0.12 percent of GDP). The construction markets of Angola and Ghana make up the remaining output of the region’s main economies.

According to the World Bank —Global Economic Prospects Report (2024), growth across Sub-Saharan Africa for 2024 is projected to increase to 3.5 percent. The region may see growth of about 4.0 percent from

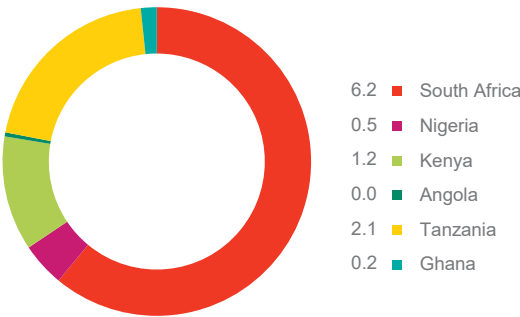
2025 to 2026. The reduction in interest rates and increased levels of consumption, in addition to higher levels of investment, are assisting growth. The Report also notes that ongoing global geopolitical conflicts, continued

political instability across the region, a more pronounced slowdown of the Chinese economy, ongoing adverse weather events, and regional debt distress represent the main risks to economic activity.

Africa GDP



GDP from Construction USD Bn





Asia

GDP from construction across the main economies is expected to reach USD 1.570 trillion across Asia in 2024, with China accounting for USD 1.280 trillion. This equates to circa 6.86 percent of all GDP generated from within the Chinese economy. Following China, Japan accounts for USD 187 billion of the overall construction market (4.32 percent of GDP) and India accounts for a further USD 46 billion (1.21 percent of GDP). Indonesia accounts for USD 22 billion (1.40 percent of GDP), with South Korea contributing USD 17 billion (0.96 percent of GDP). The construction markets of Kazakhstan, Malaysia and Cambodia make up the remaining output of the region’s main economies.

Growth across the East Asia and Pacific region is projected to reduce from 5.10 percent in 2023 to 4.8 percent in 2024, primarily due to reduced activity within the Chinese economy, as outlined in the World Bank - Global Economic Prospects Report (2024). Additionally, growth will reduce to 4.20 percent in 2025 and 4.10 percent in 2026 due to a further slowdown in the Chinese economy. The Report notes that

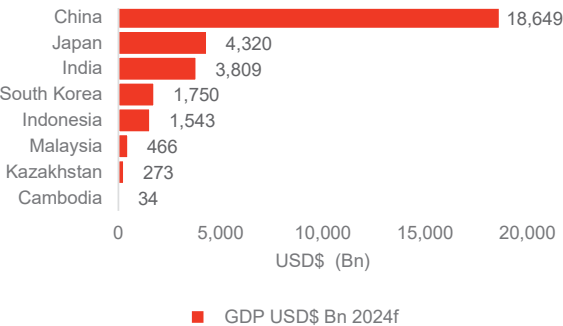
excluding China, regional growth will increase to 4.60 percent in 2024, due mostly to better global trade.

According to the World Bank —Global Economic Prospects Report (2024), risks to the projected outlook for the region relate to ongoing global conflicts, further trade policy fragmentation and a more pronounced slowdown of the

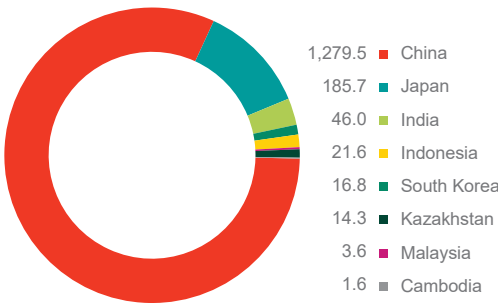
Chinese economy. Tighter global financial conditions and ongoing adverse weather events are additional risks.

According to RICS’ Global Construction Monitor, India and the Philippines display positive Construction Activity Index levels, with India reporting a level of +57 for Q2 of 2024.

Asia GDP



GDP from Construction USD Bn



Source: IMF, Trading Economics, World Bank



Australasia

GDP from construction across the main economies is expected to reach USD 32 billion across Australia and New Zealand, with Australia accounting for USD 29 billion. This equates to circa 1.63 percent of all GDP generated from within the Australian economy. The remaining output value of USD 3 billion relates to the New Zealand market, which accounts for 1.06 percent of total New Zealand GDP.

According to a Research and Markets report, the Australian construction industry is expected to grow by 6.9 percent and reach AUD 193 billion in 2024. Furthermore, a CAGR of 6.2% is projected for 2024–2028, with the market expected to reach AUD 246 billion by 2028, indicating substantial growth potential.

A recent report by the Australian Institute of Quantity Surveyors (AIQS) outlined that while the Australian economy still faces challenges, the outlook is optimistic. It notes that a downward trend in inflation is expected to continue due to eased supply constraints and reduced domestic activity pressures. Furthermore, the same report outlines that the economy is expected to grow at a moderate pace and will support the Australian construction

industry. Additionally, it notes that the Australian Federal Government has committed to significant infrastructure spending in the coming years, particularly in areas such as transportation, renewable energy, and social infrastructure, while also implementing policies to address the housing affordability crisis, which will lead to increased demand for new housing construction across Australia.

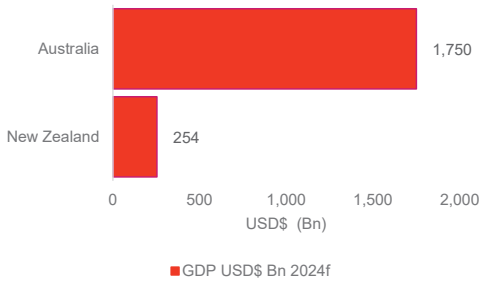
Research and Markets reports that the New Zealand construction industry is expected to decline in real terms by 1.9 percent in 2024, due mainly to weaknesses within the residential sector and high inflation and corresponding construction costs. The report outlines that the New Zealand construction industry is expected to grow annually at an

average rate of 3.4 percent from 2025 to 2028 due to supports in investments within sectors such as transport, health and education.

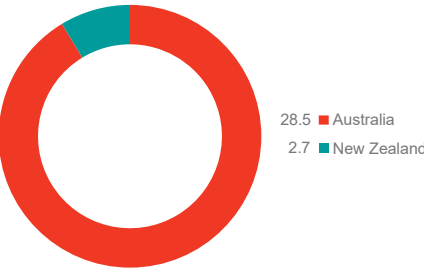
According to the RICS’ recent Global Construction Monitor publication, the infrastructure sectors in Australia, Singapore and Hong Kong comprise the main area of activity. Additionally, the RICS publication outlines that Australia saw a Construction Activity Index level of +10 during Q2 of 2024.

Conversely, the same report notes that Sri Lanka and New Zealand saw reduced activity within all sectors of their respective markets during Q2 of 2024, with the Construction Activity Index level in New Zealand falling from -13 to -42 when compared to the previous quarter.

Australasia GDP

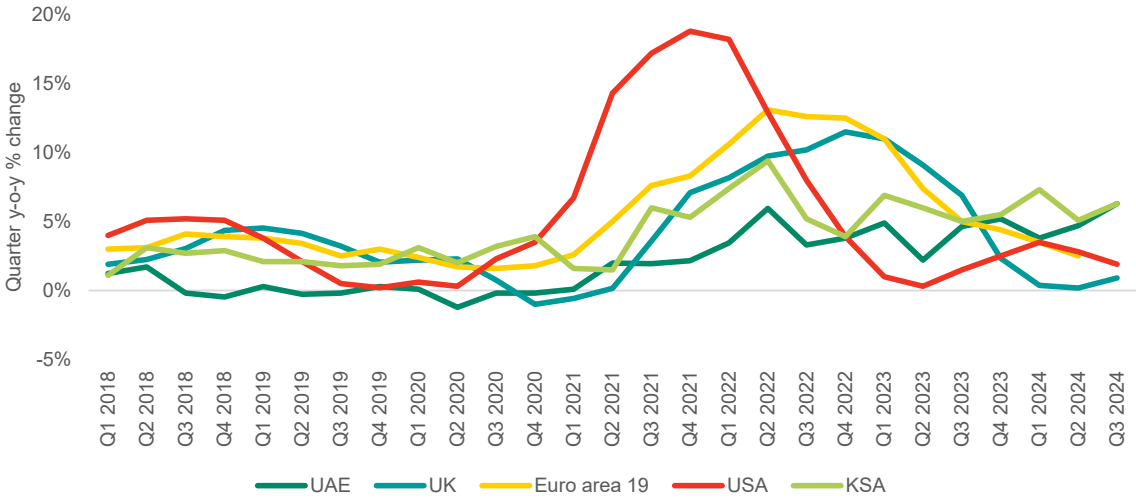


GDP from Construction USD Bn



International construction cost inflation

International construction cost indicators



Source: Based on AECOM Indices for UK, UAE; ENR USA Construction Cost Index; Euroarea Eurostat Construction Output Index.

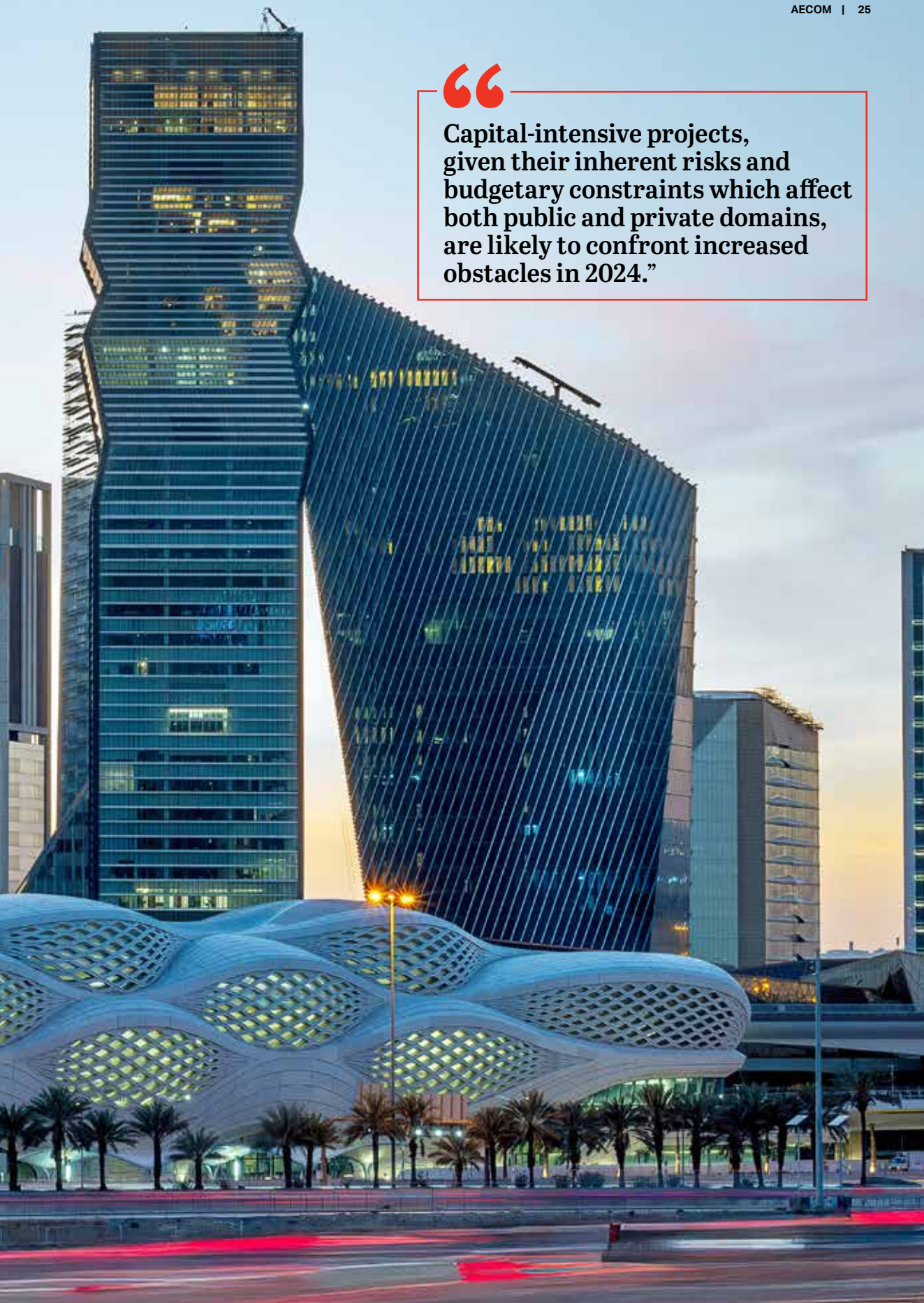
From the above graph, it is evident that construction inflation within the UAE increased upwards in the order of 5 percent and 6 percent in KSA during 2024, which is reflective of the market

conditions. Over the course of 2024, the UK market has remained steady, with a slight increase seen during Q3. Other markets, such as Europe and the US, have continued to slide during 2024.



“

Capital-intensive projects, given their inherent risks and budgetary constraints which affect both public and private domains, are likely to confront increased obstacles in 2024.”



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MENA economic review

At the end of Q3 2024, the International Monetary Fund (IMF) forecasted the Middle East and North Africa (MENA) region's GDP to grow by 2.1 percent for the full year 2024. This represents an increase of 0.2 percent on the 1.9 percent figure reported for 2023.

This modest increase in growth is mainly attributable to the gradual resumption of oil production, with the limited growth seen in 2023 resulting from increases in non-oil sector activity. The Middle East encompasses several oil-exporting countries, including Saudi Arabia, the United Arab Emirates (UAE), Qatar, Oman, Bahrain, Iran, Iraq, Syria, Kuwait and Yemen. These countries account for approximately 48 percent of the world's proven oil reserves and about 38 percent of natural gas reserves. During periods of high oil prices, such as 2021-2022, these countries' economic outlook became bolstered due to fiscal surpluses, and they became somewhat sheltered from the economic risks attributed to the rest of the world. These fiscal surpluses provide considerable easing in economic recovery; with the current and continued high oil prices at the center of the

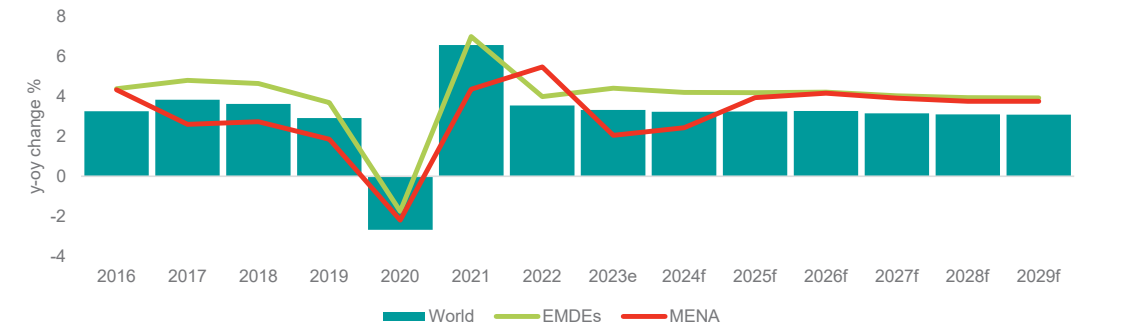
Middle East's growth, it allows for greater fiscal flexibility, confidence in investment and the funding of diversification efforts across the GCC member states.

The Middle Eastern oil-importing countries have seen a slowdown in activity but to a lesser extent than that seen in the oil-exporting countries. Egypt's growth slowed to 2.8 percent in 2024, 0.7 percent lower than the estimate at the start of the year, mainly due to weaker manufacturing activity caused by import restrictions, reduced shipping through the Suez Canal and reduced tourism due to regional conflicts. Tunisia and Morocco have also seen a reduction in activity due to sharp contractions in agricultural production as an ongoing consequence of droughts in 2023, despite relatively robust tourism levels. .

Regional challenges such as conflict and slower-than-expected tourism growth suppressed MENA's economic growth in 2024. Despite this, the outlook for 2025 is positive at 4 percent, with strong growth driven by the expected phasing out of oil production cuts and robust non-oil sector activity, particularly in Saudi Arabia.

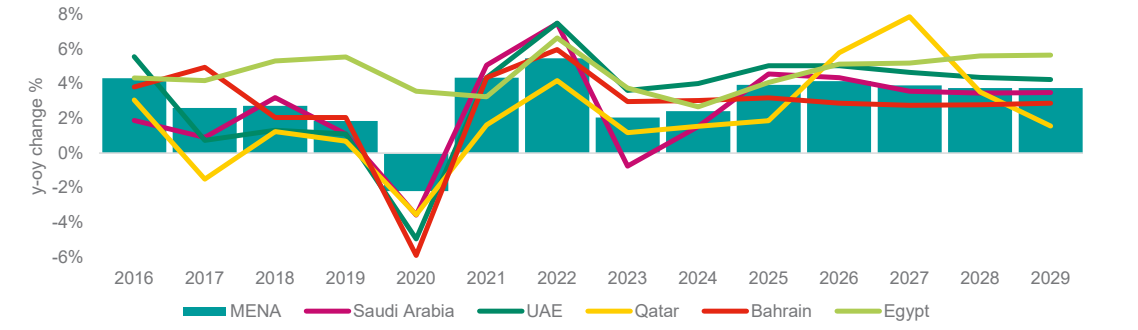
The graph below shows the MENA GDP growth rate compared to emerging markets and developing economies. The GDP is also tracked against the overall world economy from 2016 and forecasted to 2029. According to the IMF, the MENA region's GDP is expected to grow in 2025 and achieve relatively stable growth levels between 2026 and 2029 compared to rates achieved in 2024.

World, EMDEs and MENA, GDP growth at constant prices



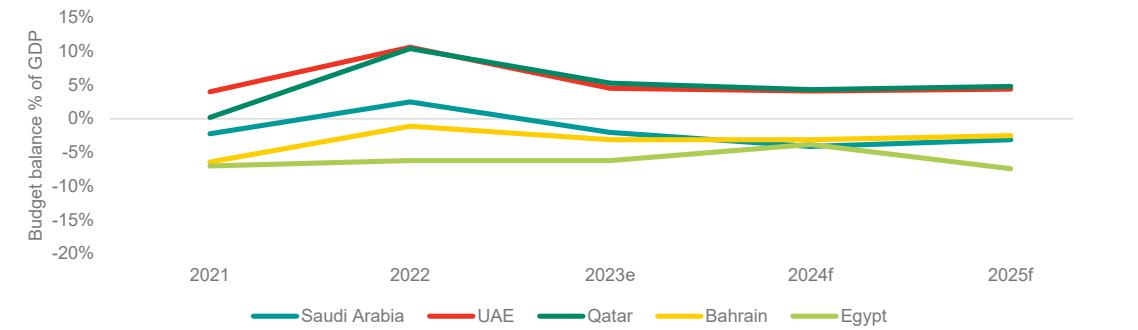
Source: IMF, World Economic Outlook Database, October 2024

Selected MENA countries, GDP growth at constant prices



Source: IMF, World Economic Outlook Database, October 2024

Budget balance % GDP for selected MENA countries



Source: Haver Analytics, National Sources, Emirates NBD Research July 2024

2024 MENA country statistics

Below is a reference to the key data for MENA countries in 2024. It presents statistical growth and forecasts for 2024 and, in some instances, through the end of the review period 2029. The table identifies the country's GDP value, imports and exports against GDP and population growth.

	Algeria	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Land area, '000 km2 (1)	2,381.7	0.8	995.5	1,628.8	434.1	88.8	17.8	309.5	11.6	2,149.7	71.0
Capital city	Algiers	Manama	Cairo	Tehran	Baghdad	Amman	Kuwait	Muscat	Doha	Riyadh	Abu Dhabi
Population, million, 2024f (2)	46.6	1.6	107.8	87.4	44.5	11.4	5.1	5.2	3.0	33.5	9.8
Population growth, CAGR 2024-2029 (CAGR %) (2)	1.2	2.5	2.0	1.0	2.6	0.7	2.0	3.2	0.5	2.0	0.7
GDP, USD, billion, current, 2024f (2)	266.8	46.8	347.6	464.2	265.9	53.6	160.4	108.9	244.7	1,106.0	527.8
Real GDP growth (2023-2024), % (2)	3.8	3.6	3.0	3.3	1.4	2.6	-1.4	1.2	2.0	2.6	3.5
GDP/ Capita (PPP), USD, 2024f (2)	13,163	50,048	14,066	16,945	9,533	9,904	41,745	31,830	89,667	56,166	77,339
Net lending/ borrowing, 2024f % of GDP (2)	-8.5	-6.9	-10.9	-3.0	-7.6	-7.7	27.3	3.7	5.1	-2.8	4.5
Volume of imports of goods & services, % of GDP (2)	9.7	1.5	6.9	-6.4	-	1.8	-	10.8	2.0	9.0	2.8
Volume of exports of goods & services, % of GDP (2)	2.2	3.2	-8.2	7.4	-	0.6	-	8.0	-2.4	1.0	2.4
Account balance, USD, billion, current (2)	0.4	3.2	-21.8	16.7	-9.6	-3.4	48.3	3.0	38.1	5.3	41.0
Unemployment rate, % of total labor force (2)	-	-	7.1	8.9	-	-	-	-	-	-	-

Source: World Bank, IMF

MENA economic challenges and risks

The MENA region continues to face the same economic challenges and risks as in previous years; however, in 2024, the escalation of geopolitical conflicts has contributed to higher uncertainty in the region's economic outlook. Ongoing conflicts are suppressing regional growth, and their overall

impact will depend on the duration, intensity and spread of geopolitical tensions.

Continued political instability, extreme unemployment, economic uncertainty, economic relief disparity and ongoing geopolitical conflicts all remain challenges to the stability and

economic growth of the region. Some of these challenges arise from political developments outside of the region; political uncertainty in the European Union and the United States and the potential escalation of a trade war between major global economies have an impact on regional activity.

The key risks associated with the MENA region include:

1  Conflicts Violence, protests and social unrest.	2  Oil Prices Exporting and importing reliance.		
3  Governments Institutional and social fragility and corruption.	4  Unemployment and under-employment, especially for youths and women.	5  International ties and trade tensions	6  Cyberattacks Disruption of operations or theft of data or money.
7  Human Capital Education and skills gaps.	8  Climate Change Extreme weather, rising sea levels, floods and droughts.	9  Pandemics New viruses and variants.	10  Food security including water Supply chain disruption, low crop yields, water scarcity.

MENA construction market review

The overall outlook for the MENA region's construction sector remains confident, strengthened by growing pipelines and continued investment in Saudi Arabia and the UAE.

Buoyant and increasing project pipelines across the UAE and Saudi Arabia paint an optimistic market backdrop. These projects are set to be the focus of the region's construction sector in 2025 and beyond.

The resilience and driving force of the MENA region's construction sector are focused on the need to develop and diversify their economies, meet the demands of their rapidly growing population and reduce their economic reliance on finite and economically volatile fossil fuels.

Project awards in the Middle East in 2024 exceeded the value of awards in 2023 (based on data to the end of Q3 2024). The figures for 2024 currently represent a new eight-year record for construction activity in the region. When final award values are accounted for up to the end of 2024, they may even exceed a 10-year record set in 2015.



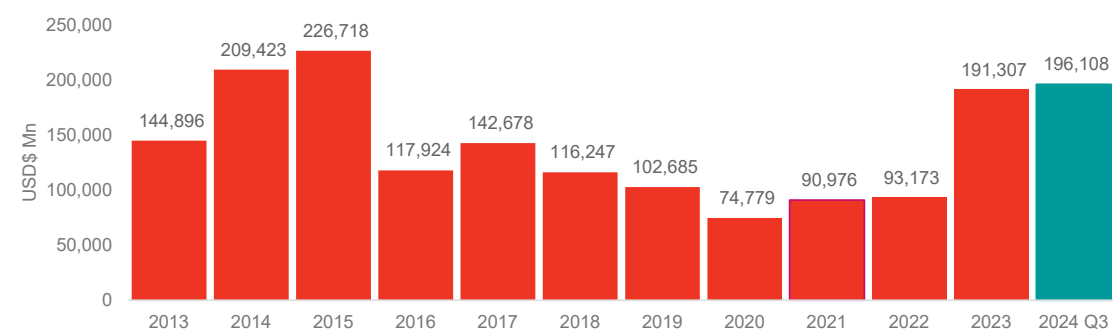
Development players in the region continue to focus on Saudi Arabia's infrastructure projects to support the expansion of its PIF-led mega-project programs. The UAE's increase in project awards focusing on the building and residential real estate sectors

marks a considerable return to a buoyant construction market.

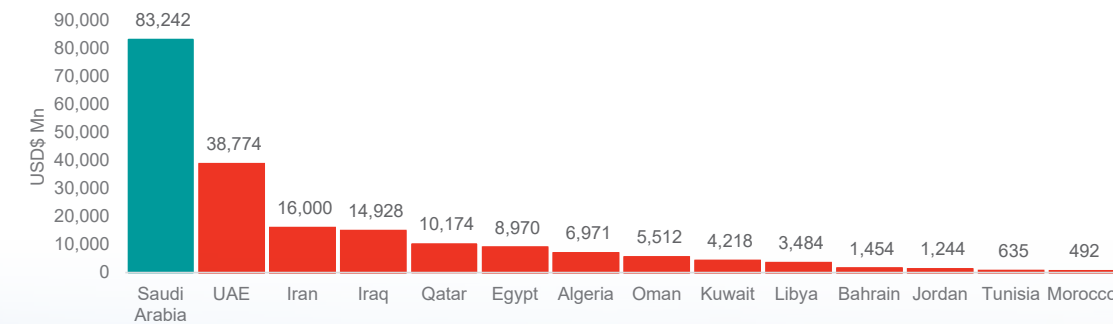
MENA project awards are expected to grow further in 2025, mainly due to Saudi Arabia striving to meet the demands of its Vision 2030, but also

recognizing the need for several major international events to occur in the Kingdom, such as the Asian Cup (2027), Asian Winter Games (2029), World EXPO (2030) and FIFA World Cup (2034).

MENA projects awarded yearly



MENA projects awarded 2024



Source: MEED



MENA awarded contracts

The country with the highest value of awarded projects in 2024 was Saudi Arabia, with an approximate total of USD 83.24 billion, up 50 percent from 2023, equating to about 40 percent market share. KSA was followed by the UAE with USD 38.77 billion in project awards, equating to a circa 17 percent market share.

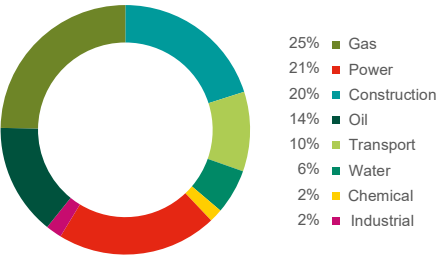
The busiest sector for project awards was gas, which saw a 25 percent share with a value of USD 48.55 billion, followed by power projects at 21 percent, with a value of USD 40.72 billion. Building construction projects came in third with 20 percent, with a value of USD 39.36 billion, followed by oil (14 percent - USD 28.37 billion) and transportation (10 percent - USD 20.25 billion). Water, chemical and industrial projects collectively accounted for the remaining 10 percent of awards.

According to MEED, the cumulative value of USD 228 billion for awarded projects in the MENA region for Q1 to Q3 2024 represented a 13.7 percent increase on the same period in 2023.

Of Saudi Arabia's USD 83 billion investments this year, USD 12.8 billion was committed to four deals with Saudi Electricity Company (SEC) for combined gas-fired power plants and HVDC converter stations in Riyadh. Additionally, SEC is understood to have an agreement with Egypt's Orascom and Spain's Tecnicas Reunidas for power plants in Qurayyah and Ghazlan 2 for USD 3 billion. Energy China won a USD 2.5 billion deal for a plant next to Ghazlan 1. Two solar power plants with a combined value of USD 4.2 billion were also awarded by SPPC's Renewable Energy Program in Haden and Muya, each with a 2,000 MW capacity, showing a growing grasp of opportunities for introducing renewable energy to the grid.

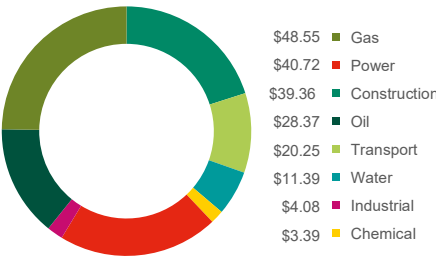
According to MEED, the Kingdom is set to award more power infrastructure projects in the coming years. These awards show a concerted effort to meet the rising energy demands of Saudi Arabia, driven by current

MENA project awards%2024



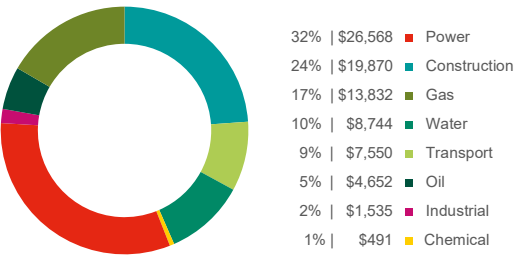
Source: MEED 2024 Q1 - Q3

MENA project awards in \$bn 2024



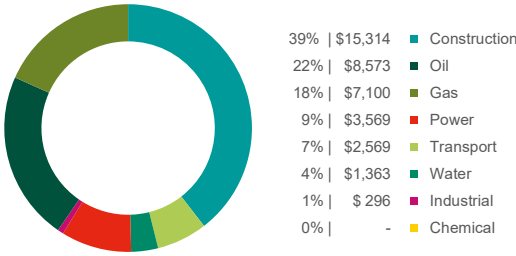
Source: MEED 2024 Q1 - Q3

KSA project awards % and \$m 2024



Source: MEED 2024 Q1 - Q3

UAE project awards % and \$m 2024



Source: MEED 2024 Q1 - Q3

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The cumulative value of USD 228 billion for awarded projects in the MENA region for Q1 to Q3 2024 represented a 13.7% increase on the same period in 2023.”



and future projects and projected population growth in 2025 and beyond. The Kingdom of Saudi Arabia continues to lead the region in terms of the value of contracts awarded.

The UAE continued the trend in power infrastructure contract awards with USD 2.4 billion awarded by Abu Dhabi National Oil Company (ADNOC) to Egyptian contractor ENPPI to build a new oil pipeline from Abu Dhabi to Fujairah, one of several contracts awarded by ADNOC in 2024 as they build on a record USD 22 billion spent on oil and gas projects in 2023.

Despite uncertainty affecting the region from continued conflicts, the outlook for the UAE remains buoyant due to boosted tourism and property purchases since early 2022 following the Ukraine-Russia conflict, increased activity in upstream gas production, reworked metro and rail expansions and the reignition of shelved development projects. The UAE construction sector has seen consolidation in 2024 as government-owned developers have been reorganized or merged, such as the incorporation of Nakheel and Meydan into Dubai Holding Group.

According to a report by Research and Markets, Qatar's construction market is forecast to have grown by 4.4 percent in 2024. Of the USD 10 billion total contract value awarded in the Sultanate in 2024, gas and oil projects dominate, with USD 4 billion awarded by Qatar Energy for a gas plant at North Field Phase 2 and four contracts with a combined value of USD 4.9 billion awarded at the Al Shaheen Oil Field Ruya Development.

Following the World Cup in 2022, several strategic projects are in Qatar's pipeline that should provide opportunities for continued contract award value growth in the short term.

In Egypt, project awards were up 56 percent from 2023 to USD 8.9 billion in 2024. The El Nasr Company's Acid and Fertiliser Production plants, with a combined value of USD 1.8 billion, led the way. Other significant contracts on the Cairo Metro network modernization works totaling USD 1.6 billion also contributed to the country's market in 2024.

Although Egypt is facing challenges in terms of its economic growth, the country's construction pipeline remains strong with multiple strategically important projects in development to meet the Government's vision for 2030.

Despite regional instability and political uncertainty that might otherwise give cause for

concern for Iran, Iran surprisingly places third amongst countries excluding KSA and UAE in terms of contract award value in 2024, with USD 16 billion awarded. This is, in fact, one contract for the Pars Oil and Gas Company on the South Pars Gas Field Pressure Boosting Project, awarded in March.

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In Egypt, project awards were up 56% from 2023 to USD 8.9 billion in 2024.”



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Oman awarded USD 5.5 billion of projects in 2024, up from USD 2.5 billion of projects in 2023, representing a 120% increase”



Oman awarded USD 5.5 billion of projects in 2024, up from USD 2.5 billion in 2023, representing a 120 percent increase. With USD 0.8 billion attributable to the Marsa LNG Terminal and a further USD 1 billion to the Oman Rail - Etihad Rail packages B and C, these three projects dominate the Sultanate's project award list.

Transport projects account for USD 1.8 billion in 2024 for Oman, compared to USD 0.5 billion for oil projects and USD 1.1 billion for

gas, highlighting the country's increased diversification into infrastructure development.

Awards were recorded for Bahrain at a total value of USD 1.4 billion in 2024, which, although modest, still represents a 258 percent increase on the USD 0.39 billion awarded for 2023.

Looking across Bahrain's pipeline of projects, the launch of Bahrain's USD 30 billion Strategic Projects Plan, which is

set to increase the total land area by more than 60 percent and the tendering of USD 3.5 billion King Hamad Causeway project as a public-private partnership shows considerable prospects in the country's journey to realize its Economic Vision 2030. Furthermore, with Bahrain being a gateway country for business in Saudi Arabia, the significant uplift of activity in Saudi Arabia means that the outlook for the country is expected to remain strong.

Top five awarded contracts in 2024

Saudi Arabia

Awarded project name	Industry	Value USD Mn
NEOM City: Trojena Valley Cluster: Dams	Water	4,700
SEC - ±500 HVDC Converter Station for COA-SOA Link	Power	3,730
SEC - Qurrayah Combined Cycle Gas Fired Power Plant (CCGT) 3600 MW	Power	3,600
NHC - Residential Development (20,000 Units)	Construction	3,000
NHC - Development of 20000 Housing Units	Construction	3,000

Egypt

Awarded project name	Industry	Value USD Mn
El-Nasr Company - Acid Production Plant	Chemical	900
El-Nasr Company - Fertiliser Production Plant	Chemical	900
NAT - Cairo Metro Network: Line 1- Modernization of Helwan to El Marg Line	Transport	885
NAT - Cairo Metro Network: Line 1- Modernization of Helwan to El Marg Line	Transport	750
Atomstroyexport - El Dabaa Nuclear Power Plant: Civil Works	Power	563

Qatar

Awarded project name	Industry	Value USD Mn
QatarEnergy LNG - North Field Production Sustainability: Phase 2 - COMP3A and COMP3B	Gas	4,000
NOC - Al Shaheen Oil Field Development - Ruya Development: EPC-11	Oil	2,100
NOC - Al Shaheen Oil Field Development - Ruya Development: EPC-12	Oil	1,300
NOC - Al Shaheen Oil Field Development - Ruya Development: EPC-09	Oil	900
NOC - Al Shaheen Oil Field Development - Ruya Development: EPC-13	Oil	640

UAE

Awarded project name	Industry	Value USD Mn
ADNOC - Ruwais Low Carbon LNG Terminal Project	Gas	5,500
ADNOC - West To East Pipeline:	Oil	2,400
ADNOC Offshore - Lower Zakum Long-Term Development Plan: Phase 2	Oil	1,600
DEWA - MBRM Solar Power Plant (IPP): Phase 6	Power	1,200
ALDAR - Saadiyat Lagoons District - Residential Villas: Phase 2 & 4	Construction	1,200

MENA construction considerations

Rising material costs and access to financing remain significant factors in the MENA construction market. Although inflationary pressures are under control in most global economies in the second half of 2024, they continue to impact the region which imports much of its goods and materials. While this has been and will continue to be a consideration, so will the opportunity to switch to locally produced materials and simpler, shorter supply chains where possible.

Resilient growth in contract awards has led to increased demand for labor and regional competition for skills. Saudi Arabia continues to draw labor away from the UAE and the wider region, and access to labor remains a key consideration for the sector. According to the RICS, Dubai and Abu Dhabi are reporting skill shortages and project delays that may increase if not addressed in 2025 and the short term.

Despite these potential pitfalls, the region remains a draw for investors in the context of wider geopolitical instability. There are opportunities for significant improvement in the quality of product delivery, margin, and volume. The ability to achieve this will ultimately depend on the region's attractiveness to headcount, not just investment.



MENA construction: strengths, weaknesses, opportunities and threats

Looking at the key strengths, weaknesses, opportunities and threats for construction in the region reveals many strengths and opportunities to support the buoyancy and growth of the MENA construction market moving into 2025. However, this will be disproportionate across countries.

Leading into 2025, a continuation of the post-pandemic 'new normal' is expected in the region, with opportunities for transparency, trust and a collaborative approach within supply chains and between stakeholders.

The change should begin to see greater cashflow management and improvements to contractual terms and conditions.

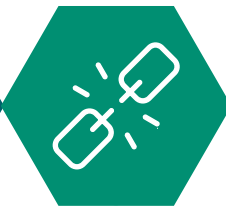
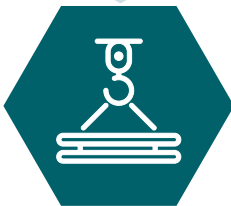
Some of the key topics leading into 2025, in terms of recovery and mitigating risk in the MENA region, are:

Strengths

- Capability to deliver complex and bespoke structures.
- International input, supply, location and ability to import.
- Construction speed.
- Reduced bureaucracy.
- Cheaper cost of labor.
- Diversification and government incentive to invest.
- Creating and providing employment opportunities.
- Supporting local talent and industries.
- Economic value creation.

Opportunities

- Collaboration among industry stakeholders.
- Modular construction.
- Sustainable construction processes.
- International investment.
- Environmental Social and Governance funding.
- Public-Private Partnerships.
- New business markets.
- Digital transformation.
- New materials and construction techniques.
- Encouraging career opportunities for young graduates.



Weaknesses

- Payment delays.
- Procurement timescales and awarding contracts before design completion.
- Resources, transient population and talent gap.
- Lack of skilled labor.
- Quality issues.
- Safety issues.
- Carbon emission and environmental impact.
- Digitalization and uptake of AI deployment.
- Cyber security.

Threats

- Continued regional conflicts.
- Supply chain disruptions.
- Inflation/escalation.
- Precedence of contract awards to lowest price.
- Communication.
- Delay of adopting new technology and missed innovation opportunities.
- Misuse of value engineering with a risk to quality.
- Market capacity limitations.

MENA construction risk mitigation

In terms of weaknesses and threats, significant challenges remain to the construction market and its successful delivery and recovery. One of the key challenges in 2025 will be the availability and capability of the construction market resources to mobilize and enable project pipelines. Significant

resources are required to meet the demands of construction projects in 2025. To facilitate construction and manufacturing capacity, the readiness of the industry's supply chains and organizations' ability to retain staff will be pivotal in ensuring successful delivery in 2025 and beyond.

Some of the key factors in terms of recovery and mitigating risk in the MENA region as we head into 2025 are shown below:



MENA construction trends and prospects

Key trends and opportunities in the region include:

Artificial Intelligence (AI)

With the rapid advancements in AI since 2023, the construction sector is considerably focused on the capabilities and implementation of AI-supported construction methodologies. This includes generative designs, design optimization algorithms, safety and program monitoring and control, autonomous vehicles and equipment, robotic construction, predictive analytics for supply chain management, inspections and defects monitoring, drone surveying, smart buildings, predictive cost models and collaborative project management platforms. Integrating AI in construction is an ongoing process hampered by the sector's lack of digitalization. Nevertheless, AI can improve efficiencies with reduced cost, improved turnaround times and enhanced safety and sustainability.



Environmental, Social and Governance (ESG)

Environmental, Social and Governance (ESG) considerations are becoming increasingly important in construction as stakeholders recognize the industry's significant influence on the environment, society and corporate governance. Investors and financial institutions are increasingly incorporating ESG criteria into their decision-making processes, which has implications for Foreign Direct Investment (FDI) in construction. Investors are showing a preference for construction projects that align with ESG principles; the projects' perceived environmental and social responsibility may influence FDI inflows. There is also a need for preferential green financing forms such as green bonds and sustainable loans.



Digital transformation

The construction industry is gradually adopting digital technologies such as Building Information Modelling (BIM), drones and construction management software to enhance efficiency and reduce costs, while the opportunity to embrace Artificial Intelligence (AI) represents a potential to increase efficiency and reduce costs.



Safety

Safety is a focal point on all projects for both construction workers and the public. Revised safety regulations will soon be applied to construction equipment and machinery on future construction projects by contractors and developers alike. Maintaining newly adopted safety protocols will be essential in ensuring construction sites remain operational.



Adaptation to changing work environments

The construction industry is adapting to changing work environments, including remote working and digital collaboration tools. This trend will likely continue to influence project management and communication in the sector.



Public-Private Partnerships



Governments in the region are increasingly turning to Public-Private Partnerships (PPP) to fund and manage large-scale infrastructure projects. This approach allows governments to seek private sector expertise and investment to develop and manage critical infrastructure projects. PPP projects can further contribute to job creation and stimulate economic activity. The construction phase, in particular, generates employment opportunities, while ongoing operations can contribute to economic growth.

Infrastructure, residential and mixed-use developments



Non-energy sectors will remain the spotlight across the MENA region's construction market, with many countries already investing heavily in infrastructure and residential projects to fill the demands of population growth and urbanization. This includes transportation (roads, bridges, airports), energy (power plants), water, residential, commercial and recreational spaces.

Vision plans (recovery from economic challenges)



MENA region countries are facing economic challenges due to factors like conflicts and fluctuating oil prices. However, there are expectations of economic recovery and investment in construction plays a crucial role in stimulating growth. Many countries in the region have long-term development plans and visions that include substantial investments in infrastructure. These initiatives aim to diversify economies and create sustainable growth.

Smart cities initiatives



Several cities in the MENA region are embracing smart city concepts. Smart cities involve integrating technology into urban infrastructure to enhance efficiency, sustainability and the overall quality of life for residents. In the UAE, Dubai has its Smart Dubai Initiative, and Abu Dhabi has smart city goals embedded in its 2030 Urban Structure Framework Plan. In KSA, Riyadh's King Salman Energy Park (SPARK) aims to become a smart industrial city and Jeddah Economic City (JEC) incorporates smart technologies and services. Bahrain's Vision for Manama has Smart City Components and Egypt has its New Administrative Capital (NAC) Smart Infrastructure.

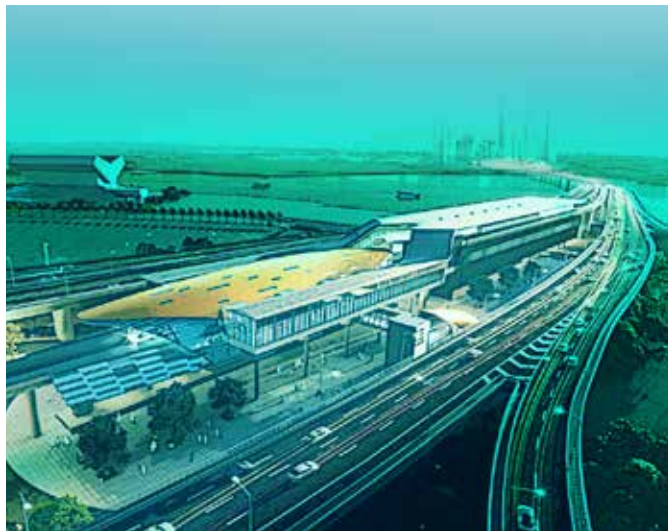
Supply chain diversification



During the pandemic, contractors had little choice but to pay premium prices for materials and alternative suppliers due to the disruptions caused. As we head into 2025, having learned a great lesson, supply chains will diversify to incorporate additional criteria such as environmental, social, governance and sustainability goals. They will examine resets in current procurement relationships that hope to achieve cost efficiencies. This will present a challenge to suppliers and contractors but also an opportunity for those who recognize it as a true differentiator.

United Arab Emirates (UAE)

2024 highlights



Dubai Metro Blue Line

A new 30 km metro route linking the existing Red and Green lines in the Emirate through 14 stations, the Blue Line will form a significant expansion of the Dubai Metro and will be one of many large transportation projects in the UAE to progress in 2025. In November 2024, Dubai's Roads and Transport Authority (RTA) received updated bids for the design and build of the civil works, electromechanical works, rolling stock and rail systems from multiple parties, with bid values expected to be in excess of AED 22 billion / USD 6 billion.

Palm Jebel Ali / Nakheel

In May 2024, contracts for the commencement of infrastructure works were awarded on Dubai's 'second palm island', which will be twice the size of its well-established twin, Palm Jumeirah, when finally completed. With land reclamation works and dredging contracts also announced in August 2024, activity on this project has gained momentum, and the first villas have now been launched, expected to be handed over in 2027.



The Loop (Dubai)

Announced in 2024, The Loop is a 93km covered pathway suitable for walking and cycling intended to provide connections between Dubai's communities. It is planned to provide an air conditioned, fully enclosed elevated route around Dubai and connect with existing and future cycle and public transport networks. Designed by URB as part of their Dubai Cycle City 2040 masterplan, the project aims to make more sustainable journeys a viable option compared to car travel, encouraging cycling as a mode of transport, not just a recreational activity.



Dubai Square / Emaar

Set within Dubai Creek Harbour Emaar's Dubai Square is a planned ultra-modern mixed-use project that will deliver over 7 million square meters of residential space and a sprawling shopping and entertainment mall connected to the Dubai Creek Tower. What sets the project apart in the UAE is its focus on incorporating technology, specifically artificial intelligence, into the occupier and visitor experience and create jobs for the next generation of tech-enabled Emiratis.

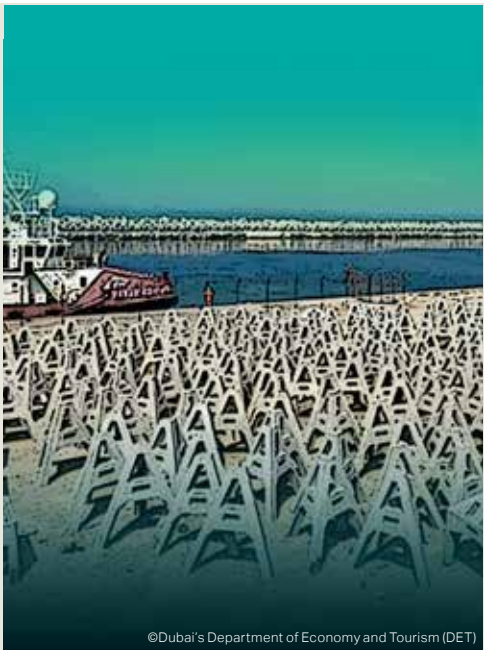


Vertiports / Air Taxi Services

In Q4 2024, the first eVTOL (electric Vertical Take-Off and Landing) 'Vertiport' station started construction at Dubai International Airport (DXB). The first of four stations to be built in the initial stage, completion is expected in 2026. Stations within this stage are also expected to be built in Downtown Dubai, Dubai Marina and Palm Jumeirah Vertiports, also known as vertical airports, are places where drones and other Advanced Air Mobility (AAM) vehicles can land and take off. Dubai is aiming to be one of the first in the world to implement eVTOL, with the planned taxis capable of speeds of up to 200mph.

Dubai Reef

The world's largest reef development project first announced in 2024, Dubai Reef will see significant progress in 2025 with the deployment of its first purpose-built modules announced in Q4 2024. A collaboration between public and private sectors, the project brings together Dubai's Department of Economy and Tourism (DET), Dubai Environment and Climate Change Authority (DECCA), DP World, Dubai Chambers, Nakheel, Ports, Customs and Free Zone Corporation (PCFC) and Emirates. By 2028 around 20,000 modules will be installed to create a marine environment that enhances biodiversity, increases ecosystem resilience and supports fish populations. Ultimately by completing the Dubai Reef project, Dubai wants to promote sustainable fishing, enhance tourism and recreation in Dubai and create aquaculture, marine research and monitoring zones for advancing marine research and promote educational initiatives.



©Dubai's Department of Economy and Tourism (DET)

Kingdom of Saudi Arabia (KSA)

2024 highlights

World Cup 2034

In December 2024, KSA was confirmed as the host of the FIFA World Cup 2034. As part of the award, a minimum of 14 all-seater stadiums need to be provided, of which at least four should be existing structures and the capacity must be at least 80,000 seats for the opening and final matches, 60,000 for the semi-finals and at least 40,000 for all other matches. Stadiums are already being built in KSA for the 2027 Asian Cup, which is already helping KSA to upgrade and build stadiums. The most prominent development is the construction of a new stadium in the North of Riyadh and the upgrading of five existing stadiums.



Qiddiya

In May 2024, it was announced that Saudi Entertainment Ventures (SEVEN) was to merge with Qiddiya Investment Company, bringing together significant entertainment expertise to the ongoing development of Qiddiya City and its various projects. A city focused on the concept of sport and play, progress on the Six Flags theme park was reported to pass the 80 percent mark in Q3 2024, with several major rides being installed, while an e-gaming district and FIFA World Cup stadiums are also planned.



NEOM

NEOM has moved to the building phase of its vision, with infrastructure works underway on 'The Line' with a focus on the initial neighborhoods and a shorter section of the original planned development. Its first destination, 'Sindalah', opened its doors in 2024. NEOM also announced in October a USD 187m concrete factory to support works on The Line in an effort to shorten the supply chain and provide more control over cost and supply risks.



Diriyah Gate

A number of entertainment and cultural projects have been detailed and progressed in 2024, including the Royal Diriyah Golf Club, the Royal Diriyah Equestrian and Polo Club, Diriyah Art Futures and the Royal Diriyah Opera House. The Diriyah Gate neighborhoods of Wadi Safar, Wadi Hanifah Park, Bujairi District, Arts District, Samhan District and Diriyah Square are under development across three phases as part of the masterplan. MEED Projects recorded USD 12.6 billion of projects under construction at Diriyah Gate, while USD 9.5 billion of projects are in the design and tendering stages.



Jeddah Tower

In May 2024, construction restarted on this much-delayed project that will eventually see the world's tallest building constructed by the Jeddah Economic Company, surpassing Dubai's Burj Khalifa by over 180 meters to stand at in excess of 1,000 meters tall. The project will include residential units, offices, hotels and shopping malls and will form the centerpiece of Jeddah Economic City while creating a new globally recognizable landmark in KSA and the region.

Tender Price Index (TPI)

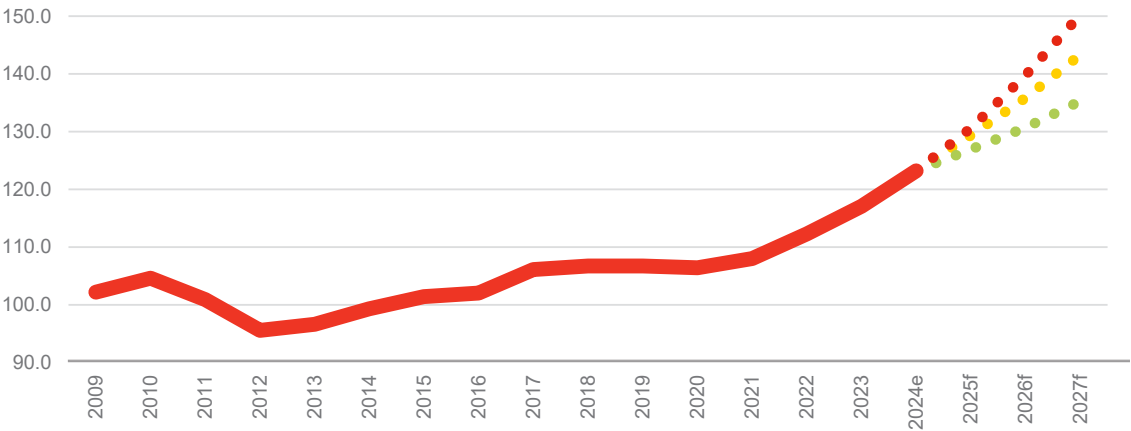
The TPI is AECOM's assessment of construction tender prices in the market. It is compiled by AECOM's Middle East business intelligence team and is based on actual returns of projects.

The index is a measure of average price increases across differing markets, project types and locations. It should be regarded as only a guide when looking at any specific project since the pricing of individual projects will vary depending on factors such as their scope, complexity, location, timescale and end-user requirements as well as the receiving tendering pool of Contractors and their appetite for work and associated risk, etc. at that point in time.

Received tender returns have been noted as irregular between parties, with increases being considerably higher than expected as Contractors extrapolate high inflation across multi-year contracts and price in excessive risk.



UAE Tender Price Index



Annual percentage change (average)																
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
-17.1	2.4	-3.5	-5.3	1.1	2.7	2.1	0.6	4.0	0.6	0.0	-0.4	1.5	4.0	4.1	5.0	

Source: AECOM

AECOM’s TPI evaluation for the United Arab Emirates (UAE) in 2024 is posted at circa 5 percent. This has been predominately driven by a busy tendering period during 2024, as Developers continued to race to get to market with their product while tendering to a somewhat shrinking pool of suitably pre-qualified Main Contractors who are capable of completing the works from a technical,

quality and safety perspective and also meeting the required expectations from a financial stability viewpoint.

Taking a closer look at the economic forecasts for 2025, the construction industry in the UAE is poised again for more growth this coming year, with projections indicating an expansion of between 4 percent and 5 percent approximately

in real terms. This growth is underpinned by substantial investments in predominately infrastructure, renewable energy, housing, and tourism projects. However, this upward trajectory is accompanied by anticipated increases in construction costs, with AECOM forecasts suggesting annual rises between 4 percent and 6 percent during 2025.



Factors influencing Tender Price Inflation (TPI):

Several key factors are contributing to the anticipated tender price inflation in the UAE's construction sector for 2025:

- **Increased demand for infrastructure and development projects:** The UAE's commitment to expanding its infrastructure - particularly for transportation connection upgrades (i.e., rail, metro and road), preparation for global events and to bolster tourism, is driving demand. This surge necessitates a corresponding increase in construction activities, thereby exerting upward pressure on tender prices.
- **Material costs and supply chain dynamics:** While some material prices have shown signs of stabilization, the global construction industry generally continues to face challenges related to supply chain disruptions and material shortages. These issues contribute to cost escalations, which are reflected in tender prices.
- **Labor market constraints:** The construction sector is experiencing labor shortages, with neighboring countries like KSA now offering higher labor wages etc. - this, coupled with increased demand for skilled workers, leads to higher labor costs. These increased costs are subsequently factored into tender prices.
- **Sustainability and Green Building Initiatives:** The UAE's focus on sustainable development and green building practices necessitates the use of specialized materials and construction methods. While beneficial in the long term, these requirements can lead to higher initial construction costs, impacting tender prices.
- **Technological advancements and integration:** The adoption of advanced construction technologies, such as artificial intelligence, 3D printing and robotics is slowly transforming the industry. While these technologies enhance efficiency and sustainability, their integration requires significant investment, which can in some cases influence overall project costs and tender prices.
- **Suitable contracting and sub-contracting pools:** Over the last 18 to 24 months, there has been a noticeable shrinkage of suitably pre-qualified main contractors and sub-contractors available to tender, win and deliver projects in the UAE. Certain Contractors have unfortunately felt the financial strain over the last 3 to 5 years and this is limiting them to be suitably pre-qualified for current projects, with some contractors having exited the UAE market already. The main contractors and sub-contractors that have managed to stay and operate in the UAE can now of pick and choose what projects to go after, resulting in higher-than-normal tender returns.



Sector-specific projections:

The impact of TPI is expected to vary across different sectors within the construction industry (MEED 2024):

- **Residential Construction:** Projected to have grown by 5.5 percent in real terms in 2024, with an annual average growth rate of 2.7 percent between 2025 and 2028. Private investments and government initiatives aimed at meeting rising housing demand are key drivers.
- **Commercial Construction:** Anticipated to have expanded by 6.6 percent in real terms in 2024, followed by an annual average growth rate of 5.6 percent between 2025 and 2028. The recovery in tourism and investments in the hospitality sector are significant contributors.
- **Infrastructure Construction:** Expected to have grown by 5.9 percent in real terms in 2024, with an annual average growth rate of 4.6 percent during 2025–2028. Investments in road and rail infrastructure projects are primary factors driving this growth.
- **Energy and Utilities Construction:** Projected to have expanded by 5.3 percent in real terms in 2024, with an annual average growth rate of 3.7 percent from 2025 to 2028. Investments in renewable energy, oil and gas and water infrastructure projects are key drivers.

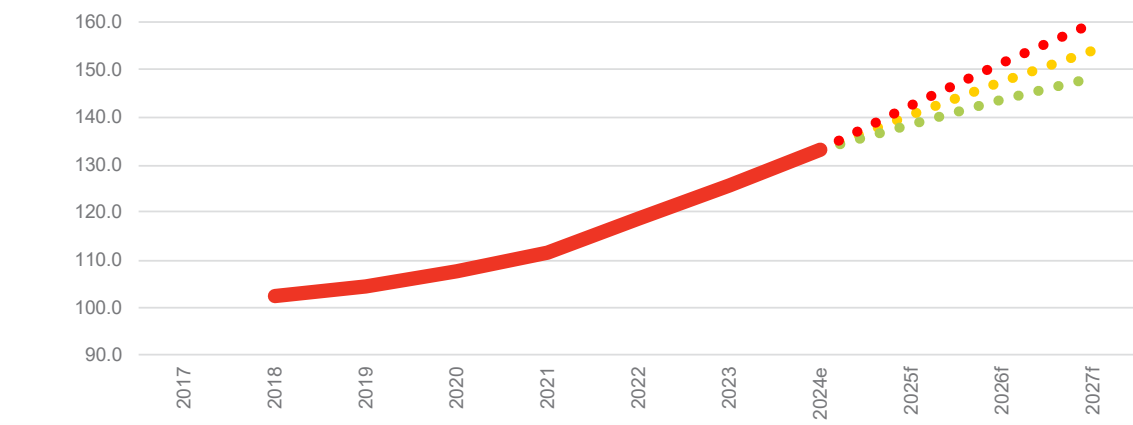
Strategic considerations for stakeholders:

Given the anticipated TPI, stakeholders in the UAE construction industry should consider the following strategies:

- **Early procurement and contracting:** Engaging in early procurement and securing contracts can help mitigate the risks associated with price escalations. Early engagement with suppliers and contractors may lead to more favorable pricing and terms.
- **Investment in workforce development:** Addressing labor shortages through investment in training and development can help ensure a skilled workforce is available to meet project demands, potentially stabilising labor costs.
- **Adoption of innovative construction methods:** Embracing modular construction and other innovative building techniques can enhance efficiency, reduce waste and potentially, over time lower costs, thereby offsetting some of the impacts of TPI.
- **Sustainable Building practices:** Incorporating sustainable design and construction practices not only aligns with the UAE's environmental goals but can also lead to long-term cost savings through energy efficiency and reduced operational costs.

The UAE's construction industry is on a path of significant growth, with 2025 poised to be another year of substantial development across various sectors. This growth is however, accompanied by anticipated TPI, influenced by factors such as increased demand, material costs, labor shortages, technological integration and sustainability initiatives. Stakeholders must adopt strategic measures to navigate these challenges effectively, ensuring that projects are delivered efficiently and cost-effectively in a dynamic and evolving market landscape.

KSA Tender Price Index



Annual percentage change (average)						
2018	2019	2020	2021	2022	2023	2024
2.5	2.0	3.0	3.6	6.4	6.5	6.0

Note: KSA TPI represents a national average.

Source: AECOM



As we entered 2024, the construction industry faced significant pricing pressures due to the large number of ongoing projects; moreover, the country was awarded the 2029 Asian Winter Games, World Expo 2030 and the 2034 FIFA World Cup. Due to this and other factors, government project budgets have been reprioritized, affecting many of the giga projects. While Q1 and Q2 2024 prospered, the market slowed during Q3 and Q4 2024.

While Consumer Price Inflation indirectly impacts TPI, it is worth mentioning that the Saudi Central Bank reports a 1.5 percent Year on Year (YoY) and a 0.5 percent Quarter on Quarter (QoQ) increase in Q2 2024. The Saudi Central Bank noted that inflation rates were highest in housing, water, electricity, gas, and fuels, followed by the catering and hospitality sectors. In 2024, material prices have

risen by 8 percent for concrete, 3 percent for formwork and 6 percent for reinforcement. Moreover, diesel prices have increased by a staggering 50 percent. According to the analysis of tender returns, commodity prices, and market testing, AECOM's TPI growth for 2024 is at an estimated 6.0 percent.

Looking to 2025, the effect of budget cuts and project reprioritization will likely have an ongoing impact. Furthermore, the growing demand for mega projects coupled with Vision 2030 aspirations will likely result in higher input prices, including labor, plant, materials, energy, shipping and transportation costs, prelims/subcontractor rates, imported goods prices and higher project finance interest rates. Considering this, the TPI for KSA in 2025 is forecasted to be 4.0 to 7.0 percent.

As a cautionary note and a lesson learned from 2008, our businesses must be prepared and more responsive to the risks connected with market conditions. As KSA awards numerous new projects to meet the country's objectives, through fast-track delivery routes, the resultant rubber band effect has the potential to strain the region's supply and demand stability, resulting in hyperinflation, peak demands and undersupply. In a worst-case scenario, this could result in project costs escalating beyond economically viable levels.



Bahrain market overview

The Bahrain Economic Development Board reports that Bahrain's economy is mainly driven by the non-oil sector, which has consistently outperformed the oil sector in recent years. There have been increased investments in construction projects, particularly housing, transportation and utilities, in line with Bahrain's economic diversification strategy (Vision 2030) to reduce reliance on oil revenue. Furthermore, the OECD's September 2024 Economic Outlook Interim Report projects stable economic growth of 3.2 percent in 2024 and 2025. This can be attributed to rising real incomes and

progressively looser monetary policies supporting demand.

It's important to note that Bahrain's primary trading partners for non-oil exports and imports are Saudi Arabia and the UAE. Changes in demand, trade policies or economic conditions in these countries can significantly affect Bahrain's economy. For example, Saudi Arabia's booming construction industry has increased demand for expertise, materials, and services from neighboring GCC countries, creating competition for labor and materials across the region and impacting Bahrain's industry.

Additionally, the demand for specialized professionals has led to wage inflation, affecting Bahrain's ability to retain talent. Consequently, contractors in Bahrain have had to adjust their strategies to attract and retain skilled talent and cover higher insurance costs, leading to higher preliminary costs on projects across the region.

Considering this, AECOM forecasts that the Bahrain Tender Price Index (TPI) for 2025 has the potential to increase between 4 and 6.5 percent, given the sustained global market volatility.





Qatar market overview

Following the success of the Qatar World Cup in 2022 and the intensive construction activity in the lead-up to the event, the country witnessed a drop in construction over the last number of years. Notwithstanding, there has been a consistent number of ongoing high-profile projects supported by investments in renewable energy, industrial, and oil and gas sectors, most notably the following:

- North Field East LNG Expansion Project: The USD 30bn expansion project is currently in the planning stage, with an estimated 2026 completion.
- Qatar Long Distance Railway Project: The project aims to provide freight and passenger services within Qatar, as well as provide links to Saudi Arabia and Bahrain.
- Sharq Crossing Project: The USD 12bn project is

set to provide a 12km road connection via both bridge and subsea tunnel between North and South Doha. Initially developed in 2013, the project was relaunched in Qatar's 2020 budget.

- Hamad International Airport Terminal Expansion: The second phase of the expansion of the Hamad International Airport in Doha started in January 2023.
- Simaisma luxury destination including theme park and golf course phase 1.

In terms of market trends, sustainability has become a key driver for many commercial developers to support attracting international companies to Qatar; this includes LEED accreditation, which is driving higher occupancy rates, resulting in landlords enhancing their portfolios to ensure long-term commercial viability.

While global material costs have increased over the last number of years, the cooler construction market has helped mitigate tender price escalation in a highly competitive market. Contractors are also capitalising on the increased local manufacturing capabilities in country which were developed leading up to the 2022 World Cup.

The market has also seen some international and regional property developers entering the market over the last few years, offering higher quality residential products than was previously available as Qatar looks to target the lucrative international sales market. This has resulted in an increase in premium residential construction costs, specifically for waterfront villas, apartments and branded residences in this sector.

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Harnessing artificial intelligence to decarbonize the property and construction sector

Net zero, not zero sum

When we hear or read about Artificial Intelligence, it provokes various reactions based on a varied understanding of what it means and the context in which it is used. Some may see it as an opportunity, others a threat – or maybe a lack of understanding means we do not know what to make of it. At a basic level, Artificial Intelligence, or AI, refers to the capability of machines to imitate human intelligence. This may be learning from data, understanding spoken and written language, recognizing patterns, problem solving and making decisions. Wherever AI is used, the aim is to perform tasks that typically require human intelligence.

The pace at which AI is developing is impressive, but in practice would be more aligned to those who think of it as an opportunity rather than a threat. Automation, speed and efficiency of business processes mean AI does not seek to replace human engagement but merely enhance it. When we explore AI's current and possible future utilization within the property and construction industry, we can see how it can help achieve Net Zero targets without engaging in a zero-sum game.



Machine learning

A specific characteristic of AI is its ability to learn from data and provide an outcome without being specifically programmed to do so. Commonly known as Machine Learning (ML), this concept has been around for decades, and machines now can interpret large quantities of multi-layered, complex data. Once a basic functionality, ML is now at a stage where it has advanced sufficiently to create the perception that machines are thinking for themselves. It is also the most applied aspect of AI that businesses and organizations look to take advantage of.

Examples of ML are all around us. If you are reading this article on a laptop, you may see adverts recommending products generated based on your recent browsing history, demographic or location. Your email inbox uses ML to filter unwanted messages and spam. You may use facial recognition to unlock your phone. All these outcomes derive from ML's capability to interpret data, identify patterns and increase optimization. Within the property and construction industry, we can identify several opportunities to utilize ML to improve efficiency and reduce the sector's carbon intensity.

Optimizing the asset life cycle

Unlike in the management of financial assets, in the built environment, past performance can be an accurate indicator of future results. Using data to analyze the performance of current buildings and equipment, ML would recognize patterns that consider numerous factors to provide highly detailed, objective-led recommendations quickly and according to a particular project brief during the design stage. Guiding the design team to make decisions based on a greater understanding of future performance not only helps to maximize the life span of a built asset, which helps delay the need for new buildings, but can also help to optimize energy efficiency according to available budgets or help to select materials that meet the design brief but are less carbon-intensive to procure. Targeting the reduction of carbon in the design stage and helping to maximize the life spans of assets is one of the most effective ways of reducing the carbon footprint of the property and construction sector, as up to 40 percent of emissions are incurred 'upfront' before the handover of assets to their end users.

Low-carbon, high-performance buildings are not a new concept, as AECOM's High Performing Building Pathway has demonstrated. With a design mindset and an innovative approach to the design process, High Performing Building Pathway considers whole-life carbon, cost, construction, handover and occupation in every stage of the building's development to increase efficiency and improve performance. The potential for integration of AI into this process is exciting, as opportunities to design for lower carbon footprint buildings will surely benefit from the vast amount of project data already available, which no project team could fully comprehend. For example, predictive modeling may be used to develop the design and produce digital twins that can eventually be handed over to the end-user or operations team, promoting more efficient maintenance practices.

Integrating AI into the project manager's function during the planning and construction stages may also provide learning from previous, similar projects and identify risks early enough to allow mitigation or even suggest effective mitigation practices based on what has worked before. The obvious benefit is a reduction in program overruns and their associated cost. It also helps to reduce wastage and resource redundancy that would otherwise contribute to the carbon impact of a project. When on site and during the construction stage, further opportunities present themselves with the implementation of real-time project monitoring that alerts workers before accidents occur and reduces the need for site visits, including travel associated with obtaining construction updates.

In the operational phase of an asset's life cycle, AI can help reduce carbon emissions by optimizing maintenance activities and equipment use. Smart buildings are already a reality, where system performance can be monitored and action taken to reduce energy use, for example. AI can use the data that smart buildings generate to learn and then apply solutions in real-time, even identifying issues and taking action before they become major problems by accessing building management systems. In this way, smart buildings will become smarter.

Even at the end of an asset's life, when disposal occurs, the adoption of AI to identify opportunities for recycling and reuse of building material and equipment can present detailed recommendations for an asset owner to extract any final residual value and offset carbon emissions anywhere material or equipment can be repurposed.

Challenges

As with any innovative solution, while the multiple potential applications of AI in the construction industry present opportunities to save cost and increase productivity, they must be weighed against the investment needed in the technology and associated training to implement them effectively. The property and construction industry is one of the least digitalized industries in the world. Therefore, implementation costs are relatively high and a business case needs to be made. The effectiveness of AI and its reliance on data is also problematic when the industry lacks significant quantities of digital data and construction projects become more complex.

Where data can be accessed, data sovereignty issues and questions on confidentiality arise. How does AI differentiate between public and private information, and once used, how can any generative outcome from AI be communicated or utilized without breaking data protection rules? This is currently one of the grey areas in the adoption of AI and the biggest challenge for any organization to overcome.

Other challenges that apply to all organizations looking to benefit from adopting AI include a lack of technical expertise, poor data quality and integration with existing systems. Without significant digitalization, the property and construction industry will find it hard to adopt AI, not just because of lack of data – or access to data – but also because of possible shortages in the necessary skills needed to implement and take advantage of potential AI applications. A lack of understanding makes it hard to make the case for adoption and businesses are generally finding it hard to realize the full potential of this technology.



Low-carbon, high-performance buildings are not a new concept, as AECOM's High Performing Building Pathway has demonstrated."



Middle East application

In October 2017, recognizing the importance of AI, the UAE launched its Strategy for Artificial Intelligence, which later became the National Strategy for Artificial Intelligence 2031. Since then, examples of its actual use have been limited as organizations and companies appear to still be within the exploration stage. More recently in Dubai, Emaar's new project, Dubai Square, is reported to be using AI in the planning, design and construction process, while Dubai Municipality has launched the 'Using Artificial Intelligence to Detect Building Violations' project to help it monitor construction sites as part of its wider 'Artificial Intelligence Roadmap' (2024). In April 2024, it was reported that Abu Dhabi's Department of Municipalities and Transport (Abu Dhabi DMT) launched two AI solutions to make the building permit process more efficient in the Emirate, including AI-enabled BIM and an automated plan review system with a virtual assistant chatbot.

Further afield, Saudi Arabia has recognized the challenges surrounding data sovereignty and has developed several pieces of legislation to lay a foundation for AI implementation, including a National Framework for AI in Digital Learning. In September 2024, Saudi Arabia set a target for AI to contribute 12 percent to the country's GDP by 2030. It is hard to imagine this will be achieved without significant adoption in its property and construction sector as the numerous giga projects in the Kingdom would appear to offer plenty of opportunity to do so.

At present, the examples of actual implementation appear to be oriented toward saving time and automating business processes, which will have a limited impact on decarbonization. They are nevertheless positive indicators of a willingness to engage with the technology and can only help to drive larger efficiencies that will have greater environmental consequence.

Future developments

There will be a balance between how people see AI, from identifying quick wins that can be implemented relatively easily, cost-effectively and at lower risk to the longer-term adoption of practices requiring higher investment levels.

The construction industry is one of the least digitalized industries in the world, and the companies that are more heavily digitalized stand to benefit more from the adoption of AI. This presents a challenge to the industry but may also be another incentive to modernize.

The opportunity cost of not adopting AI throughout the asset lifecycle would be measured not only in financial terms but also in terms of the environmental impact. Accounting for around 40 percent of total global emissions, the property and construction sector has a responsibility to identify ways and take measurable action to reduce its carbon footprint. In a world increasingly reliant on the built environment to support growing populations, delivering assets and infrastructure in a quicker, safer, cost-effective and less carbon-intensive way will catalyze societal development.

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Delivering vision through Strategy+

The property and construction industry has known AECOM for our expertise and skill in designing and engineering large scale built environment and infrastructure projects.

While designing and engineering remains the mainstay for AECOM, the company has recognized the need for developing expertise in Advisory services. In the current business environment, efficiency is key and the need to understand the business environment is a crucial part of being able to thrive.

Over the last few years our Middle East offices have focused on growing its Advisory practice with a slew of services including Asset, Project

Monitoring, P3 Technical, Risk Management, Program, Procurement & Contracts and Industrial. Strategy+, the newest addition to our Advisory practice is expanding AECOM's understanding of core business concepts and building expertise around areas such as Vision and Strategy Development, Target Operating Model Development, Business Transformation and Digital Transformation Services.



How does Strategy+ differentiate itself?

While Strategy+ offers traditional consulting services, it goes beyond what a traditional consulting services organization offers, hence the Plus in Strategy+. Traditionally, on a large infrastructure project, architects and engineers depended on several consultants to better understand operational requirements. This meant that architects and engineers had to constantly engage with multiple consultants. The operational complexity of such an arrangement made it time-consuming and inefficient to get the necessary inputs. Therefore, building specialist teams within AECOM who can embed themselves with the design team was necessary to ensure all strategic and operational concepts are embodied in the design. Strategy+ provides design teams with an understanding of how vision and strategy impact operations and how operations impact the space being designed. This is made possible using tools including numeric models and user journeys, which bring to life the operational environment and movements of people, equipment, material and vehicles that impact the space.

Vision to infrastructure

In a very short span of time, Strategy+ built a team of highly motivated young and experienced consultants capable of helping clients not only develop infrastructure that help achieve the vision and strategy, but also capable of developing strategies and operating models that help achieve long-term vision.

Partnership strategies

In the interconnected environment, we operate in strategic partnerships which can be a game-changer. We help our clients identify and form partnerships that align with their business goals. Our approach involves thoroughly analyzing potential partners, evaluating synergies and crafting win-win strategies that benefit all parties involved. Whether the objective is to expand market reach, access new technologies or leverage

combined expertise, our partnership strategies are designed to create greater value than the sum of its parts.

Scenario planning

We understand that our clients operate in complex, uncertain and evolving environments and being prepared for multiple future possibilities is essential. Our scenario planning services help our clients anticipate and prepare for potential futures by analyzing trends, identifying key uncertainties, developing plausible future scenarios and understanding the impact this will have on organizations. Through this process we enable our clients to be agile and adaptable, turning potential challenges into opportunities and ensuring their businesses remains resilient.

Human resources planning

We understand the importance of aligning human resources with business objectives, and our workforce planning services focus on optimizing the workforce, enhancing productivity and fostering a culture of excellence. From talent acquisition strategies to training, development and succession planning, we ensure that our client's teams are equipped, motivated and ready to drive their businesses forward.

Organization design and operating models are the bridge between strategy and day-to-day operations. They answer the question "What are we doing?" and pave the way for understanding how it will be done. We help our clients develop robust operating models that act as the foundation for execution, effectively translating strategic intent into operational capability.

Current and target operating models

At AECOM, we utilize a nine-faceted operating model framework to provide structure around the interconnected and interdependent aspects of our client's operations. We begin with a comprehensive analysis of the current operating model. Delving

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Strategy+ is building expertise around areas such as Vision and Strategy Development, Target Operating Model Development, Business Transformation and Digital Transformation Services.”

into the intricacies of their existing organizational design and culture, operational infrastructure as well as strategic management and governance to understand the core capabilities and areas for improvement. From this foundation, we develop a target operating model that encapsulates the future aspirations of our clients. This model is not just a blueprint of what the organization should look like but a roadmap detailing how to get there.

Hierarchy design

The structure of an organization is a critical factor in success. We bring a strategic perspective to hierarchy design, aligning it with business goals and culture. Our approach goes beyond traditional structures to embrace more agile, responsive designs that foster communication, collaboration, and effective decision-making. By optimising the hierarchy, we ensure that leadership is more connected with the workforce, decision paths are clearer, and there is a seamless flow of information across all levels.

Delivery model optimisation

We help our clients optimize and refine their delivery models to ensure they are operating at optimal efficiency. This involves streamlining processes, integrating technologies and adopting best practices to reduce costs, enhance quality and improve productivity. Our goal is to create a delivery model that not only meets the current demands of the market but is also scalable and adaptable for future growth and changes.

Transformation strategies

At the heart of our services is the development of robust transformation strategies. We believe that true transformation will only succeed with controlled and considered change management. We use approaches and techniques from Prosci Change Management. Not only do we help our clients understand their current and desired states, we help them develop bespoke, clear and actionable roadmaps, providing guidance and assurance throughout their transformation journey.

Stakeholder engagement & strategic communications

Successful transformation and sustained change are contingent on the support and engagement of stakeholders, whether they are the ones instigating the change or being impacted by it. We help clients understand the perspectives and intricacies of their stakeholders and develop targeted communication and engagement strategies. By ensuring clear, consistent and compelling messaging, we help build consensus, foster collaboration and drive collective action towards shared ambitions

Implementation planning

Strategy without execution is wishful thinking. Implementation planning is a critical component of our offering. We work closely with clients to translate strategic plans into actionable, measurable steps. This involves setting clear milestones, allocating resources and defining responsibilities. We deliver comprehensive implementation plans and offer guidance designed to ensure smooth, efficient and timely execution of transformation initiatives.

Leadership & culture facilitation

Culture is the consistent demonstration of certain behaviors over time. Leaders' consistently model behaviors in their team to build culture, and consistency of behavior in many teams builds an organization-wide culture.

The leadership team is key to setting and modeling behaviors. Leaders' behavior in and out of the spotlight will significantly impact an organization's success.

Our leadership and culture facilitation services focus on enhancing leaders' skills, qualities and capabilities. Through assessment, feedback, mentorship and coaching, leaders can clearly articulate and communicate their values and expectations, maintain open and transparent communication channels and integrate behavioral expectations into performance metrics and evaluations. They are able to adapt their leadership style to different situations and individuals.





Product management

Our product management services are designed to bridge the gap between technology and business strategy. We combine our deep industry knowledge with a sound understanding of our clients' aspirations and specificities to ensure suitable technology solutions with a reach back into the breadth and depth of AECOM's digital capability.

Digital adoption planning

We help businesses navigate the complexities of digital transformation. Partnering with the AECOM digital consulting team, our approach encompasses assessing current digital maturity, identifying suitable technologies and creating a tailored adoption roadmap. We focus on ensuring that solutions are seamlessly integrated into our clients' operations, allowing them to fully capture the benefits of technology investment in enhancing efficiency, user experience and, ultimately, efficiency and effectiveness.

KPI & metric development

To steer a business toward success, you need the right metrics and key performance indicators (KPIs). Our team excels in developing relevant, actionable and measurable KPIs tailored to our client's business objectives. We take a deep dive into their operations to understand what drives success and how it can be measured effectively. This approach not only provides clarity and focus but also enables continuous improvement.

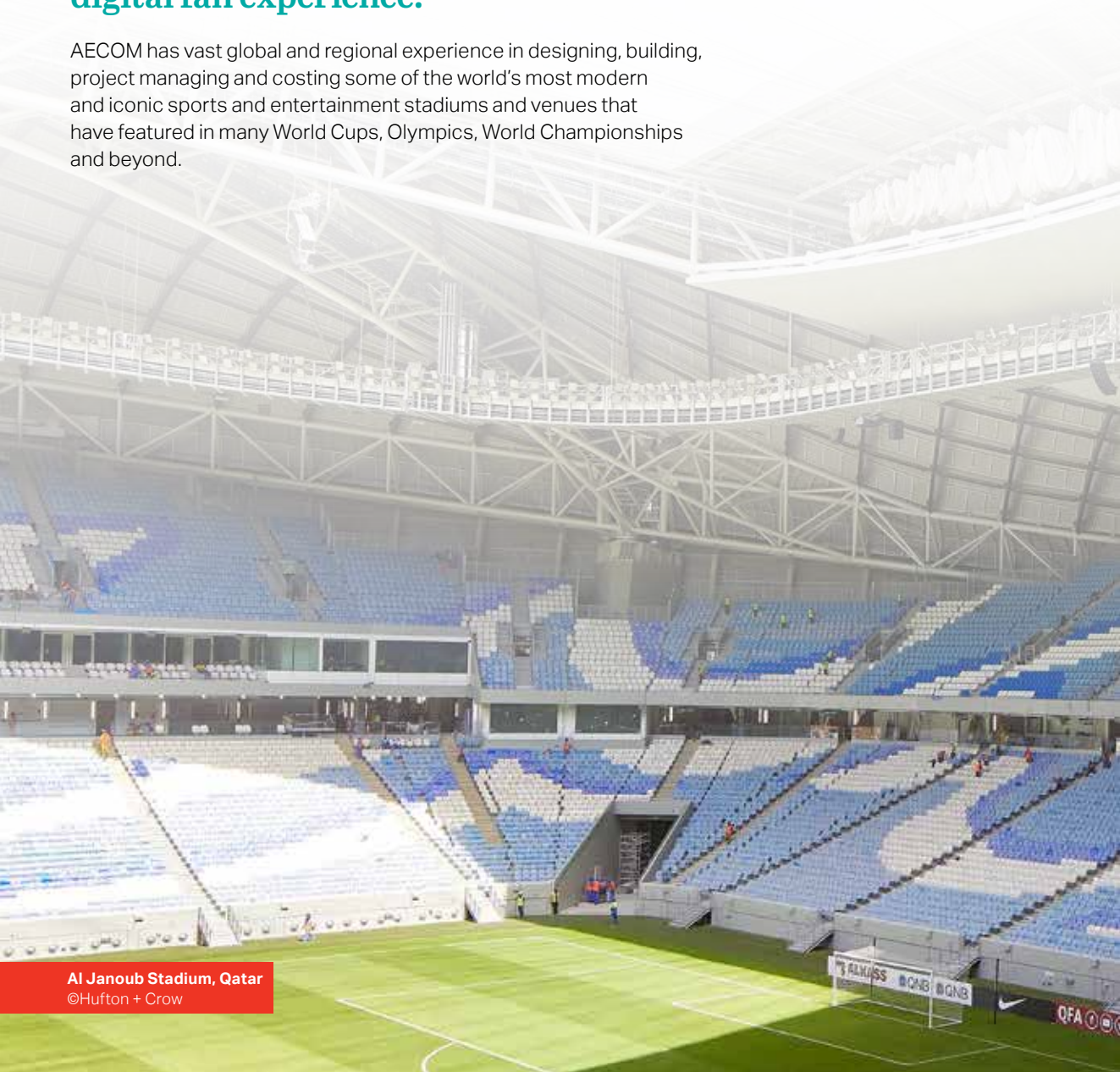
BI & MI interpretation

Business Intelligence (BI) and Management Information (MI) are crucial for making informed decisions but the real challenge lies in interpreting this vast amount of data. We help our clients understand how they can use their data to answer business questions. Including what data they have, what to capture and how to analyze, visualize and action it to enable data-driven decision-making and a clear understanding of their business performance and market trends.

Middle East sports stadiums

In this three-part article, we explore key considerations and cost drivers for new-build and retrofit upgrade options as well as factors influencing the modern digital fan experience.

AECOM has vast global and regional experience in designing, building, project managing and costing some of the world's most modern and iconic sports and entertainment stadiums and venues that have featured in many World Cups, Olympics, World Championships and beyond.



Part 1 - Modern sports stadium designs: Key considerations and cost drivers for the Middle East region

Sports and entertainment infrastructure is increasingly integral to the Middle East's economic and cultural growth. Iconic projects such as Qatar's Lusail Iconic Stadium and Saudi Arabia's planned mega-venues exemplify the region's aspirations to position itself as a global hub for major international events. Modern sports stadiums transcend their traditional role as venues for games. They serve as multi-functional urban landmarks that promote tourism, commerce, and community engagement. In part 1 of this article

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explores the critical considerations in designing such stadiums, the associated cost drivers, and the unique challenges and opportunities within the Middle East.

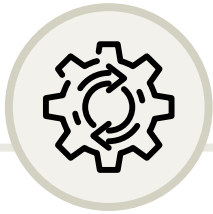


Key trends in stadium design



Fan-centric experiences

- Modern stadiums are designed with fans in mind, prioritizing their comfort and engagement. Enhanced fan zones, expansive concourses, luxury suites, and interactive displays are becoming the norm.
- Technologies such as mobile apps provide real-time game statistics, exclusive content and personalized services, enhancing the overall experience.



Technological integration

- Advanced technologies such as augmented reality (AR), high-definition video walls, robust Wi-Fi and 5G connectivity are now essential features of contemporary stadiums.
- These innovations enable seamless digital engagement, including live streaming, interactive apps and immersive in-game experiences.



Sustainability

- Sustainability has become a cornerstone of stadium design, addressing environmental concerns while optimizing operational costs. Energy-efficient systems, solar panels, water-saving technologies and recyclable materials are increasingly incorporated.
- Achieving certifications such as LEED and other green standards is becoming a priority for developers aiming to position their venues as environmentally responsible.



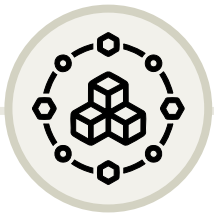
Flexibility and multi-functionality

- To maximize utilization, stadiums are now designed as versatile spaces capable of hosting diverse events such as concerts, conferences, exhibitions and cultural gatherings.
- Features like retractable roofs, movable seating, movable pitches and modular spaces enhance the adaptability of these venues.



Climate adaptation

- The Middle East's hot and arid climate necessitates innovative solutions in building materials and cooling systems. Technologies such as heat-resistant materials, advanced air conditioning and natural ventilation are crucial.
- Roofs and facades are designed to minimize heat retention while maintaining energy efficiency.



Modular construction

- Modular construction techniques are increasingly favored for their efficiency. Prefabricating components off-site reduces construction time, health and safety incidents, labor costs and waste, ensuring streamlined project delivery.

Key cost drivers



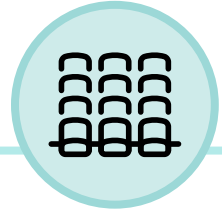
Land acquisition and preparation

- Urban areas like Riyadh, Dubai and Doha have high land costs, significantly impacting budgets. Prime locations near transportation hubs or commercial districts are desirable but expensive.
- Site preparation in desert environments often involves stabilizing soil, grading and installing utilities, which add complexity and cost.



Construction materials

- High-quality, durable materials that can withstand the region's extreme temperatures are essential. Heat-resistant concrete, advanced insulation and UV-resistant glass contribute to higher construction expenses.



Capacity, design, and innovation

- Stadium capacity in terms of number of seats, corporate boxes, etc.
- Unique architectural features such as retractable roofs, tier arrangement, iconic facades and dynamic geometries add complexity and elevate costs.
- Innovative designs must balance aesthetics with functionality, often requiring advanced engineering solutions.



Technology and infrastructure

- Robust digital infrastructure, including 5G networks, interactive platforms and advanced broadcasting equipment is critical to meeting modern demands.

These technologies enhance the fan experience but require significant upfront investments.



Sustainability features

- Incorporating energy-efficient systems, solar panels, and water-saving technologies increases initial costs but delivers long-term savings and environmental benefits.
- Green building certifications often require additional investments in materials and systems.



Labor and project management

- The Middle East relies heavily on expatriate labor for construction projects. Skilled labor shortages and high demand for specialized workers can drive up costs.
- Effective project management is essential to coordinate stakeholders, meet regulatory requirements, and maintain schedules, adding to overall expenses.

Estimated cost of a modern 60,000 to 70,000 seater sports stadium in the Middle East

The cost of building a 60,000 to 70,000 seat stadium in the Middle East will vary greatly depending on factors such as location, design complexity, stadium capacity and specific technologies. Below is a rough cost estimate range based on recent projects in the region. In summary, a typical 60,000 to 70,000 seater stadium in the Middle East costs between USD 860 million and USD 1.38 billion, with variations based on location, design, and technology integration. It is to be noted that the below indicative cost ranges exclude various items such as but not limited to Signature Architectural designs, unique and or remote locations, land costs, VAT, inflation, soft costs, LFF&E, OS&E, etc.

Cost Range Breakdown for a Modern 60,000 to 70,000 Seater Sports Stadium in the Middle East (in USD)

Cost category	Estimated Cost Range (USD)	Description
Substructure, Superstructure, Seating & Roofing	USD 500 million – USD 770 million	Includes the stadium's structural framework, seating and roofing
Technology & Digital Systems	USD 60 million – USD 100 million	Digital engagement systems, 5G connectivity, smart technologies
Sustainability Features	USD 40 million – USD 70 million	Green building certifications, solar panels, water conservation
Interior & Exterior Design	USD 100 million – USD 170 million	Luxury suites, fan zones, premium seating, and exterior aesthetics
Parking & Transportation Infrastructure	USD 40 million – USD 70 million	Transportation access, parking facilities, public transit integration
Main Contractors Preliminaries	USD 120 million – USD 200 million	
Total Estimated Cost Range (excl. VAT)	USD 860 million – USD 1.38 billion	Total estimated cost for design, construction and outfitting

Al Janoub Stadium, Qatar
©Hufton + Crow



Part 2 - Designing revenue-generating stadiums and upgrading and retrofitting existing stadiums

Designing Revenue-Generating Stadiums - In addition to being architectural landmarks, modern stadiums must function as revenue-generating hubs. This requires a careful balance between design, functionality, and operational efficiency. Key considerations include:



London 2012 Olympics
UK

Maximizing non-matchday revenue

- Hosting non-sporting events such as concerts, conferences, exhibitions and festivals increases utilization and profitability.
- Multi-purpose venues with adaptable spaces and superior acoustics are more attractive to event organizers.



Intuit Dome
Inglewood, California, USA

Optimizing operational efficiency

- Artificial intelligence (AI) and Internet of Things (IoT) technologies streamline operations, from predictive maintenance to energy optimization.
- These systems reduce costs and enhance the overall experience for spectators.



Intuit Dome
Inglewood, California, USA

Revenue streams

- Matchday revenue includes ticket sales, merchandise and food and beverage sales.
- Non-matchday revenue is generated through venue rentals, stadium tours, retail outlets, and corporate sponsorships.
- Corporate sponsorships, including naming rights and advertising, provide a significant financial boost.

Usable areas, such as concessions and kiosks, which only require a small amount of space (0.05m² usable area per seat), are capable of generating a large amount of revenue compared to concourses (0.50m² usable area per seat), which are more space-hungry yet generate little or no revenue. Two options exist to address this design and revenue equation: (i) make these spaces, such as plants, concourses, back of the house and the WCs

as cheap as possible or (ii) explore opportunities to allow some of these spaces to generate revenue. Understanding the sensitivity of changes to overall cost and revenue at a particular point in the design is also important. These factors in each stadium and corresponding variation often mean there are unique design, cost and revenue considerations on any stadium redevelopment.

Upgrading and retrofitting existing stadiums - While building new stadiums is often the focus, upgrading and retrofitting existing stadiums can be a cost-effective way to enhance capacity and functionality.

The advantages arising from upgrading and retrofitting versus new build are difficult to define. One potentially salient advantages of redevelopment over new build are the demands, or design and operational standards, to which new construction must comply such as row depths and tread. In most cases, increasing row depths and seat widths (particularly in corporate locations) of stadium terracing dramatically reduces the overall number of seats. This may prove to be counterproductive when the primary reason for redevelopment is often to increase capacity.

This approach addresses the following key areas:



Increasing seating capacity

- expanding seating capacity to accommodate more spectators can significantly boost revenue potential.
- Upgrades may include reconfiguring seating layouts, adding upper tiers or incorporating standing-room areas.



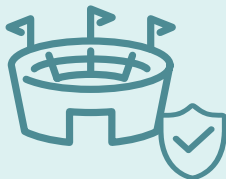
Modernizing facilities

- Enhancements such as improved concourses, updated amenities and advanced digital infrastructure elevate the fan experience.
- Upgraded locker rooms, media centers and hospitality areas meet the expectations of modern athletes, broadcasters and VIP guests.



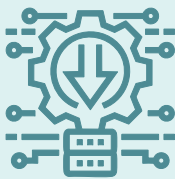
Energy efficiency retrofits

- Retrofitting older stadiums with energy-efficient systems, including LED lighting, solar panels, and smart HVAC systems, reduces operational costs and aligns with sustainability goals.



Safety and compliance

- Retrofitting ensures compliance with updated safety standards, including fire protection systems, accessibility features and structural reinforcements.



Technology integration

- Adding high-speed Wi-Fi, digital signage and interactive mobile apps modernizes older venues, enabling better fan engagement and operational efficiency.

Cost Model Range for Upgrading Stadiums (in USD)

Cost Category	Estimated Cost Range (USD)	Description
Structural Enhancements	USD 60 million – USD 110 million	Includes seating expansions, roof modifications, and structural reinforcements.
Facility Modernization	USD 30 million – USD 60 million	Upgraded concourses, restrooms, and hospitality areas.
Technology Integration	USD 50 million – USD 70 million	Wi-Fi networks, digital displays, and IoT-based systems.
Energy Efficiency Upgrades	USD 30 million – USD 50 million	Solar panels, LED lighting, and efficient HVAC systems.
Safety and Compliance	USD 30 million – USD 50 million	Fire systems, accessibility improvements, and code compliance.
Main Contractors Preliminaries	USD 30 million – USD 60 million	
Total Estimated Cost Range (excl. VAT)	USD 230 million – USD 400 million	

The above cost model assumes these upgrading works are driven by a stadium seat expansion project of between circa 10,000 to 20,000 additional seats as well as major upgrades for FIFA World Cup compliance, technology and health and safety upgrades, etc.

Upgrading existing stadiums not only extends their lifecycle but also provides a faster and often more cost-effective solution compared to new construction. These retrofits can significantly enhance revenue opportunities and align older venues with modern standards. It is to be noted that the below indicative cost ranges exclude various items such as but not limited to Signature Architectural designs, unique & / or remote locations, land costs, VAT, inflation, soft costs, LFF&E, OS&E, etc.



Intuit Dome, California, USA
© Kevin Korczyk

Part 3 - Digital Stadiums: Revolutionizing the fan experience

Saudi Arabia's Vision 2030 emphasizes sports' transformative potential in driving economic diversification. Digital stadiums are pivotal in this strategy, leveraging advanced technologies to enhance fan experiences and operational efficiency. These state-of-the-art venues are redefining global standards in sports infrastructure.



Key technologies



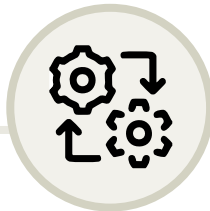
Next-generation connectivity

- High-speed Wi-Fi and 5G networks form the backbone of digital stadiums, enabling real-time activities such as live streaming, interactive apps and AR experiences.



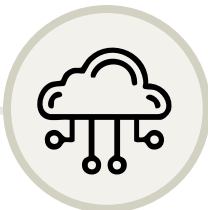
IoT and AI

- IoT sensors monitor crowd dynamics, optimize energy consumption and enhance safety through predictive maintenance.
- AI-driven systems personalize fan experiences and improve operational efficiency, from navigation to resource allocation.



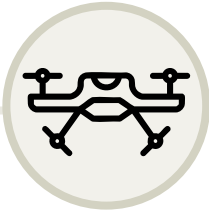
Digital twins

- These virtual replicas of physical stadiums use real-time data for simulations, improving crowd management, energy efficiency and emergency preparedness.



Cloud-based command centers

- Centralized hubs integrate IT and operational systems, enhancing decision-making and incident response.



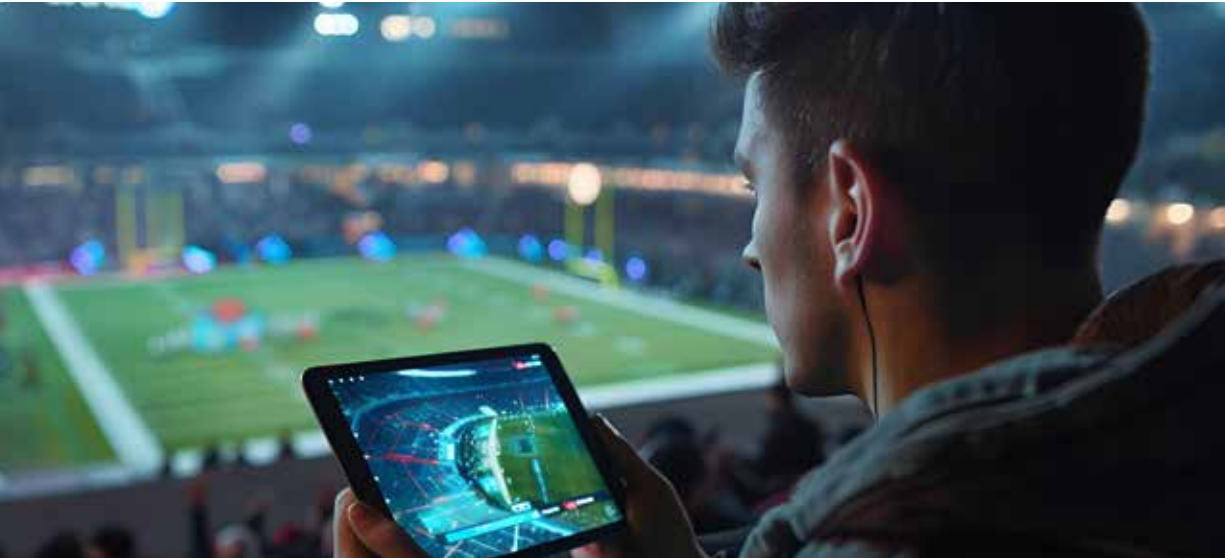
Drones and robotics

- Drones enhance surveillance and logistics, while autonomous robots improve cleaning and maintenance efficiency.



Extended reality (XR)

- AR and VR create immersive fan experiences, offering features like virtual stadium tours, real-time analytics and enhanced game visuals.



Conclusion

Building a modern sports stadium in the Middle East is an ambitious and complex undertaking that combines advanced engineering, innovative and cutting-edge technologies and unique architectural designs. By understanding the key cost drivers — from land acquisition and construction methods to technology integration and sustainability — stakeholders can better plan for a successful and financially sustainable project.

Upgrading and retrofitting sports stadiums also provides financially viable and environmentally sustainable options to clients, particularly when

these stadiums often exist in urban areas where mature or semi-mature infrastructure exist.

Whether it is building new, retrofitting or upgrading existing stadiums, the digital fan experience is a must, with AV technologies playing a key role in how a fan experiences a major sporting event or indeed a major musical event.

The progression of cost modeling through the integration of design tools like BIM is invaluable, but integrated financial models that bring together operational, program and cost data, such that

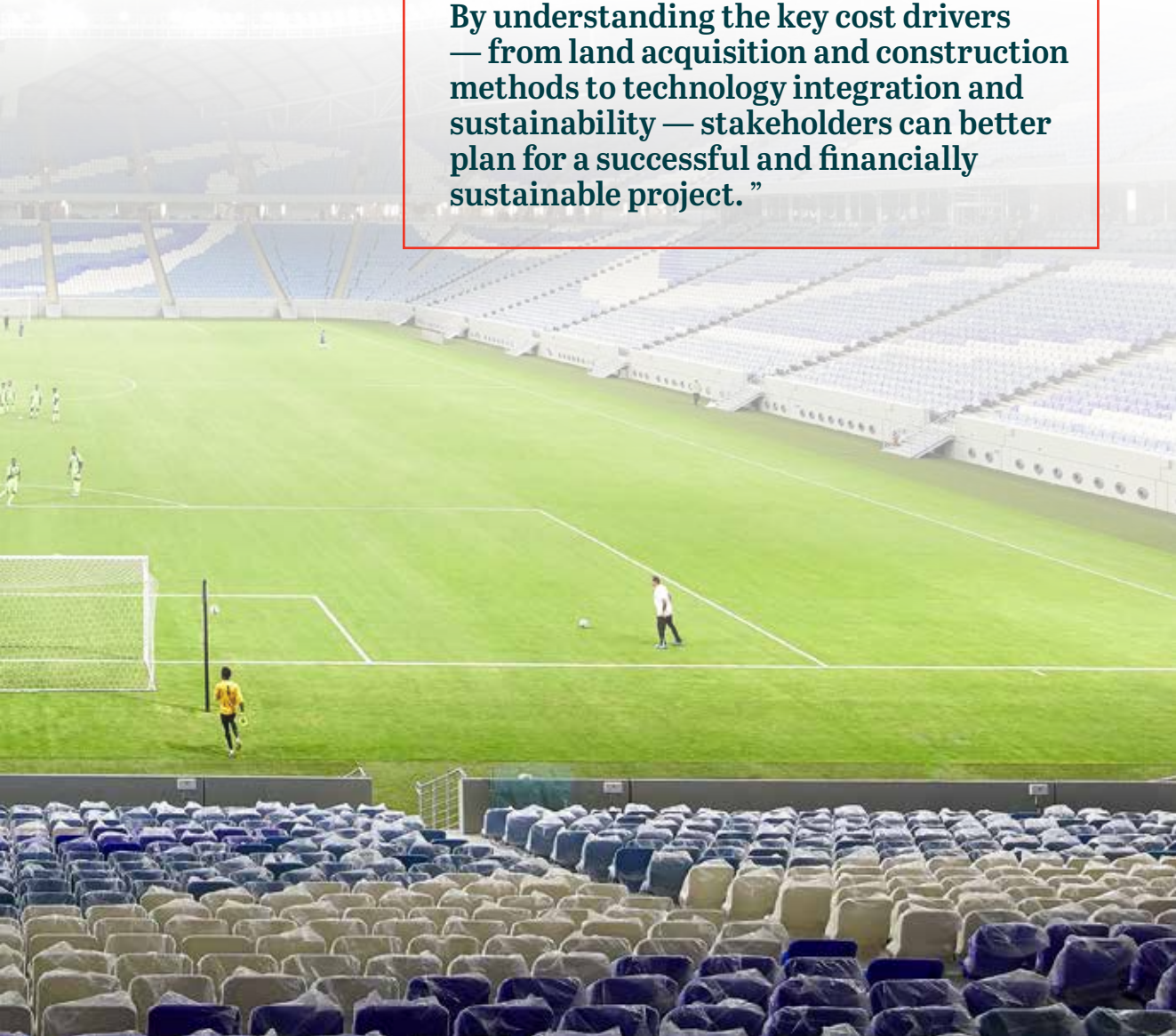


design can be informed, are more powerful and change the way stadiums and arenas are developed. AECOM's 'SAINT' (Stadium and Arena Investment Tool) does just this. It allows the client to fully understand the potential of their stadium development or redevelopment at the earliest possible stage. It takes into account all the different fundamental aspects of stadium development, as discussed above, and understands how they are all linked, enabling the client to gain a clear and concise picture of the stadium they both want and need.

As the region continues to grow as a global sports and entertainment destination, stadiums will play a key role in defining the Middle East's infrastructure legacy. With the right blend of innovation, functionality and sustainability, these stadiums will not only serve as state-of-the-art venues for sporting events but also as hubs for cultural and economic activity, contributing to the broader development goals of the region.

“

By understanding the key cost drivers — from land acquisition and construction methods to technology integration and sustainability — stakeholders can better plan for a successful and financially sustainable project.”



Sustainable Legacies

Together, we can
deliver a better world

We all leave a legacy. What will yours be?

With our clients and partners, we have one goal: to leave a positive, lasting impact on people and our planet.

We do this by delivering Sustainable Legacies, our ESG strategy and services offering. As part of our Sustainable Legacies strategy, we have made solid, actionable ESG commitments. This roadmap will enable us to achieve our goal of delivering a better world.

#1

in water, transportation,
general building, and
international markets by
Engineering News Record
in 2024.

Sustainable Legacies is built on four pillars

Embedding Sustainable development and resilience across our work



When our planet thrives, we thrive.

Increasingly severe climate events and the pandemic have shown that achieving resilience is an urgent and strategic imperative for cities, governments and organizations - including our own. Climate science also makes it clear that for development to be viable, it must be sustainable. That's why we're embedding net zero, resilience and social value targets into all our work - and why we developed ScopeX™ to reduce carbon impacts by at least 50 percent on major projects. We're committed to a more sustainable and resilient future, partnering with those who want to make a positive difference in the world. The first step is to understand the base level we are working from - that's why we're measuring key ESG impacts through our operations and projects. The next step is embedding key targets - on net zero, resilience and social value - across our work, then actioning those.

Improving social outcomes



Towards a fairer, more equal society.

To improve social outcomes, our focus is on empowering our teams to deliver projects that deliver real, measurable value for individuals, communities and society in general. In addition, our teams must reflect the diversity of the clients and communities we serve.

Although values such as wellbeing and equity are universal, to be most effective social impact requirements should be driven by local needs. To support best practice, we've set up a global social value group, with goals and metrics set at a regional and local level. Alongside our own ESG goals, we're helping our clients deliver real social impact through strategies, services and solutions.

Achieving net zero carbon emissions



Eliminating carbon to zero.

As the world's most trusted infrastructure firm, we understand both the magnitude of the climate crisis and our responsibility to help fix it. We achieved operational net zero last year and are one of the first companies to have science-based net zero targets approved by the best practice organization the Science Based Targets initiative. This experience is supporting our advice to clients on setting and reaching their own targets.

We're at the industry vanguard in terms of emission reductions - cutting both our own carbon impact and helping clients achieve net zero through strategies, services and solutions that reduce operational and embodied carbon now and forever.

Enhancing governance



To do better, we must be better.

Governance is the foundation for how our leaders ensure effective corporate and business ESG management.

Through enhancing our governance, we're achieving our ESG goals faster and setting more ambitious targets for the future. We've developed an enterprise framework to assess ESG risk which we are using to determine which projects we work on.

We're increasing awareness and accountability in our own business and incorporating ESG-related targets in our CEO and officer compensation.

Scopex™

The built environment accounts for a large portion of carbon emissions emitted each year globally. As a large infrastructure firm, we have both an opportunity and a responsibility to address the climate emergency. The biggest impact we can make is to reduce the carbon in our work and that's where ScopeX™ comes in.

ScopeX™ decarbonizing to deliver a better world

ScopeX is AECOM's approach to solving for carbon. In partnership with our clients, we find opportunities to influence carbon emissions in all our projects. ScopeX is a way of systematizing the methods, workflows and technologies needed to enable decarbonization of the projects we work on.



Using the Scopex™ framework, we bring our skills and experience with carbon reduction, together with digital tools and data to reduce emissions in each phase of an asset’s lifecycle — from planning to asset management and decommissioning.

Step 1: Conversations with our clients

The foundation of ScopeX™ is understanding your carbon reduction commitments, challenges and aspirations. We are ready to meet you wherever you are on your decarbonization journey and design solutions around your project needs.



Step 2: Identifying carbon reduction opportunities and methods

After initial engagement, our team will work with you to understand the baseline carbon footprint of the project. Once we understand where the opportunities are, our teams will review methods that best reach your goals, such as carbon modelling and analysis, alternative design methods, low carbon material specification and efficient and renewable energy sources.



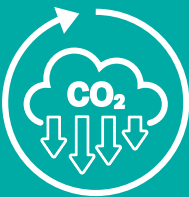
Step 3: Leverage data and technology

We leverage data from external and internal sources to support the solution development. This includes industry-leading global emissions data from verified sources as well as a proven decarbonization strategies across a wide variety of assets and geographic locations collected from our projects. We use technology to enable decarbonization methods and connect with data. These include industry standard carbon accounting tools and custom carbon modelling and planning tools developed by AECOM.



Step 4: Implement decarbonization solution

ScopeX™ is client focused, process driven and enabled by digital tools. Pairing our technical expertise and data sources with appropriate digital solutions, we confirm the right decarbonization approach and execute the project. Once the project is complete, we record the knowledge and results back into our internal global ScopeX platform to continuously improve and expand our service delivery.



Digital is part of who we are

Solving ongoing challenges in smarter, faster ways. Our ecosystem is embedded with innovative digital tools and processes — making more efficient, sustainable ways of working business-as-usual for us and our clients.



Digital AECOM is how we're solving our clients' challenges in smarter, faster ways — with the best-in-class digital expertise it takes to unlock their true potential. Guided by our renowned culture of technical excellence, we combine industry-leading infrastructure knowledge with cutting edge digital expertise and robust data engineering capabilities. We

partner together to define your strategy and deliver innovative solutions that drive results and achieve better outcomes for projects, programs and communities.

We ensure global collaboration, sharing best practices across business lines to ensure our clients get the best thinking at the intersection of digital, infrastructure and innovation. Our leadership team includes Global Digital Leads for each of our business lines as well as Digital Leaders in each of our regions.

With thousands of digital practitioners leading the way, we support our clients in defining digital strategies that help them get more from their data, delivering a platform and process that meets their unique needs. What sets us apart is the pragmatic way we integrate digital into everything we do. Our focus is absolute: a digital-first approach improves efficiency, informs better decision-making and enables us to deliver flexible, resilient infrastructure for an increasingly changing world

Spotlight on services



Digital Strategy

For a rapidly changing built environment

Our focus on innovation unlocks human creativity to meet your specific needs and deliver relevant, impactful and enduring solutions. Whether your objective is clear from the outset or you're navigating through a series of digital options, we bring our infrastructure knowledge and data expertise to help you build a strategy that delivers your desired outcomes.



Data science and analytics

Insights that optimize infrastructure

Uncover robust insights through our industry expertise and unique understanding of infrastructure and the widespread data it generates. Our consulting services blend operational excellence with cutting-edge data science skills, ensuring your data tells a clear and meaningful story that enables effective decision-making.



Development and implementation

An integrated network that reflects the way work gets done.

We understand the delicate interplay involved in connecting your existing and new solutions to the right data at the right time and to the right people. Our team leverages decades of industry and technology expertise to build an ecosystem that aligns to your organizational and project milestones.

Markets we serve

We also recognize the urgency of the challenges facing the infrastructure industry and our responsibility to respond in an impactful and enduring way. Our digital practitioners bring their market expertise to help you accelerate digital and organizational transformation across the globe.



MARKET

Transportation

Shaping the future of smart, sustainable transportation

The urgent need for safe, reliable and sustainable transportation is vital to keep our communities thriving worldwide. With a global track record designing, delivering and managing large-scale transportation projects and programs, our team combines leading industry knowledge with digital expertise. From capital planning to optimizing operations and maintenance, we leverage data engineering excellence to ensure safe and sustainable infrastructure that remains resilient into the future.

Future-proof decisions with intelligent modelling:

We empower our clients throughout the planning and design phases with real-time assessment and informed decision-making capabilities. Integrating 3D visualization and data automation with generative AI, we simulate diverse scenarios – from traffic patterns to shifts in transportation demand – ensuring robust planning and adaptive strategies.

Full lifecycle asset

management: Unifying all asset data in digital model from initial planning through ongoing management provides a single source of truth and complete view of detailed as-built information alongside critical maintenance and operations data. We seamlessly transition BIM data from design and construction into a dynamic virtual replica of the physical asset for continuous operations and management, ensuring your teams have immediate access to updated information and enabling them to respond and resolve issues swiftly.

Gain insight across asset

networks: We help our clients leverage insights across all assets, driving proactive management and supporting informed decision for long-term sustainability and growth. Digitally connected assets provide a holistic view across your entire transportation network, whether optimizing resource allocation, forecasting maintenance needs or evaluating performance metrics. This comprehensive perspective facilitates efficient planning, budgeting and strategic financial decision-making.



MARKET

Water

Solving our most pressing water challenges

The one thing that supports all life, bears the heaviest business transformation burden of all. By understanding your immediate needs, long-term ambitions and culture, we leverage our extensive water expertise to advise, guide and implement digital solutions that optimize your organization and make your assets more resilient, last longer, work smarter, perform better and use less energy.

Data-driven asset management: Water infrastructure owners and operators navigate the delicate balance between reliability, quality and cost amidst increasing demand and climate change impacts. With vast physical and virtual assets generating extensive data, we offer comprehensive insights tailored to your infrastructure needs. Our data integration approach combines financial, operational and engineering data to prioritize spending, identify improvement needs and optimize infrastructure management and maximum returns.

How we help optimize your infrastructure: Our data integration approach combines financial, operational and engineering data to prioritize spending, identify improvement needs and optimize infrastructure management for maximum returns.

Empower organizational transformation: Throughout the planning and design phases, we collaborate extensively with a wide variety of stakeholders, from engineers and contractors to operators and regulators. Our focus is on strategically aligning our specialized knowledge and

insight at each stage of the process to synchronize your asset data with the necessary people and functions it needs to serve. This empowers your teams to anticipate how those assets will perform, make informed decisions and take the best course of action – optimizing performance and ensuring optimal lifespans.



MARKET

Buildings and Places

Delivering next gen built and lived environments

Building and planning today is more complex than ever, requiring a deep understanding of your business challenges and desired outcomes. From master planning and urban design to transit and sustainability, we integrate global infrastructure knowledge with cutting-edge technology expertise to increase capital and operational efficiencies and deliver better results for our clients' projects, organizations and communities.

Advance collaboration and decision making: Creating digital replicas of physical spaces enhances collaborative decision-making by enabling teams to visualize various scenarios in a virtual environment. We partner with our clients to develop robust digital twin platforms and deploy them across projects and programs, ensuring seamless integration from initial design and construction through long-term asset management for more effective decision-making and risk mitigation.

Augment operations and maintenance: Utilizing digital twins throughout asset lifecycles, we enable real-time monitoring and predictive maintenance that optimizes asset performance and future reliability. By simulating real world scenarios, we help our clients preemptively address issues, minimize downtime and extend asset lifespans.

Gain insight across your organization: Leveraging the latest generative AI, digital twins continuously capture and analyze data to provide actionable insights. By integrating digital twin technologies into core processes, we help boost productivity, enhance experiences and drive innovation across the entire organization, fostering a culture of continuous improvement.



MARKET

Environment

Data-driven environmental leadership for an ever-changing world

Navigating evolving environmental complexities and risks demands a blend of foresight and adaptability. From climate resilience and hazardous materials to health and safety, our team ensures continuous monitoring, dynamic analysis and actionable insights. With world-class experience in environmental management, data best practices and technology expertise, we help our clients deliver lasting benefits for communities and our planet.

Comprehensive environmental data strategies:

We partner to instill data confidence, creating comprehensive strategies that automate data capture through remote sensing and seamlessly integrate field collection alongside robust historical data repositories. Our approach ensures a unified platform of accurate up-to-date environmental data, providing teams with a clear and reliable picture of environment conditions that enable effective decision-making and risk management.

Environmental data insights:

Utilizing real-time data and advanced analytics, we develop digital replicas to simulate scenarios for environmental remediation, restoration

and enhancement. Through sophisticated technology and interactive data storytelling tools, we empower clients to make informed decisions that prioritize environmental sustainability while efficiently achieving project and programs goals.

Accelerated environmental planning and permitting:

We streamline environmental planning and permitting processes using digital best practices and compelling storytelling techniques. Our approach improves understanding among stakeholders and builds trust through inclusive public engagement. By translating complex environmental data into clear, accessible insights,

we facilitate transparent communication and collaborative decision-making, ensuring regulatory compliance and fostering positive social and environmental outcomes.

Our environment expertise:

Our team works across global environmental sectors, empowering our clients to successfully capture, analyze and manage complex environmental data. We specialize in areas ranging from green and sustainable remediation, restoration and reuse, management of natural capital and climate change resilience to expediting environmental assessments and permitting to fostering inclusion and social engagement.



04 Reference data

IN BRIEF

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Global building cost comparison

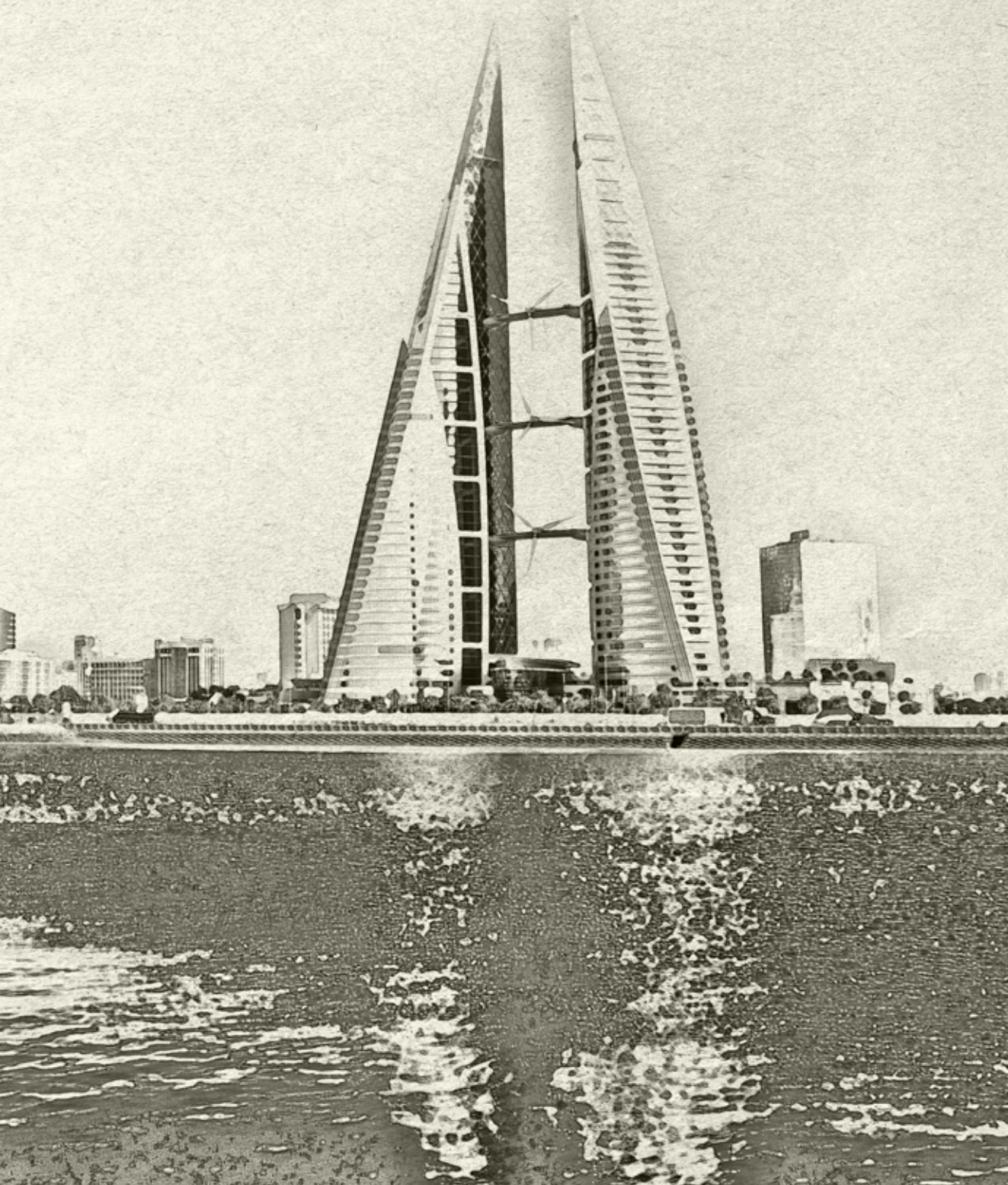
98

GCC building cost comparison

110

Weights and measures





Global building cost comparison

The international cost data shown is converted to US Dollars to enable comparison. The building costs, for their respective asset types, are averages based on local specifications.

The actual cost of a building will depend, on among other things, unique site conditions, design attributes and applicable tariffs. For specific current and benchmarked cost data, please contact AECOM's Program Cost Consulting team for assistance in obtaining relevant and specific advice.

In addition, the standard for each building varies from region to region, which may have a significant impact on cost.

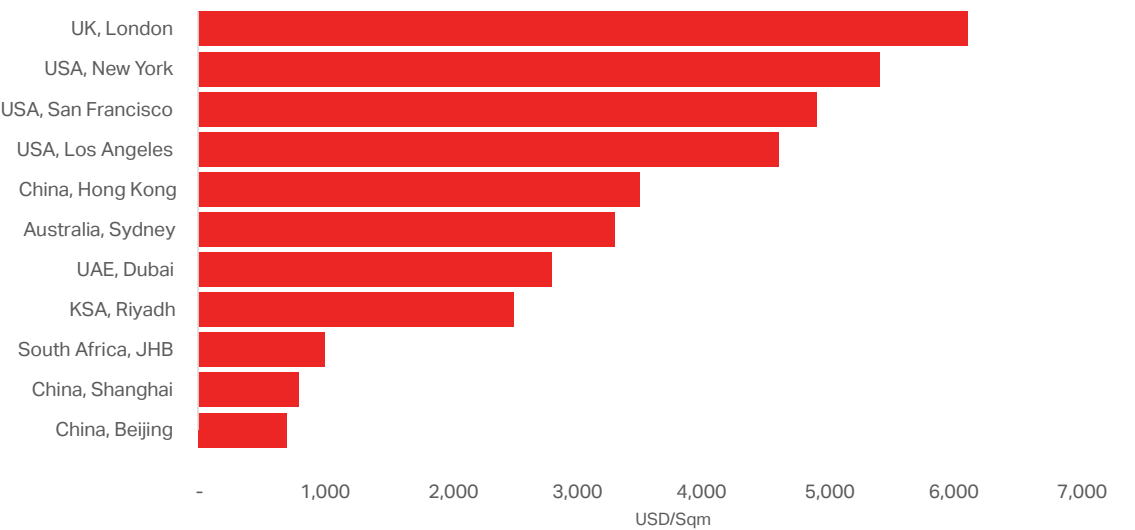
Costs are subject to considerable variations due to factors such as:

- Local market conditions.
- Complexity of project.
- Commodity price movements.
- Building specifications.
- Exchange rates.
- Contractors appetite for securing work.
- Contractual risk apportionment.



Residential

Average building cost for a standard multi unit high-rise



Source: AECOM

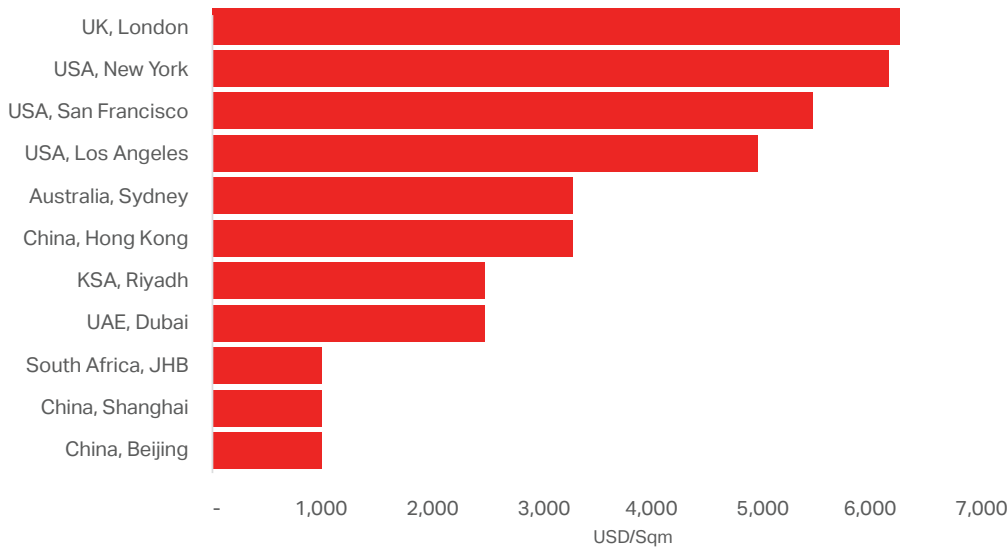
Average building costs (USD/sqm)											
Building Type	Australia Sydney	China Hong Kong	China Beijing	China Shanghai	South Africa JHB	UAE Dubai	USA Los Angeles	USA San Francisco	USA New York	UK London	KSA Riyadh
Multi Unit High Rise	3,300	3,500	800	700	1,000	2,800	4,600	4,900	5,400	6,100	2,500
Luxury Unit High Rise	4,000	4,700	1,400	1,400	1,300	3,900	6,400	6,800	7,200	9,300	3,400
Individual Prestige Houses	4,600	6,700	1,700	0	1,400	4,000	5,500	6,000	6,200	6,000	3,000
(Ave H1 2024)	AUD	HKD	CNY	CNY	ZAR	AED	USD	USD	USD	GBP	SAR
1 USD =	1.51	7.81	7.20	7.20	18.48	3.67	1.00	1.00	1.00	0.78	3.75

Note: Prices exclude land, site works, professional fees, tenant fitout and equipment. Rates exclude GST/VAT.
International costs based on Q3 2024 and exchange rates to USD as of H1 2024.
UAE / KSA costs based on Q3 2024 and exchange rate to USD as of Q3 2024.

Source: AECOM

Commercial

Average building cost for a standard office high-rise



Source: AECOM

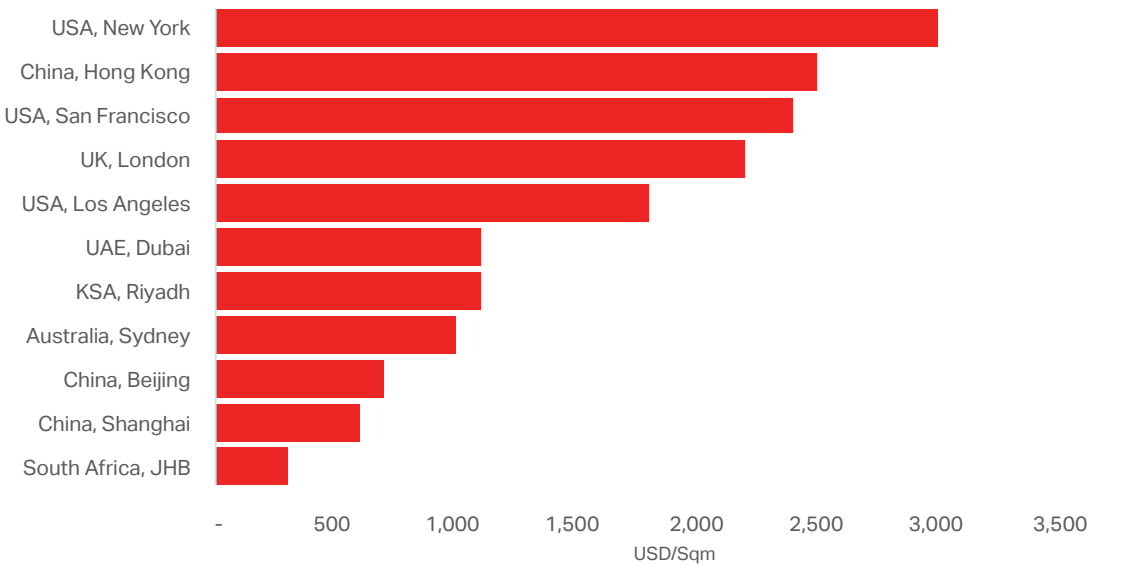
Average building costs (USD/sqm)											
Building Type	Australia Sydney	China Hong Kong	China Beijing	China Shanghai	South Africa JHB	UAE Dubai	USA Los Angeles	USA San Francisco	USA New York	UK London	KSA Riyadh
Standard Offices High Rise	3,300	3,300	1,000	1,000	1,000	2,500	5,000	5,500	6,200	6,300	2,500
Prestige Offices High Rise	4,600	4,100	1,400	1,400	1,300	3,600	5,500	6,200	6,800	6,900	3,800
Major Shopping Center (CBD)	3,000	4,600	1,300	1,200	800	2,000	4,100	4,500	4,600	5,200	2,200
(Ave H1 2024)	AUD	HKD	CNY	CNY	ZAR	AED	USD	USD	USD	GBP	SAR
1 USD =	1.51	7.81	7.20	7.20	18.48	3.67	1.00	1.00	1.00	0.78	3.75

Note: Prices exclude land, site works, professional fees, tenant fitout and equipment. Rates exclude GST/VAT.
International costs based on Q3 2024 and exchange rates to USD as of H1 2024.
UAE and KSA costs based on Q3 2024 and exchange rate to USD as of Q3 2024.

Source: AECOM

Industrial and other

Average building cost for a light duty factory



Source: AECOM

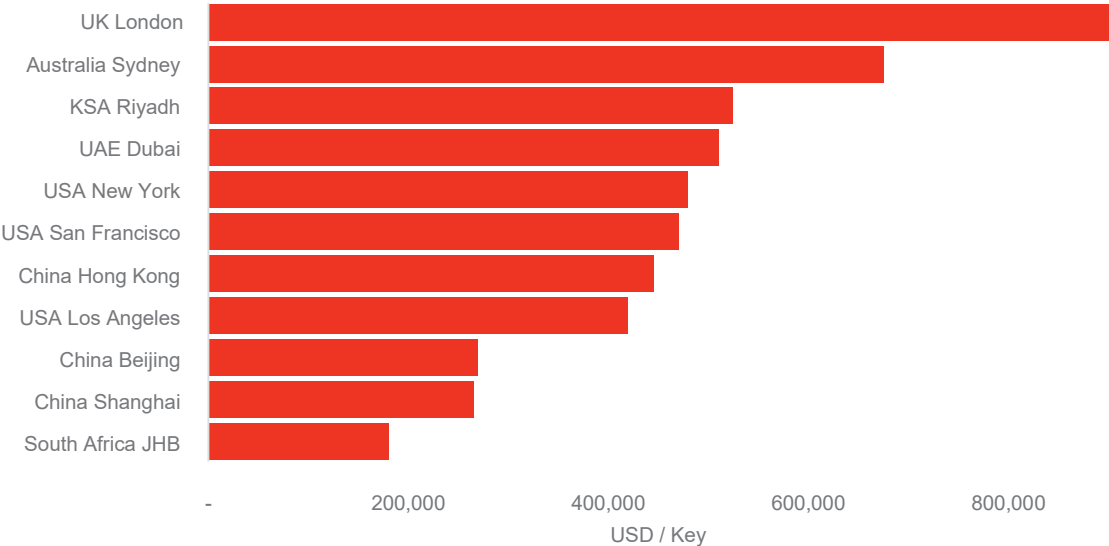
Average building costs (USD/sqm)											
Building Type	Australia Sydney	China Hong Kong	China Beijing	China Shanghai	South Africa JHB	UAE Dubai	USA Los Angeles	USA San Francisco	USA New York	UK London	KSA Riyadh
Light Duty Factory	1,000	2,500	700	600	300	1,100	1,800	2,400	3,000	2,200	1,100
Heavy Duty Factory	1,300	-	-	-	400	1,700	2,200	2,500	3,000	3,800	1,500
Multi Storey Car Park	1,200	1,900	500	500	300	900	1,700	1,800	1,800	2,200	900
District Hospital	5,000	5,500	800	1,200	2,000	3,600	9,000	9,500	10,500	8,100	2,700
Primary & Secondary Schools	2,300	2,900	-	1,000	500	2,200	5,200	5,400	5,400	4,800	1,700
(Ave H1 2024)	AUD	HKD	CNY	CNY	ZAR	AED	USD	USD	USD	GBP	SAR
1 USD =	1.51	7.81	7.20	7.20	18.48	3.67	1.00	1.00	1.00	0.78	3.75

Note: Prices exclude land, site works, professional fees, tenant fitout and equipment. Rates exclude GST/VAT.
International costs based on Q3 2024 and exchange rates to USD as of H1 2024.
UAE/KSA costs based on Q3 2024 and exchange rate to USD as of Q3 2024.

Source: AECOM

Tourism

Average building cost
for a five-star luxury hotel



Source: AECOM

Average building costs (USD/key)											
Building Type	Australia Sydney	China Hong Kong	China Beijing	China Shanghai	South Africa JHB	UAE Dubai	USA Los Angeles	USA San Francisco	USA New York	UK London	KSA Riyadh
3 Star Budget	230,000	215,000	45,000	60,000	75,000	116,000	90,000	95,000	95,000	245,000	125,000
5 Star Luxury	675,000	445,000	270,000	265,000	180,000	510,000	420,000	470,000	480,000	1,405,000	525,000
Resort Style	-	-	-	-	205,000	660,000	350,000	390,000	400,000	575,000	710,000
(Ave H1 2024)	AUD	HKD	CNY	CNY	ZAR	AED	USD	USD	USD	GBP	SAR
1 USD =	1.51	7.81	7.20	7.20	18.48	3.67	1.00	1.00	1.00	0.78	3.75

Note: Prices exclude land, site works, professional fees, tenant fitout and equipment. Rates exclude GST/VAT.
International costs based on Q3 2024 and exchange rates to USD as of H1 2024.
UAE and KSA costs based on Q3 2024 and exchange rate to USD as of Q3 2024.

Source: AECOM

International exchange rate trends

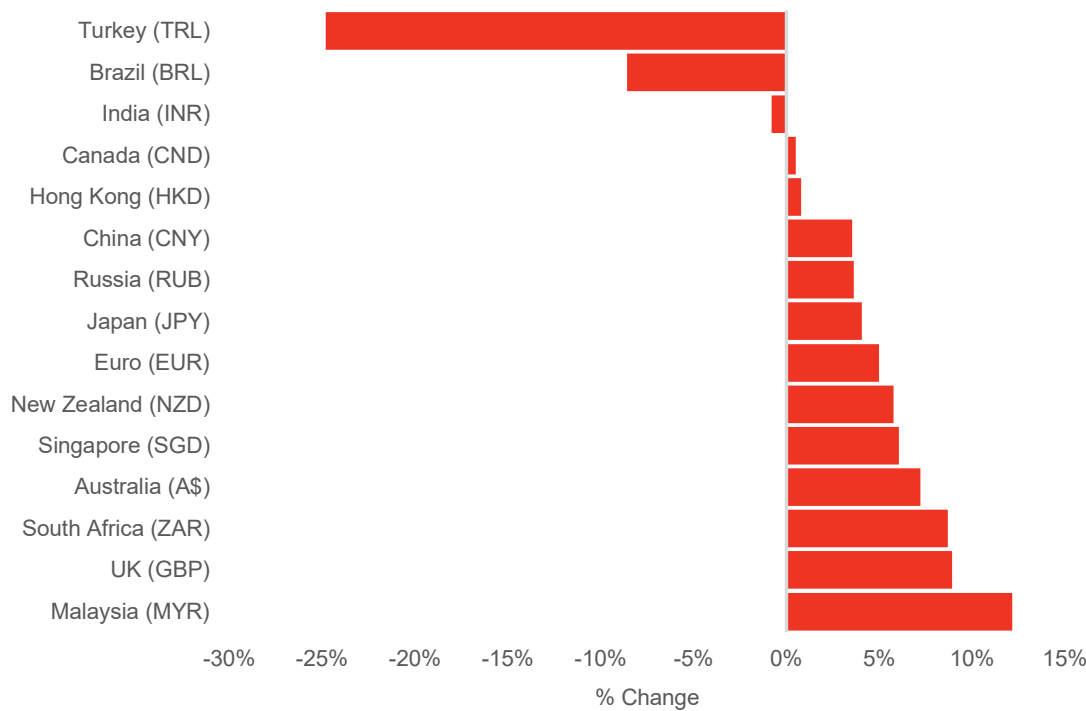
In recent years, exchange rate movements have been significant as diverging economic performance has led to many major currencies experiencing significant shifts against the US Dollar. The Forex rate illustrates a country's economic stability with leading factors that can influence fluctuations and those that are constantly analyzed, including:

- Interest rates.
- Inflation.
- A country's current account balance.
- Government debt.
- Political instability
- Recessions.
- Commodity markets.
- International trade.
- Geopolitical conflict.

Currency depreciation against the US Dollar translates into a relative drop in building costs when expressed in US Dollars, making these locations/regions relatively cheaper in US Dollar terms.

Exchange rate trends

Currency movements of the US Dollar against major currencies Q3 2024 compared to Q3 2023.



Source: www.xe.com

GCC building cost comparison

The Middle East cost data shown is converted to US Dollars to enable comparison.

The building costs, for their respective asset types, are averages based on local specifications. The actual cost of a building will depend, on among other things, unique site conditions, design attributes and applicable tariffs.

For specific current and benchmarked cost data, please contact AECOM's Program Cost Consulting team for assistance in obtaining relevant and specific advice.

In addition, the standard for each building varies from region to region, which may have a significant impact on costs.

Costs are subject to considerable variations due to factors such as:

- Local market conditions.
- Complexity of project.
- Commodity price movements.
- Building specifications.
- Exchange rates.
- Contractors appetite for securing work.
- Contractual risk apportionment.





Average building cost by asset type

Building Cost (USD / sqm)	UAE (Dubai)		KSA (Riyadh)		Qatar (Doha)		Bahrain (Manama)	
Typology	Low	High	Low	High	Low	High	Low	High
Residential								
Low-rise	1,300	2,000	1,000	1,500	1,100	1,600	900	1,500
Medium-rise	1,500	2,200	1,300	1,800	1,200	1,900	1,200	1,800
High-rise	2,100	3,400	1,900	3,000	1,800	2,800	1,600	2,500
Villas	1,400	2,500	1,200	2,400	1,300	2,600	1,000	1,800
Commercial								
Low-rise office (shell and core)	1,300	1,700	1,100	1,500	1,300	1,600	1,200	1,600
Mid-rise office (shell and core)	1,500	2,400	1,300	1,700	1,600	2,000	1,300	1,700
High-rise office (shell and core)	1,800	3,100	1,600	3,300	1,800	2,500	1,600	2,300
Fit-out - basic	1,100	1,800	1,000	1,500	1,200	1,800	900	1,400
Fit-out - medium	1,800	2,300	1,500	2,300	1,700	2,300	1,300	2,000
Fit-out - high	2,300	3,100	2,200	3,000	2,300	3,200	1,900	2,700
Retail								
Community	1,700	1,900	1,400	1,800	1,500	1,900	1,200	1,500
Regional mall	1,700	1,900	1,500	2,200	1,500	1,900	1,300	1,800
Super regional mall	1,700	2,200	1,700	2,700	1,800	2,300	1,600	2,000
Industrial								
Light duty factory	900	1,300	900	1,200	900	1,100	900	1,200
Heavy duty factory	1,200	2,100	1,200	1,800	1,300	1,900	1,100	1,400
Light industrial unit	700	1,000	800	1,100	700	900	700	1,100
Data centers								
<10Mw Tier 3 (*based on \$/KW(IT)	9,500	13,000	11,700	15,900	10,600	14,400	10,000	13,600
>10Mw Tier 3 (*based on \$/KW(IT)	7,500	10,500	10,300	13,300	8,300	11,600	7,900	13,100
Hotel								
Budget	2,000	2,300	1,800	2,000	1,900	2,200	1,700	2,000
Mid-market	2,300	3,200	2,200	2,900	2,900	3,200	1,800	2,500
Up-market	3,200	4,600	2,800	4,800	3,400	4,400	2,300	3,900
Resort	4,100	5,100	3,900	6,400	4,000	5,000	2,800	4,200
Car parks								
Multi-storey	700	1,100	700	1,100	700	900	500	900
Basement	1,100	1,600	800	1,300	1,000	1,300	800	1,100
Other								
Schools - Primary, Secondary, Academy	1,600	2,700	1,400	1,900	1,600	2,200	1,500	2,000
Healthcare - District hospital	2,700	4,500	2,300	3,100	2,700	4,200	2,800	3,400
Exchange rate to 1 USD	AED	3.67	SAR	3.75	QAR	3.64	BHD	0.37

Note:

1. All costs are based on Q3 2024.
2. Relative costs of construction are based on typical build costs in USD. Influence of exchange fluctuations, unique site conditions, design attributes and applicable tariffs must be considered when comparing actual projects.
3. Relative costs are based on an average across all sectors.
4. For typology definitions, inclusions and exclusions see page 101.
5. No investment or other business decision should incorporate the rates in the above table without first contacting AECOM for further information/clarification.
6. KSA (Riyadh) building costs are not representative of current or future assets associated with 'giga projects' under development.
7. Villas typology represent typical master plan community developments.
8. KSA Resort typology refers to coastal projects.
9. For specific current and benchmarked cost data, please contact AECOM's Program Cost Consulting team for assistance in obtaining relevant and specific advice.

Asset type: basis, inclusions and exclusions

Asset class	Cost inclusions	Cost exclusions
Residential	– Fit out works – MEP services installations – Lift services installations	
Commercial offices	– Internal finishes — lobby and core areas only – Fit out works — lobby and core areas only – MEP services installations — lobby and core areas only – Lift services installations	– Internal finishes to offices – MEP services installations to offices – Active IT and phone equipment
Fit out (commercial offices)	– Works to fit out area only – Fit out works — architectural – Fit out works — MEP services – Specialist installations (AV, IT, security) – FF&E	– Active IT and phone equipment
Retail	– Front of house fit out – Kitchen and laundry equipment – Active IT equipment	– Tenant fit out – Strip retail developments
Industrial (light duty factory)	– Warehouse/distribution type factory – Internal services – FF&E	– Storage/racking systems – IT and CCTV active equipment – OS&E – Production, process and laboratory equipment – Waste water treatment plant, compressed air plant – Process water and drainage systems – N+1/2 redundancy – Humidity/environmental control/conditioning other than standard air conditioning – Ultra flat slabs
Data centers		– Active equipment – FF&E – Utilities outside the building outline – Modular construction (based on one complete data center)
Hotel	– Fit out – Kitchen and laundry equipment – Active IT equipment	– Pre-operating expenses – Client soft costs – OS&E
Healthcare, education	– Fixed fit out works only	– All loose fit out and ICT – All medical equipment

Note: All costs are based on Q3 2024.

General notes	General cost inclusions	General cost exclusions
– The building costs for the respective asset types are averages based on competitive tenders analyzed by AECOM. It must be understood that the actual cost of a building will depend on the design and many other factors and may vary from the figures shown. – Due to the volatile nature of the current market, it is possible that tenders will be received outside these ranges. Professional advice should be sought for specific projects. – The standard for each building varies from region to region. – General and specific cost inclusions and exclusions are listed below. – Relative costs of construction are based on typical build costs in USD. Influence of foreign exchange fluctuations, unique site conditions, design attributes and applicable tariffs must be considered when comparing actual projects.	– Construction works. – Main contractor preliminaries and OH&P.	– External works and landscaping. – Site infrastructure. – Enabling works. – Swimming pools. – Basements, podiums and car parks. – Contingencies. – Undefined provisional sums. – Utility connection charges. – Statutory fees and charges. – Professional fees. – Client direct costs. – Land acquisition. – Finance charges. – LEED silver or above. – Staff accommodation. – Pre-opening expenses. – Mock-ups. – VAT.

Average MEP cost by asset type

MEP Cost (USD / sqm)	UAE (Dubai)		KSA (Riyadh)		Qatar (Doha)		Bahrain (Manama)	
Typology	Low	High	Low	High	Low	High	Low	High
Residential								
Low-rise	310	490	240	360	260	390	210	360
Medium-rise	360	560	320	460	290	470	290	450
High-rise	530	910	480	820	450	750	400	680
Villas	390	800	300	660	360	830	280	570
Commercial								
Low-rise office (shell and core)	370	510	310	450	370	480	330	490
Mid-rise office (shell and core)	460	790	400	560	490	660	390	560
High-rise office (shell and core)	560	1,090	500	1,160	560	880	500	810
Fit-out - basic	340	580	300	470	370	570	280	440
Fit-out - medium	580	790	480	780	540	780	410	680
Fit-out - high	780	1,090	750	1,050	780	1,130	650	940
Retail								
Community	470	660	390	640	420	670	330	520
Regional mall	480	670	430	770	420	660	370	630
Super regional mall	480	780	470	950	500	800	450	700
Industrial								
Light duty factory	290	460	290	420	280	380	290	420
Heavy duty factory	430	840	430	720	460	760	380	560
Light industrial unit	210	300	240	340	210	270	220	340
Data centers								
<10Mw Tier 3 (*based on \$/KW(IT)	5,700	7,800	7,020	9,540	6,360	8,640	6,000	8,160
>10Mw Tier 3 (*based on \$/KW(IT)	4,500	6,300	6,180	7,980	4,980	6,960	4,740	7,860
Hotel								
Budget	560	690	510	610	530	660	470	600
Mid-market	690	1,000	670	910	870	1,000	550	780
Up market	960	1,480	850	1,530	1,020	1,410	690	1,250
Resort	1,230	1,690	1,180	2,120	1,200	1,650	840	1,390
Car parks								
Multi-storey	150	270	150	280	160	210	110	220
Basement	300	440	220	360	270	350	220	310
Other								
Schools - Primary, Secondary, Academy	510	870	460	610	510	700	480	640
Healthcare - District hospital	1,100	1,890	940	1,310	1,110	1,760	1,150	1,430
Exchange rate to 1 USD	AED	3.67	SAR	3.75	QAR	3.64	BHD	0.37

Note: All costs are based on Q3 2024.

Source: AECOM

Typical building services standards for offices

Subject	BCO (UK) specification 2014	Bahrain specification	UAE specification	Qatar specification	Oman specification
Net : Gross ratio - typical	80 - 85%	70 - 80%	75 - 80%	70 - 80%	70 - 80%
Occupancy standards — typical	1:8 - 1:13/m ²	1:10 - 1:14/m ²	1:10 - 1:15/m ²	1:10 - 1:14/m ²	1:10 - 1:15/m ²
Occupancy standards — toilets	Single sex one person to 10m ² using 60/60 male/female ratio based on 120% ratio.	Single sex one person to 12m ² using 50/50 male/female ratio based on 100% population.	Single sex one person to 12m ² using 50/50 male/female ratio based on 100% population.	Single sex one person to 12m ² using 50/50 male/female ratio based on 100% population.	Single sex one person to 12m ² using 50/50 male/female ratio based on 100% population.
Heating and air conditioning internal criteria	24°C, +/- 2°C (Summer) 20°C, +/- 2°C (Winter)	24°C, +/- 2°C	24°C, +/- 2°C	24°C, +/- 2°C	24°C, +/- 2°C
Fresh air supplies	12 - 15 L/s per person	8.5 - 10 L/s per person	8.5 - 10 L/s per person	8.5 - 10 L/s per person	8.5 - 10 L/s per person
Ventilation - WCs (extract)	none stated	10 Air changes per hour	10 Air changes per hour	10 Air changes per hour	10 Air changes per hour
Lighting load allowance	10 W/m ²	10 W/m ²	10 W/m ²	10 W/m ²	10 W/m ²
Small power load allowance (based upon one workspace every 10m ²)	20-25 W/m ²	12 - 25 W/m ²	12 - 25 W/m ²	12 - 25 W/m ²	12 - 25 W/m ²
Acoustics - open plan	NR 40	NR 40	NR 40	NR 40	NR 40
Acoustics - cellular offices	NR 35	NR 35	NR 35	NR 35	NR 35
Lighting - VDU use	300 - 500 lux	400 - 500 lux	400 - 500 lux	400 - 500 lux	400 - 500 lux
Passenger lifts - capacity	0.8	0.8	0.8	0.8	0.8
Passenger lifts - waiting time (up-peak)	< 25 seconds	< 30 seconds	< 30 seconds	< 30 seconds	< 30 seconds

Source: AECOM

Asset type: basic specification

Asset type	Residential		
Typology	Low-rise	Mid-rise	High-rise
Specification	Basic, medium and high	Basic, medium and high	Basic, medium and high
Key design characteristics			
Building height	G+1 to G+3	G+4/5 to G+20	G+20 and above
GIA	80,000 - 140,000	50,000 - 80,000	90,000 - 120,000
BUA	85,000 - 155,000	55,000 - 90,000	105,000 - 135,000
Efficiency (%)	85 - 100%	80 - 85%	70 - 80%
Units per core	1 - 2	10 - 20	4 - 6
Wall: floor ratio	0.50 - 0.80	0.45 - 0.65	0.45 - 0.55
Net to gross	80 - 100%	75 - 85%	65 - 75%
GIA per unit	200 - 450m²	90 - 200m²	145 - 165m²

Asset type	Offices		
Typology	Low-rise (shell and core)	Mid-rise (shell and core)	High-rise (shell and core)
Specification	Basic, medium and high	Basic, medium and high	Basic, medium and high
Key design characteristics			
Building height	G+1 to G+5	G+5 to G+20	G+20 and above
GIA	10,000 - 25,000	25,000 - 75,000	100,000 - 250,000
BUA	13,000 - 30,000	30,000 - 100,000	130,000 - 280,000
Efficiency (%)	70 - 85%	70 - 85%	70 - 85%
Wall: floor ratio	0.40 - 0.70	0.40 - 0.60	0.40 - 0.50
Net to gross	50 - 60%	50 - 60%	50 - 70%
Slab to slab height	4.0 - 5.0m	4.0 - 4.5m	4.0 - 4.5m
Grid spans	7 - 12m	9 - 12m	9 - 12m

Asset type	Retail		
Typology	Community	Regional	Super regional
Key design characteristics			
Finishes	Mid range	High	High
GFA (m²)	Not exceeding 30,000	30,000 - 100,000	> 100,000

Asset type	Industrial			
Typology	Light duty factory	Heavy duty factory	Light industrial unit	Data center — Tier 3
Specification	Basic	Basic	Basic	Basic
Key design characteristics				
Building height (m)	8	10	6	6
GIA	10,000	20,000	6,000	4,000
Wall: floor ratio	0.33	0.30	0.38	0.35

Asset type	Hotel			
Typology	Budget	Mid-market	Up-market	Resort
Specification	Basic	Mid range	Luxury	High end
Key design characteristics				
Building height	G+10	G+10	G+15	G+6
GIA	16,000 - 18,000	13,500 - 15,500	56,000 - 60,000	39,000 - 41,000
Wall: floor ratio	70%	75%	75%	55%
Functional units	350	200	350	200

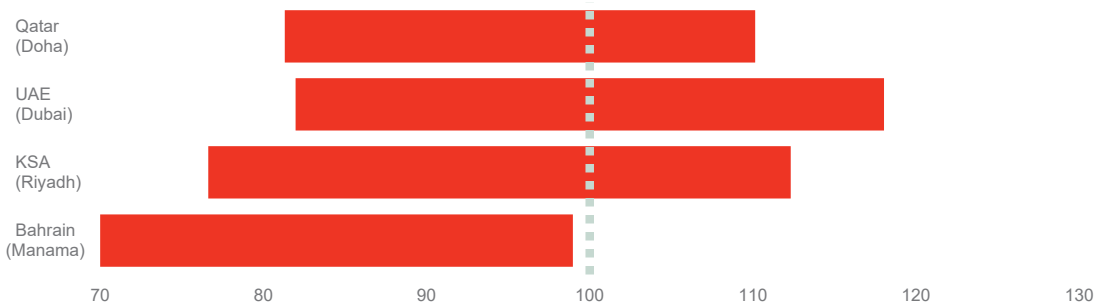
Asset type	School	Healthcare
Typology	Primary/secondary academy	District hospital
Specification	Mid-range	Mid-range
Key design characteristics		
Building height (m)	10	24
GIA (m²)	21,000 - 22,000	50,000
No. of lift core	1	4
No. of stair core	9	6

Source: AECOM

Middle East relative cost of construction

The relative cost of construction is based on typical building costs in US Dollars. The influence of foreign exchange fluctuations, unique site conditions, design attributes and applicable tariffs must be considered when comparing actual projects. Relative costs are based on an average across all sectors.

Middle East relative cost of construction



Note: Relative cost of construction is based on typical build costs in USD. High and low-cost factors for each building type have been calculated relative to the UAE (Dubai), where average costs equal 100. The relative cost bars plotted in the chart represent the average high and low-cost factor for each country, based on the costs of the buildings included in the sample (excluding commercial fitouts).

Source: AECOM



Major measured unit rates

Item (Unit rates in USD)	Unit	Description	UAE (Dubai)	KSA (Riyadh)	Qatar (Doha)	Bahrain (Manama)
Excavation	m³	"Standard/minimum specification excavation for trench foundation; depth not excessive, i.e. no greater than 1-2 m"	8	10	8	11
Disposal of excavated material	m³	"Standard/minimum specification disposal away from site"	7	6	5	6
Filling	m³	Imported fill	14	20	17	45
Poured concrete, reinforced	m³	"Standard/minimum specification grade 20 or 30; superstructure, walls or slabs; reinforced "	136	169	158	120
Reinforcement	tn	"Standard/minimum specification 20mm bars"	1,362	1,720	1,620	990
Formwork/shuttering	m²	"Standard/minimum specification superstructure standard; fair face finish to walls"	51	53	48	20
Blockwork	m²	"Standard/minimum specification 200mm solid blockwork, usually internal walls"	38	51	40	39
Doors	no.	"Standard/minimum specification single leaf door, fire rated, timber, basic finish, usually 900mm wide, generally excluding ironmongery"	1,362	1,230	1,470	1,204
Tiling to floors	m²	"Standard/minimum specification 300 x 300mm ceramic tiles"	41	64	51	40
Plaster to internal walls and ceilings	m²	12.5mm thickness	16	17	16	11
Painting to internal walls and ceilings	m²	"Standard/minimum specification Emulsion"	8	14	8	7
Exchange rate to 1 USD			AED 3.67	SAR 3.75	QAR 3.64	BHD 0.37

Note: All costs are based on Q3 2024.

Source: AECOM

Major material prices

Item (Unit rates in USD)	Description	Unit	UAE (Dubai)	KSA (Riyadh)	Qatar (Doha)	Bahrain (Manama)
			USD	USD	USD	USD
Cement	Ordinary Portland cement	Tonne	81	107	99	91
Sand	Sand for concreting	m³	11	18	18	24
Aggregate	19mm aggregate	m³	17	16	36	54
Ready-mixed concrete	Grade 50 (OPC)	m³	76	98	93	88
	Grade 40 (OPC)	m³	64	87	88	83
	Grade 20 (OPC)	m³	65	74	81	78
Reinforcing steel	High tensile	tn	874	1,174	852	722
	Mild steel	tn	838	1,120	911	694
Hollow concrete blockwork	100mm thick	m²	11	8	10	10
	200mm thick	m²	14	10	17	13
Structural steelwork	Mild steel grade 50 to BS 4360	tn	1,293	2,135	2,431	1,204
Timber	Hardwood	m³	893	1,004	989	980
	Softwood	m³	342	534	365	353
Fuel	Diesel	Litre	1.02	0.31	0.56	0.48
	Petrol Premium 95	Litre	0.87	0.70	0.58	0.56
Exchange rate to 1 USD			AED 3.67	SAR 3.75	QAR 3.64	BHD 0.37

Note: All costs are based on Q3 2024.

Cost rates are indicative and represent supply only costs of the materials listed.

Location factors should be applied to address geographic variations in each country.

The rates are exclusive of VAT (Value Added Tax) or similar, where applicable.

Source: AECOM



Labor costs

Description	Unit	UAE (Dubai) USD	KSA (Riyadh) USD	Qatar (Doha) USD	Bahrain (Manama) USD
Skilled operatives					
Concreter	Hour	6.0	8.3	6.3	5.6
Steel Fixer	Hour	6.0	9.1	6.3	5.1
Bricklayer	Hour	6.5	8.5	8.0	5.5
Carpenter	Hour	6.5	9.1	8.0	5.2
Mechanical Installer	Hour	8.4	9.3	7.1	8.1
Electrician	Hour	9.0	8.0	9.3	7.1
Laborer (skilled)	Hour	5.7	5.9	6.3	5.1
Supervision					
Foreman	Hour	11.2	11.7	13.2	9.8
MEP Foreman	Hour	12.5	16.5	13.2	9.8
Site Engineer	Month	7,010	7,740	5,750	5,620
Construction Manager	Month	11,220	13,610	12,950	12,040
Exchange rate to 1 USD		AED 3.67	SAR 3.75	QAR 3.64	BHD 0.37

Note: All costs are based on Q3 2024.

These rates (US\$) are indicative and represent an all-in unit cost for each of the disciplines listed; and are

- inclusive of: wages, salaries and other remunerations prescribed by local labor legislation; average allowances for costs of employment; recruitment; visas/permits; paid leave; travel; accommodation; health and welfare
- exclusive of: overtime working; contractor mark-up for overheads and profit; VAT (Value Added Tax) or similar where applicable.

These rates should not be misinterpreted as contractors' daywork rates.

Source: AECOM



MENA exchange rate comparison

	Euro zone	UK	India	China	Japan	UAE	Saudi Arabia	Qatar	Oman	Bahrain	Kuwait	Egypt	Lebanon	Jordan
1 USD =	EUR	GBP	INR	RMB	JPY	AED	SAR	QAR	OMR	BHD	KWD	EGP	LBP	JOD
H1 2012	0.77	0.63	52.1	6.3	79.7	3.67	3.75	3.64	0.38	0.38	0.278	6.0	1,490	0.707
H2 2012	0.79	0.63	54.6	6.3	79.8	3.67	3.75	3.64	0.38	0.38	0.281	6.1	1,483	0.707
H1 2013	0.76	0.65	55.0	6.2	95.5	3.67	3.75	3.64	0.38	0.38	0.284	6.9	1,486	0.707
H2 2013	0.75	0.63	62.0	6.1	99.6	3.67	3.75	3.64	0.38	0.38	0.283	6.9	1,489	0.707
H1 2014	0.73	0.60	60.8	6.2	102.4	3.67	3.75	3.64	0.38	0.38	0.282	7.0	1,489	0.707
H2 2014	0.78	0.62	61.2	6.2	109.2	3.67	3.75	3.64	0.38	0.38	0.287	7.2	1,492	0.707
H1 2015	0.90	0.66	62.8	6.2	120.3	3.67	3.75	3.64	0.38	0.38	0.299	7.5	1,491	0.707
H2 2015	0.91	0.65	65.4	6.3	121.8	3.67	3.75	3.64	0.38	0.38	0.302	7.8	1,488	0.707
H1 2016	0.90	0.70	67.2	6.5	112.8	3.67	3.75	3.64	0.38	0.38	0.302	8.4	1,508	0.709
H2 2016	0.91	0.78	67.2	6.7	105.9	3.67	3.75	3.64	0.38	0.38	0.303	11.6	1,508	0.709
H1 2017	0.92	0.79	65.7	6.9	112.4	3.67	3.75	3.64	0.38	0.38	0.305	18.0	1,508	0.709
H2 2017	0.85	0.76	64.5	6.6	111.9	3.67	3.75	3.64	0.38	0.38	0.302	17.8	1,508	0.709
H1 2018	0.83	0.73	65.7	6.4	108.7	3.67	3.75	3.64	0.38	0.38	0.301	17.7	1,508	0.709
H2 2018	0.87	0.77	70.7	6.8	111.9	3.67	3.75	3.64	0.38	0.38	0.303	17.9	1,508	0.709
H1 2019	0.88	0.77	70.1	6.8	110.4	3.67	3.75	3.64	0.38	0.38	0.304	17.4	1,508	0.709
H2 2019	0.89	0.79	70.6	7.0	108.0	3.67	3.75	3.64	0.38	0.38	0.304	16.4	1,508	0.709
H1 2020	0.91	0.79	74.1	7.1	108.2	3.67	3.75	3.64	0.38	0.38	0.308	15.8	1,508	0.709
H2 2020	0.89	0.75	73.2	6.5	103.0	3.67	3.75	3.64	0.38	0.38	0.300	15.7	1,508	0.710
H1 2021	0.86	0.74	74.3	6.5	112.0	3.67	3.75	3.64	0.38	0.38	0.300	15.7	1,508	0.710
H2 2021	0.90	0.76	75.8	6.4	121.8	3.67	3.75	3.64	0.38	0.38	0.305	18.3	1,508	0.709
H1 2022	1.03	0.91	81.5	7.1	144.7	3.67	3.75	3.64	0.38	0.38	0.311	19.6	1,508	0.709
H2 2022	0.94	0.83	82.7	6.9	131.9	3.67	3.75	3.64	0.38	0.38	0.307	24.8	1,508	0.709
H1 2023	0.92	0.79	82.10	7.3	144.6	3.67	3.75	3.64	0.38	0.38	0.309	31.0	15,000	0.709
H2 2023	0.91	0.79	83.2	7.1	141.5	3.67	3.75	3.64	0.38	0.38	0.308	31.0	15,000	0.709
H1 2024	0.93	0.79	83.4	7.3	160.6	3.67	3.75	3.64	0.38	0.38	0.307	48.0	89,504	0.709

Source: Bank of England, www.fxtop.com

Weights and measures

Metric measures and equivalents

Length		
1 millimeter (mm)	= 1 mm	= 0.0394 in
1 centimeter (cm)	= 10 mm	= 0.3937 in
1 meter (m)	= 100 cm	= 1.0936 yd
1 kilometer (km)	= 1000 m	= 0.6214 mile

Area		
1 square centimeter (cm²)	= 100 mm²	= 0.1550 in²
1 square meter (m²)	= 10 000 cm²	= 1.1960 yd²
1 hectare (ha)	= 10 000 m²	= 2.4711 acres
1 square kilometer (km²)	= 100 ha	= 0.3861 mile²

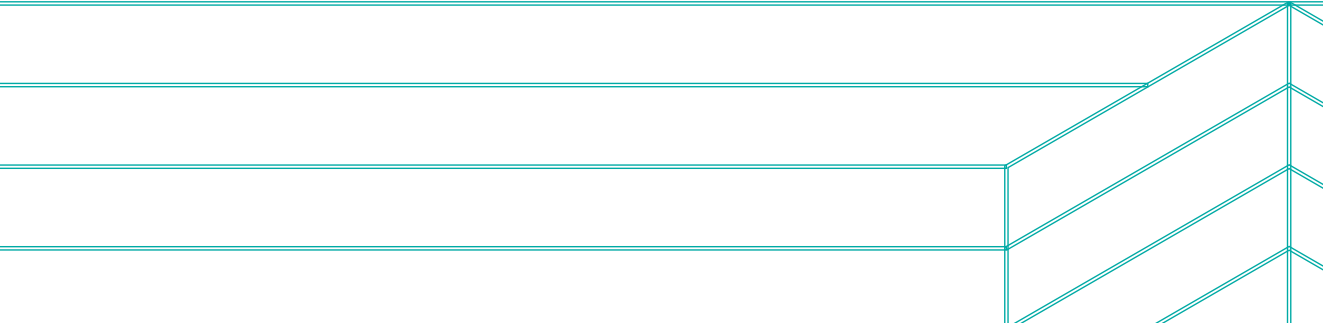
Capacity/volume		
1 cubic centimeter (cm³)	= 1 cm³	= 0.0610 in³
1 cubic decimeter (dm³)	= 1000 cm³	= 0.0353 ft³
1 cubic meter (m³)	= 1000 dm³	= 1.3080 yd³
1 liter (l)	= 1 dm³	= 1.76 pt
1 hectolitre (hl)	= 100 litre	= 21.997 gal

Mass (weight)		
1 milligram (mg)		= 0.0154 grain
1 gram (g)	= 1000 mg	= 0.0353 oz
1 kilogram (kg)	= 1000 g	= 2.2046 lb
1 tonne (t)	= 1000 kg	= 0.9842 ton

USA measures and equivalents

U.S. dry measure equivalents		
1 pint	= 0.9689 UK pint	= 0.5506 liter

U.S. liquid measure equivalents		
1 fluid ounce	= 1.0408 UK fl oz	= 29.574 ml
1 pint (16 fl oz)	= 0.8327 UK pt	= 0.4723 liter
1 gallon	= 0.8327 UK gal	= 3.7854 liter



Imperial measures
 and equivalents

Length

1 inch (in)		=	2.54 cm
1 foot (ft)	= 12 in	=	0.3048 m
1 yard (yd)	= 3 ft	=	0.9144 m
1 mile	= 1760 yd	=	1.6093 km
1 int. nautical mile	= 2025.4 yd	=	1.853 km

Area

1 square inch (in ²)		=	6.4516 cm ²
1 square foot (ft ²)	= 144 in ²	=	0.0929 m ²
1 square yard (yd ²)	= 9 ft ²	=	0.8361 m ²
1 acre	= 4840 yd ²	=	4046.9 m ²
1 sq mile (mile ²)	= 640 acres	=	2.59 km ²

Capacity/volume

1 cubic centimeter (cm ³)	= 1 cm ³	=	0.0610 in ³
1 cubic decimeter (dm ³)	= 1000 cm ³	=	0.0353 ft ³
1 cubic meter (m ³)	= 1000 dm ³	=	1.3080 yd ³
1 litre (l)	= 1 dm ³	=	1.76 pt
1 hectolitre (hl)	= 100 litre	=	21.997 gal

Mass (weight)

1 ounce (oz)	= 437.5 grains	=	28.35 g
1 pound (lb)	= 16 oz	=	0.4536 kg
1 stone	= 14 lb	=	6.3503 kg
1 hundredweight (cwt)	= 112 lb	=	50.802 kg
1 ton	= 20 cwt	=	1.016 tonne

Temperature conversion

C = 5/9 (F – 32)	F = (9/5 C) + 32
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Procurement routes

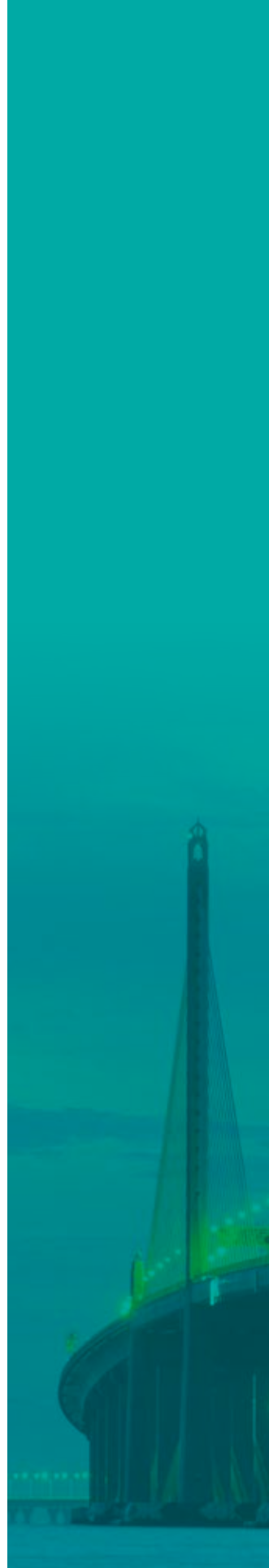
All clients expect projects to be delivered on time and within budget, with an agreed level of quality and with risk professionally managed by their management and consultant teams.

However, the majority of clients and construction professionals have experience with at least one project that was not delivered to the budget, time or quality levels expected. This is why the right procurement strategy, one that is considered robust, efficient, value-based and balances risk and control against the competing project objectives of cost, time and quality, is key to a successful project outcome.

AECOM has developed strategies for the delivery of projects that we know work, successfully delivering hundreds of projects over our long history. New and existing developers have the opportunity to learn from this knowledge and maximize the value from their time, cost and quality mix, while adhering to a process that increases the likelihood of their projects being successfully procured by the team involved.

So what is the right procurement approach for your projects?

Which funding strategy, funding partner, team behaviors, attitudes, communication channels, budget and program deliver the best approach and how can we best combine these to lead our clients to ultimate success?



AECOM's management of the procurement process

A considered, robust, efficient and value-based procurement strategy and process is critical to ensuring the procurement of an appropriate contractor (or contractors), consultants, equipment and materials to achieve the successful outcome of the project.

The procurement strategies developed aim to achieve an optimum balance of risk, control and cost certainty for the project. They also identify the selected procurement route, being the method adopted to deliver the procurement strategy.

AECOM offers important early advice to help determine the right procurement approach, adding value throughout the process. This understanding of our clients' time, cost and quality requirements maximizes the value we can offer.

The early identification and consideration of the client and project's key objectives and drivers is essential in ensuring its' successful procurement and delivery in line with the client's.

A clear understanding of project objectives, key drivers and critical success factors ensures:

- Understanding of timings and decision points for project procurement.
- Understanding of budget constraints and considerations.
- Consideration of procurement routes and requirements for packaging or phasing of works.
- Technical considerations.
- Consideration of the client's corporate governance and preferred procurement options.
- Identification, understanding and consideration of the project's risks and opportunities.

Some of the procurement strategies followed in the industry are listed on the next page, however, the real challenge is considering and selecting the right approach when considering an individual client and/or project need.





Traditional lump sum

The design by the client's appointed consultant(s) is completed before contractors tender for and then carry out the construction of the works. The contractor commits to a lump sum price and a completion date prior to appointment. The contractor assumes responsibility for the financial and program risks for the carrying out of the building works, while the client takes responsibility and accepts the risk for the quality of the design and the design team's performance. The client's consultant(s) administers the construction contract and advises on aspects associated with design, progress and stage payments, which must be paid by the client. A variant to this is a traditional re-measured contract, where the tendered BOQ quantities are re-measured (either periodically or at the end of construction) and the contract price is adjusted accordingly based on the contractual rates for the revised quantities.



Accelerated traditional

As per traditional lump sum, however procured in the marketplace before being fully designed (normally 80-85 percent designed), leaving more simple elements of the building to be procured once the contractor has been appointed. It is important to understand how a client procures the remaining elements of work with a contractor under this approach and to design out those areas that carry inherent risk early in the process. It may also involve the procurement of an early works package for enabling and/or piling works.



Design and build

Employer's requirements and/or design is developed to an initial stage to allow tendering of the project, before detailed design and construction are both undertaken by a single contractor (usually with appointed specialist design consultants) in return for a lump sum price. There are variants to this option depending on the degree to which the initial design is included in the client's requirements. Where a concept design is prepared by a design team employed directly by the client before the contractor is appointed (as is normally the case), the strategy is called develop and construct. The contractor commits to a lump sum price for completion of the design and the construction and to a completion date prior to their appointment. The contractor can either use the client's concept design to complete the design or use their own scheme to finalize it within the employer's requirements. With design and build it is important to design out or specify in detail those parts of the building the client wants to see perform a particular function or provide a particular visual impact.



Two stage

A contractor is invited to become part of the project team in stage one, usually by way of a pre-construction fee or commitment to preliminaries and mark-up percentage. They jointly procure the project with the client until a second stage lump sum offer can be agreed upon, which should be before construction begins on site. An understanding of the original appointment and the subsequent framework under which the second stage is agreed are the important aspects of this approach, as well as working with transparency and trust, preventing an early commitment to a full scheme that a client cannot afford.



Management contract

Design by the client's consultants generally overlaps with the construction.

A management contractor is appointed early to tender and let elements of work progressively to subcontractors and specialists' work packages. The contracts are between the management contractor and the trade contractors rather than between the client and subcontractors. The management contractor will not carry out construction work but rather is employed to manage the process. The management contractor, in theory, assumes responsibility for the financial (and program) risks for the works, but in reality, this is normally diluted by the terms of the contract, so their liability is similar to that of a construction manager.



Design, manage and construct

Similar to the management contract, with the contractor also being responsible for the production of the detailed design or for managing the detailed design process.



Turnkey contract

A form of a design and build contract in which a single contractor or developer is responsible for all services, possibly also including finance. Under a turnkey project, the client enters into a contract with one party to deliver the entire project. The project is handed over once it is complete and fully operational. The client is normally not involved in any of the decisions throughout the building process. There are several variations of 'turnkey' contracts, including Engineer-Procure-Construct (EPC), Build-Own-Lease-Transfer (BOLR), Design-Build-Operate-Transfer (DBOT) or PFI.



Engineer, Procure and Construct (EPC)

EPC is a form of "turnkey" contract.

This form of procurement places risk in the right hands and offers solutions to clients' engineering requirements from those specialized to meet the performance requirements set by a client team. Many of the large utility companies procure work in this way, bringing high levels of certainty from the supply chain which helps to achieve business-critical benefits over the long term.



Public Private Partnerships (PPP)

A detailed and complicated form of procurement used predominantly for public services when the private sector feels it is advantageous to design, build, finance and operate a particular service or building type. It is becoming more popular in the Middle East as a way to limit public sector spending while meeting the demands of a growing population.

Middle East forms of contract

This section considers the different forms of contract used in construction across the region.



Bahrain

Government work in the Kingdom of Bahrain is undertaken using a bespoke suite of contract forms that were issued in 2009 for consultants and contractors.

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Private developers predominantly use the FIDIC Conditions of Contract for Construction, the 1999 edition of the ‘red book’ which is well understood in the local market, but often heavily amended for specific use.

Most of the work completed in Bahrain is under a traditional lump

sum form of contract, where the design is completed upfront and price agreed with a contractor before work begins on site.

Design and build and two-stage procurement are in use across the Kingdom but are not considered to be the industry norm.

As more international private developers have started working in Bahrain, with time constraints as their main driver, the market

has adjusted to accommodate this demand.

Design and build contracts, however, are not routine.

PPP projects have been in place in Bahrain, but mainly for IWPP projects and one for the STP project. It is still in the infancy stage and needs changes to legislation.

Kingdom of Saudi Arabia

Construction contracts in the private sector are generally based on FIDIC forms of contract and are amended to suit the particular conditions for each project.

Employers prefer lump sum versus remeasured contracts and normally exercise great control in the administration of the construction process by imposing various restrictions on the engineer's (consultant) authorities under the contract. All contracts are subject to Saudi laws where Islamic Sharia law is the prime source of legislation. Litigation and arbitration are both available for resolution of disputes in the private sector.

Within the public sector, however, construction contracts are based on the Standard Conditions for Public Works, which are amended to suit particular projects. These conditions are generally based on those given in the 4th edition of the FIDIC Conditions of Contract for Works of Civil Engineering Construction, the FIDIC 4 'red book', but with greater control given to the employer for the administration of the contract.

All public work contracts are let on a remeasured basis and are subject to the Saudi Government Tendering and Procurement Regulations, as issued by royal decree. It is also noted that several of the large scale developments planned have aggressive schedule targets and as such there is also a growing appetite for the design and build form of contract with these developments.





Qatar

In Qatar, the most common forms for building works are those used by the Public Works Authority (PWA) departments through the Ministry of Municipality (MM) and the Qatar Energy (QE) forms or FIDIC based amended bespoke forms.

The contracts are generally on a fixed price lump sum basis, utilizing bills of quantities or specifications and drawings. However, the design and build route is becoming more prevalent in the market. The contracts are often biased towards clients, wherein the contractor buys all the project risks for an increased initial price. Such contracts are generally administered in a reasonable manner.

A high proportion of private sector projects utilize a bespoke form based on the FIDIC forms of contract; such contracts are generally fixed price lump sum which follows the general theme of most contracts in the state.

The Public Works Authority (Ashghal) utilizes an in-house bespoke contract which was

updated in 2018 to become more contractor-friendly with a greater share of risk. The updated suite is now tailored to a particular procurement route that is more suitable to the individual project needs. This approach should reduce the volume of project-specific amendments included in tenders.

Major international projects frequently use more traditional FIDIC forms (typically the 1999 version) with amendments to dispute resolution clauses and removal of DAB provisions.

Before any contract is awarded, there are commonly several rounds of negotiation, during which the price and other contractual terms can be modified to respond to a reduction in contract price.

“

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United Arab Emirates

Construction contracts in the UAE are predominantly based upon the FIDIC forms of contract.

Large-scale developers and major repeat clients in the region generally now develop and utilize bespoke forms of contract tailored to each individual client.

Such contracts generally use the FIDIC 4 'red book' form as a basis, amended to a greater or lesser degree depending upon the risk profile of each client. This also applies to works procured by Dubai Municipality.

Abu Dhabi Municipality, however, bases contracts on a modified FIDIC 3 form, taken from the 3rd edition of the FIDIC conditions of Contract for Works of Civil Engineering Construction.

Contracts based on the 1999 'red book' are often used in the UAE, but in general, the market remains firmly rooted in the FIDIC 4 form.

Civil works contracts within the UAE are mostly procured on a re-measurable basis, whereas building works will generally be based on a fixed price lump sum.

However, there are exceptions. More and more clients are procuring projects using a fast-track approach and will, therefore, incorporate a re-measurable element, reflecting those parts of the design that are incomplete at the tender stage.

There is also a significant increase in appetite for the use of design and build forms of contract, as clients intend to transfer a large share of the risk to the contractors, as well as seeking overall project schedule savings due to earlier procurement being enabled.

“

Civil works contracts within the UAE are mostly procured on a re-measurable basis, whereas building works will generally be based on a fixed price lump sum.”

Building regulations and compliance

This section outlines the procedures for obtaining building permissions across the region. AECOM's project management team is vastly experienced in the procedures for building permits internationally and locally and can guide and oversee this process.



Bahrain

Procuring a municipal building permit in Bahrain is now completed through the on-line portal, Benayat, over a seven-stage process:

Stage one

Prepare drawings

The client must engage a consultant to prepare the necessary architectural and engineering drawings and documents for the next stages of submission. It is generally sufficient to include simple outline plans, cross-sections to indicate overall heights and an area statement.

Stage two

Obtain pre-approval

Certain projects will require a pre-approval from the Urban Planning Development Affairs, Road, Planning and Design Directorate (RPDD), Civil Aviation Authority and other authorities. Specific criteria is listed out within the online portal should the project fall under any of the requirements, then the pre-planning approval is required.

Stage three

Third party checker

Before the building permit submission and after the pre-approval, if required, the building permit package is to be submitted to a third-party engineering firm to review and confirm compliance with the

building code and application criteria. The reviewing firm must be of a similar grade to the submitting firm and must be registered with the Council for Regulating the Practice of Engineering Professions (CRPEP). A full list of firms is provided on the Benayat portal.

Stage four

Building permit application and third party declaration

Upon agreement with the third party, the documents are to be uploaded to the online network. The third party must, within seven days, validate the application online to allow the process to move to the Government entity review.

Stage five

Government entities review

Once the submission is made and the third party validates, the respective Government entities will review and provide any conditions. The main authorities involved at this stage are the Municipality, Sanitary Engineering Planning and Projects Directorate (SEPPD) and the Electrical Distribution Directorate (EDD).

Stage six

Fee payment

Once the submission has been reviewed and there are no objections/non-conformities, the municipal charges must be paid for the following elements:

1. Building Permit Fees.
2. Building Permit Insurance Deposit.
3. Infrastructure Fees (if applicable).
4. Civil Aviation Fees (if applicable).

Stage seven

Issue of building permit

Upon payment of the fees the building permit, along with any conditions, will be issued electronically via the Benayat system for works to proceed.

Application audit

Within two weeks of issuing the building permit, it shall be reviewed by the authorities audit team. The audit team shall inform the engineering office to resubmit or modify the drawings if any changes are required to be made to meet the relevant building code standards.

Kingdom of Saudi Arabia

Obtaining a building permit in the Kingdom of Saudi Arabia varies from region to region, however, they tend to follow the same basic principles. The various procedures and approvals from the main municipality, the branch municipality and the fire department need to be obtained. Obtaining these approvals typically takes between three to four months depending on the nature and size of the building/project.

The following is a general outline of the steps needed to obtain a building permit:

Stage one

Obtaining a letter from the main municipality

A letter from the owner is submitted to the main regional municipality, along with a copy of the land deed. The municipality checks the masterplan of the area to ensure the suitability of the plot for the construction of a building. The municipality then writes a letter to the branch municipality of the area where the plot is located. This process takes approximately five days.

Stage two

Obtaining a preliminary location permit from the branch municipality

The owner submits a copy of the letter obtained previously from the main municipality to the branch municipality, requesting an inspection of the plot to ensure that the plot length, width and total area are as indicated on the deed. The branch municipality then issues an approval to use the land. This process takes approximately five days.

Stage three

Obtaining approval from the fire department

The branch municipality writes to the fire department, or civil defense, to obtain its approval of the plan submitted by the owner for the fire-alarm and fire-fighting systems.

The fire department approves these plans and sends them back to the municipality. This process takes approximately ten days.

Stage four

Obtaining a final building permit

The branch municipality issues a building permit and sends it to the main municipality for approval after obtaining all relevant approvals from the service providers, which is given dependent on the nature of the building. The owner can collect the permit from the main municipality after one to three months.



Qatar

Compared with many other countries, the planning and building approval process in Qatar is relatively clear and structured. Land ownership, other than by Qatari nationals and the state, is still extremely limited.

The key process in securing development rights is obtaining a land title or 'PIN', since without it all other permits and applications cannot be commenced. Once the land is secured, the project masterplan is submitted for approval to the Planning Department and local municipality offices. Prior to initiating the building permit process, it is essential to secure Masterplan approval from Ministry of Municipality (MM)-Urban Planning. For government projects, land allocation approval must be obtained from MM - State Property Department, and for private land, the title deed is required before initiating the building permit process. Approval from MM-Infrastructure Planning Department is mandatory for any infrastructure, building or structure, such as pumping stations, substations, EFA tanks, etc.

The statutory approval process comprises multiple stages that in turn, dictate the program parameters. The stages are as follows:

Opening of the file

Submission of Municipality documents, forms, architectural preliminary drawings, and other required building data. This is an important and critical step which needs to be processed accurately by the appointed consultant.

series of reference numbers that are then used as the file number for all future submissions.

The culmination of this round of submissions is the DC1 approval. As the design develops, a second round of submissions are made to the same utility departments for final approval. In addition, a submission is made to the Qatar Civil Defence (QCD) department who review the fire and life safety aspects of the project.

5. PWA-Road's approval for Gate Levels.
6. Qrail approval (if within Qrail Protection Zone).
7. MOT-LTPD approval for ingress and egress (for major projects only).
8. Survey department (for some cases).

Stage one

DC1 approval phase

General overviews and strategies for the architectural drawings / design are required to be submitted for approval. Once approved in principle, the Municipality Engineer transfers the request to services departments. Following which, the primary infrastructure is submitted to the relevant utility service providers for comments. During this process, each department generally issues a

DC1 submission:

1. Architectural Drawings Approval.
2. Fire and life safety (including egress paths, occupancy load, emergency lighting, fire ratings, etc.).
3. Kharamaa drawings.
4. Private Engineering Office (PEO) approval for building façades.

Once the DC1 approval is secured, a further set of standard forms are circulated with a consolidated set of documents for final signing and approval. These documents then constitute the building permit. The building permit can be issued after DC1 approval.

Where the application requires modification, the building permit will be issued after DC2 approval using the same procedure as stated above.

To obtain the building permit, the consultant will initiate the Fees



Payment request (FP) and attach all of the mentioned documents in order to pay the fees and finally print the building permit.

Stage two
DC2 approval

After DC1 phase, the request will be transferred to the consultant, who submits drawings to each of the services department, as requested by the Municipality Engineer highlighted in the DC1 Approval form. Depending upon the scale and nature of the project, separate traffic studies may be required. These would be submitted to the Road Affairs Department for approval.

Qatar Civil Defence may request modifications to Air conditioning and mechanical ventilation (ACMV), Firefighting (FF) / Fire Alarm (FA) at this stage.

DC2 submission:

- 1. Firefighting.
- 2. Fire alarms.
- 3. Air conditioning and mechanical ventilation (ACMV) (upon request).
- 4. Emergency lighting.
- 5. Kahramaa Electricity and Water loads confirmation.
- 6. Ooredoo for telecom.
- 7. MOI-SSD approval (for security cameras).
- 8. Woqod approval (if applicable).

- 9. PWA Drainage approval.
- 10. Qrail approval (if within Qrail Zone).

As a general guide the whole process usually takes at least 80 days (duration for private sector is stated in the KPI document issued by the MM in relation to the corresponding size and type of the project), depending upon the quality of the submission, although in practice it often takes much longer due to comments from different departments and progressive design revisions.

During this process, it is generally not advisable to revise or modify any submission as it may delay the approval process.



All submissions must be in Arabic or bilingual and should be endorsed by locally registered and approved design companies. International companies cannot make these submissions by themselves. There are some parts of Qatar that are exempt from the building permit approval process. These are generally related to oil and gas production facilities.

Recently, a few revisions have been made to the design standards of buildings, in particular, high-rise structures.

These address issues such as fire safety, refuge areas, the use of lifts in the event of fire and the nature and extent of façade glazing.

Fit out and refurbishment projects now follow a similar DC1 and DC2 process, a change from the requirement to obtain a maintenance permit before work commenced. The approval process is now under the control of the Ministry of Municipality and Approvals (Building Permit Complex).

Only after approvals at all the required stages and the receipt of the municipality building permit can works officially commence on site. However, mobilization and demolition works may commence at the landlord's discretion.

The main risks associated with civil defense approvals and municipality building permits are as follows:

- Submission of incorrect information, resulting in rejection of the application.
- Administrative delays within the civil defense department.
- Public holidays and governmental shutdowns.



United Arab Emirates

The following is a general outline of the procedure for obtaining a building permit in the UAE however, there are many further obligations and procedures to be completed within each of the stages.

For example, stage three of the building permit application requires no less than 15 different forms, documents and separate approvals to be submitted as part of the application.

It is the responsibility of the lead consultant to obtain the building permit.



Stage one

Submitting the preliminary application

The applicant submits a preliminary application to the relevant municipality or statutory authority.

Stage two

No Objection Certificates (NOC)

These are obtained from various governmental and municipal departments including civil defense, drainage, communication, water and electricity, civil aviation, oil and gas, coastal and military.

Stage three

Submitting the building permit application

The full building permit application, including all NOCs, is submitted to the relevant municipality or statutory authority.

Stage four

Obtaining the building permit

On approval, the applicant collects the building permit and applies for a demarcation certificate.

Stage five

Obtaining the building completion certificate

NOCs are to be obtained from various governmental and municipal departments, this is so you can submit to the relevant municipality or statutory authority for the final building completion certificate application, along with all supporting documents.

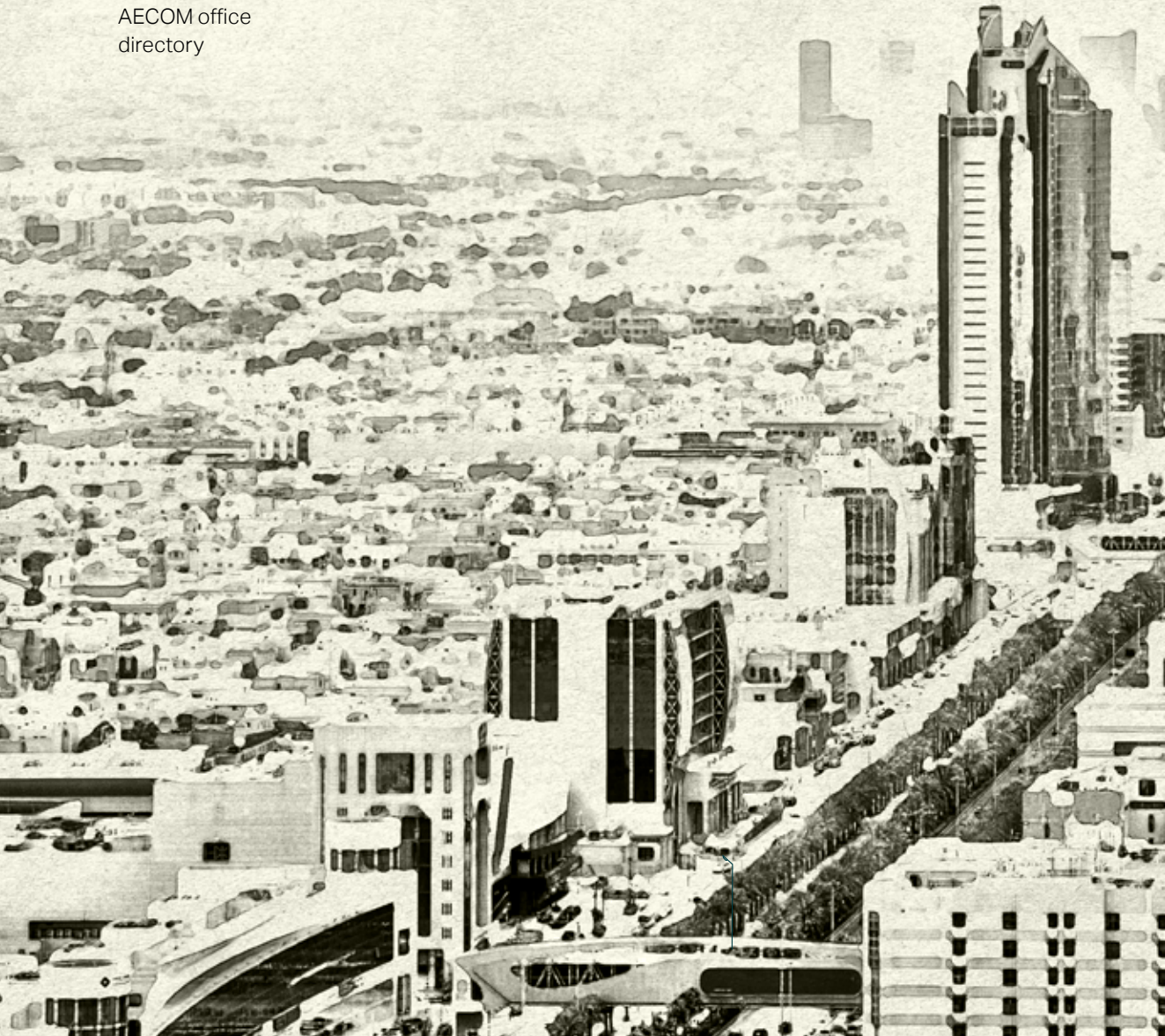


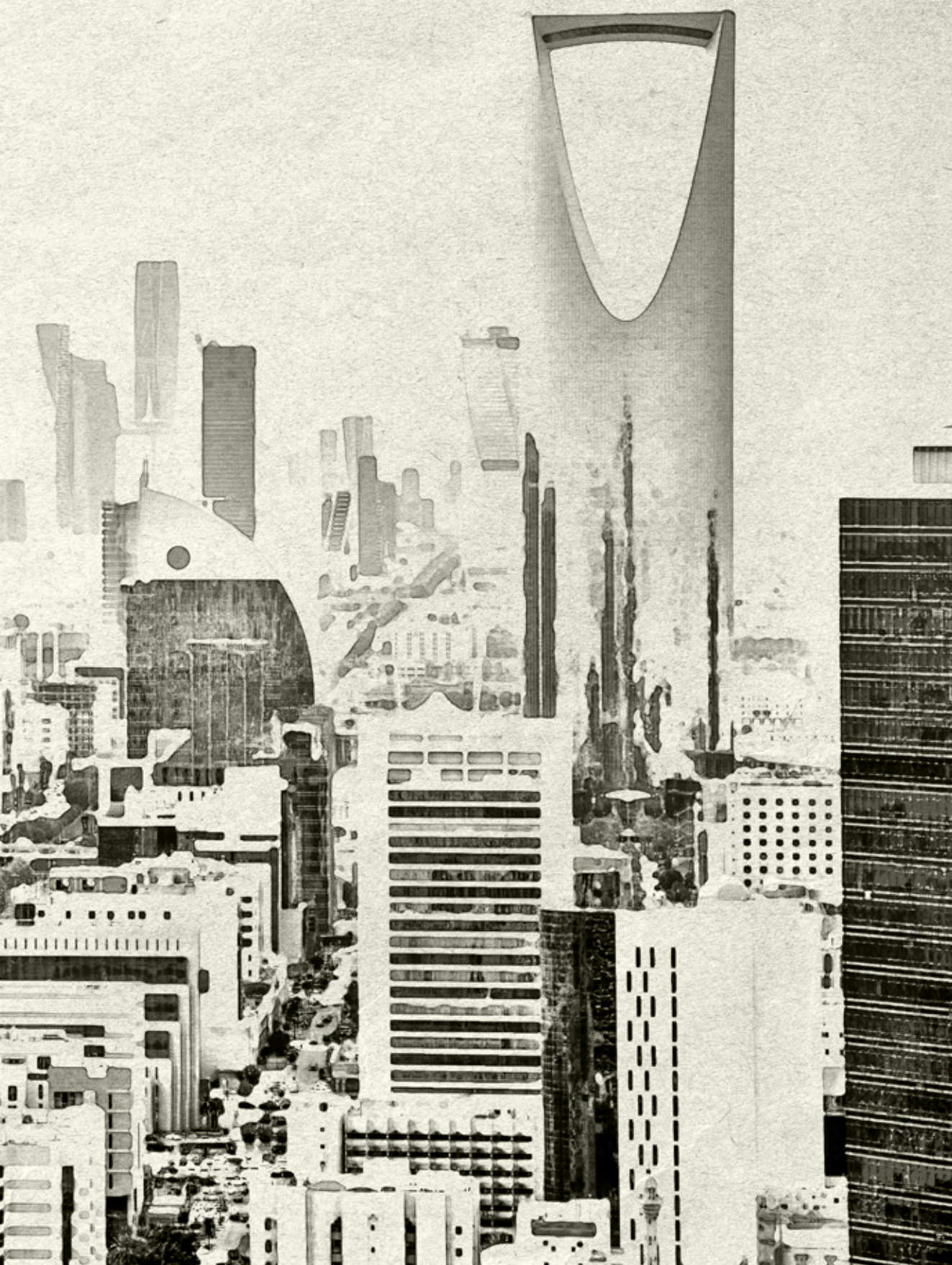
06 Office directory

IN BRIEF

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AECOM office directory





Directory of offices

United Arab Emirates

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abudhabi@aecom.com

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Al Tiwayya, Al Ain Square,
Al Istad Street,
Building 5, 3rd Floor

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F: 971 3 755 4727
alain@aecom.com

Dubai
U-Bora Tower
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PO Box 51028
Business Bay, Dubai

T: 971 4 439 1000
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dubai@aecom.com

Kingdom of Saudi Arabia

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AECOM Arabia Ltd
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Prince Turki Street
PO Box 1272,
Saudi Arabia
Al Khobar 31952

T: 966 12 849 4400
F: 966 13 849 4411
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Riyadh
Tawuniya Towers,
South Tower, Mezzanine Floor,
King Fahad Road
PO Box 58729
Riyadh 11414,
Saudi Arabia

T: 966 11 218 0099
F: 966 11 218 0098

Jeddah
5th Floor, Al Murjan Tower
Prince Sultan Street
PO Box 23431
Jeddah
Saudi Arabia

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2206 King Abdulaziz Road
Al Sukhayrat, Al Madina
Province 43522,
AlUla, Saudi Arabia

T: 966 55 2317708
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Kingdom of Bahrain

Manama
United Tower, 32nd Floor
Building 316, Road 4609
Block 346, Manama/Sea front
PO Box 640, Manama

T: 973 17 588 796
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Qatar

Jaidah Square
4th Floor, Jaidah Square
Umm Ghuwalina
Al Matar Street
PO Box 6650
Doha

T: 974 4 407 9000
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Oman

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Unit No.38, 3rd Floor,
Al Noor Building No. H17,
Plot No 15, Block No. 205,
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How can AECOM's Program Cost Consultancy (PCC) team help?



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