

# Insight

March 2018  
Middle East Issue #17

## Industry focus

**Green issues have become a fundamental part of 21<sup>st</sup>-century construction planning**



Global economy:  
**Coping with a series of  
'known unknowns'**

Regional economy:  
**Recovery underway  
despite sluggish oil  
prices and continued  
regional conflict**

**Commodities price  
analysis**

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## Welcome to Insight #17

World markets are in recovery mode, with positive growth being experienced in most economies during the initial months of 2018. Once again, this is being led by the successful economies of the Asia-Pacific region, with China at the forefront. But its remarkable resilience is not the only success story. Across Asia and the Middle East, growth continues to dominate, and recovery in some countries has been noteworthy.

This latest review takes a closer look at what that means for the construction industry across the Gulf region, where governments are coping with the impact of lower oil prices and changing public policy.

In economic terms, the major economies of Saudi Arabia and the United Arab Emirates (UAE) are moving forward following significant strategic changes enacted during the previous two years. Spending on major construction projects, especially in energy and transport infrastructure, has gained momentum. New partnerships, including privatisation and PPP model procurement, are in hand.

For 2018, both the World Bank and the International Monetary Fund have forecast continued growth across the major economies, and a general recovery in the Middle East.

There is a strong geopolitical angle too, however, and it has an impact on economics. The Gulf States' continued embargo on Qatar is having an impact on its ability to trade. And the anti-corruption crackdown ordered by Saudi Arabia has reverberations too.

These issues are examined in this edition of *Insight*.

We also take a special look at sustainability and its impact on construction. Our exclusive report examines the growing demand for 'green building', driven by regulatory changes, client or investor expectation, and the need for new buildings to be economically sustainable. This can cover every aspect of the construction process, from building materials to work practices and procurement.

Energy efficiency is another major factor for client and project manager alike, and international standards are being set across every major economy. For example, the most widely accepted international standard – known as 'LEED' – now covers nearly 100,000 projects in 165 countries.

We explain what the 'green building' concept is all about, and what it might mean for your business.

# Global economy: Coping with a series of 'known unknowns'

## Real GDP (%)

	2015	2016	2017	2018
<b>World</b>	2.8	2.4	3.0	3.1
<b>Advanced economies</b>	2.2	1.6	2.3	2.2
<b>United States</b>	2.9	1.5	2.3	2.5
<b>Euro area</b>	2.1	1.8	2.4	2.1
<b>Japan</b>	1.4	0.9	1.7	1.3
<b>Emerging market and developing economies</b>	3.6	3.7	4.3	4.5

Source: World Bank

Global economic prospects are set to improve during 2018, with optimistic forecasts emanating from leading commentators.

Global output increased by 3.7 per cent during 2017 – slightly better than expected – and that growth has been broad-based, with surprisingly good results in Europe and Asia, according to the International Monetary Fund (IMF).

As a result, the IMF has upped its global forecasts for 2018 and 2019, saying that they now anticipate 3.9 per cent growth during that period. That change reflects the momentum of recent months, as well as the likely positive impact of recent tax policy changes in the United States.

There are exceptions. The UK is forecasting annual growth of no more than 1.5 per cent over five years, partly the result of uncertainty over Brexit, its exit from the European Union, which is scheduled for 2019.

There is also an unknown risk implicit in the protectionist measures threatened by the Trump administration, which has already indicated that it may impose selective tariffs on steel and aluminium imports from Europe and Asia, for example.

Broadly, the IMF stated in its latest quarterly forecast that the ongoing recovery has strengthened. That was the experience of 120 economies worldwide during 2017, the highest number since 2010.

“Among advanced economies, growth in the third quarter of 2017 was higher than projected, notably in Germany, Japan, Korea, and the United States,” said the IMF. Key emerging market and developing economies, including Brazil, China, and South Africa, also posted third-quarter growth stronger than the fall (autumn) forecasts.

World trade has grown strongly in recent months, supported by a pickup in investment, particularly among advanced economies, and increased manufacturing output in Asia in the run-up to the launch of new smartphone models. Purchasing managers' indices indicate firm manufacturing activity ahead, consistent with strong consumer confidence pointing to healthy final demand.

Domestic demand fuelled better-than-expected growth in Germany, Italy, the Netherlands and Spain, and the euro-area economies are generally anticipated to continue that trend.

The growth forecast for Japan has also been revised upwards.

In Asia, which accounts for more than half of the world's economy, growth is expected to be 6.5 per cent during 2018-19. The IMF expects growth to moderate slightly in China, although a general level of recovery is expected in Latin America and sub-Saharan Africa.

The IMF view is shared by the World Bank, which noted that key economies, including Russia and Brazil, had emerged from recession during 2017, helped by rising commodity prices and the resultant improvement in business confidence.



# Recovery underway despite sluggish oil prices and continued regional conflict

The Middle Eastern economy is expected to pick up during 2018, having suffered a downturn during the previous year for myriad of reasons including depressed oil prices and regional conflict.

The World Bank's latest forecast includes an analysis of the varied experience of national economies across the region during 2016 and 2017, depicting a troubled area with fundamental issues to address. Fortunately, at least in economic terms, it appears that traditionally wealthy economies – including Saudi Arabia and the United Arab Emirates (UAE) – have taken steps to diversify and strengthen.

Meanwhile, other economies, such as Egypt, are showing significant growth prospects.

The World Bank report found that overall growth in the Middle East and Africa had slowed from 5 per cent to just 1.8 per cent during 2016-17, pinning most of the cause on the slowdown in growth among oil exporters, driven by oil production cuts and “continued geopolitical tensions”.

The situation was particularly acute among Gulf Co-operation Council (GCC) countries. Growth in Saudi Arabia fell to 0.3 per cent in 2017, from 1.7 per cent the previous year, while the UAE stood at 1.4 per cent. World Bank economists said also that the diplomatic rift between Qatar and its GCC neighbours had weighed upon the former's economic activity.

Nevertheless, the region will experience better growth during 2018, partly the result of moves by



A £30 billion purpose-built capital is planned for Egypt's desert  
Source: guardian.com

oil-producing countries to move away from their heavy dependence on energy-related income. The World Bank thinks growth will be 3 per cent during this year, and 3.2 per cent in the next. “GCC economies are anticipated to lead stronger growth in the region, supported by easing fiscal adjustment, infrastructure investment such as the UAE Expo 2020, and reforms to promote non-oil sector activity,” says the Bank.

“Growth among the GCC countries as a group is forecast to pick up to 2 per cent this year, from 0.7 per cent.”

Regional economy

Economists expect that private consumption and investment will support better growth across the region. “Growth among some oil importers in the region is anticipated to improve in 2018 as business and consumer confidence are boosted by reforms and as external demand improves,” concludes the Bank.

There is a warning, however. Emphasising that risks vary in degree among different countries and economies, the Bank does say that they are “tilted to the downside”. The reason is that “geopolitical risks remain elevated, and are complicated by intra-regional diplomatic tensions”. Oil importers may be vulnerable to spill-overs of conflicts in Libya, Syria and Yemen. “Conflicts have interrupted basic access to food services, education and health, and the protracted displacement of people in the fragile economies has generated a refugee crisis that creates economic pressures for host countries, and amplified fundamental health and welfare challenges,” adds the Bank.

For oil exporters, weaker than expected prices continue to cloud growth prospects. “While the impetus for reforms has gained momentum in the region, the uncertainty regarding the scope, depth and sustained nature of these reforms may limit their positive impact,” concludes the Bank.

The re-structuring of economic direction, particularly by the major GCC oil-producing nations, is taking root during 2018. One example is in the massive swing of investment and public policy interest in alternatives to carbon. Despite being among the world’s biggest oil producers, countries like the UAE and Saudi Arabia are moving firmly towards nuclear, solar and other technologies.

Utilities are switching to alternatives quickly. They want to reserve oil for exports, as an import earner of foreign capital, while reducing their own dependency on gas. In February, Saudi Arabia awarded a contract for the first project under its ambitious 9.5 gigawatt renewable programme. It intends to

tender for up to 4GW of additional solar and wind projects before the end of 2018. It is at an advanced stage of considering a major step into nuclear energy too.

Dubai has awarded a build, operate and transfer contract for its first waste-to-energy project, and is inviting proposals for its Hassyan clean-coal development. Major solar projects are at various stages of tender in Dubai, Oman and other GCC countries.

The UAE wants to cut carbon dioxide emissions by 70 per cent by 2050. It expects to tender at least 1GW of power from renewables as it continues to diversify its energy mix, according to energy minister His Excellency Suhail Al Mazrouei.



HE Suhail Al Mazrouei, Minister of Energy  
Source: plusuae.com

“We’re seeing at least a 1,000mw of mega-projects every year to meet 44GW...from now until 2050, and that I think is achievable because it makes sense economically.” Most of that is going to be for the private sector, he told The National newspaper.

A recent report, *GCC Power Market*, prepared for the Middle East Electricity conference in Dubai, estimated that the six countries of the Gulf need to spend US\$131 billion in power over the next five years. This is primarily for new generation but also distribution systems, and is being driven by three factors – growing populations, expanding economies and climate change.



OPEC monthly basket price (US\$)

Mar-18	<b>62.29</b>
Feb-18	<b>63.48</b>
Jan-18	<b>66.85</b>
Dec-17	<b>62.06</b>
Nov-17	<b>60.74</b>
Oct-17	<b>55.50</b>
Sep-17	<b>53.44</b>
Aug-17	<b>49.60</b>
Jul-17	<b>46.93</b>
Jun-17	<b>45.21</b>
May-17	<b>49.20</b>
Apr-17	<b>51.37</b>
Mar-17	<b>50.32</b>

OPEC crude oil price (US\$/barrel)  
Source: www.opec.org

The report estimates that Saudi Arabia needs US\$36 billion for generation and US\$23 billion for transmission. The UAE needs US\$22 billion and US\$13 billion respectively. Large-scale investment is also needed in the smaller states led by Oman and Bahrain.



## Regional economy

The report's author, Ventures Onsite, says the bulk of investment will be procured via public-private partnerships (PPPs). It urges governments to invite the various independent power companies to participate in the development of appropriate regulatory frameworks to help this happen across the region.

Alongside energy diversification, the next stages of economic development are in strategic spending, such as transport infrastructure, and on more sophisticated funding methods, including PPP.

Kuwait and Dubai already have legislative frameworks for PPP, a crucial element in the view of the construction industry. Oman and Qatar have both announced similar plans, and Saudi Arabia – which established a national centre for privatisation last year – is thought to be drafting its own law. Andrew Mackenzie, of law firm Baker McKenzie Habib Al Mulla, says that while the UAE and particularly Dubai has dominated construction in recent years, the “sleeping giant” of Saudi Arabia is awakening.

“They have looked into [public financing] in many ways. They've looked at mistakes in the region and asked themselves: ‘do we need to be funding this ourselves, completely? Why can't we spread the risk? Why can't the private sector shoulder some of the burden to build public infrastructure that we all benefit from?’.”

Infrastructure spending in Dubai will be boosted by more than 40 per cent this year, as preparations for Expo 2020 step up. Dubai approved a US\$3.2 billion budget last December, much of it to fund existing major projects such as the Route 2020 extension to Dubai Metro. Other major Dubai projects include the Infinity Bridge crossing Dubai Creek, and the elevation of Al-Khail road.

In Abu Dhabi, meanwhile, government representatives have re-engaged stakeholders for the design and route alignment of new phases to Etihad Rail, the federal rail network, work



Infinity Bridge, Dubai

Source: protenders.com

on which was suspended in 2016. The business intelligence publication *MEED* quoted sources saying that they have been told the project is no longer “on hold”.

If resumed, work will start on a revised design for the 628km second stage, which will connect the railway to ports at Abu Dhabi and Jebel Ali, and the UAE's borders with Saudi Arabia and Oman.

Infrastructure development remains key to the GCC economies. Kuwait has allocated US\$8.3 billion to transport works, primarily road networks, during 2018-19. A proportion of those funds will also go towards power generation capacity and the new airport, according to *MEED*. It quoted finance minister His Excellency Nayef al-Hajraf as saying that public spending this year is based on the assumption of a US\$50 per barrel oil price, and that would involve a reduction on its overall budget deficit: another sign that GCC governments are moving towards living within the reduced means from oil-related income.

In Saudi Arabia, where the impact of oil prices has arguably been the greatest in terms of government income, economic reform depends heavily on private sector investment. Privatisation and PPPs are two strategies being explored seriously by Riyadh, but it is clear to observers

that neighbouring governments are watching closely, and will follow suit if the kingdom succeeds in attracting the right level and quality of private money.

The financial world is watching the proposed offering of a stake in state oil company Aramco. The flotation of around five per cent of the giant business will raise billions, and the international market response will be seen as a gauge of confidence in the reforms being led by Saudi Arabia. It is thought that the kingdom values the whole business at US\$2 trillion and will list shares in several markets.

The question is whether that will happen during 2018. Reuters has speculated that a final decision will depend on oil prices easing upwards towards US\$70 a barrel.

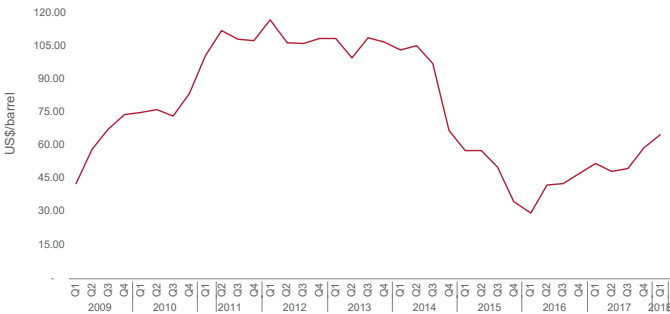
## Price analysis

Commodities	Unit	Q2-2017	Q3-2017	Q4-2017	Q1-2018
<b>Non-ferrous metals</b>					
Aluminium alloy	US\$/tonne	1,661.90	1,716.66	1,835.49	1,832.58
Aluminium	US\$/tonne	1,951.97	2,070.05	2,162.11	2,246.31
Copper	US\$/tonne	5,722.10	6,428.23	6,883.03	7,141.88
Lead	US\$/tonne	2,174.03	2,360.17	2,494.76	2,545.11
Nickel	US\$/tonne	9,563.54	10,823.87	11,862.42	13,548.43
Tin	US\$/tonne	19,804.76	20,332.32	19,614.97	21,003.21
Zinc	US\$/tonne	2,510.18	2,837.79	3,033.10	3,177.14
<b>Steel</b>					
Reinforcing bars	US\$/tonne	433.33	503.33	533.33	567.50
Steel beams - channel	US\$/tonne	570.00	638.33	656.67	675.00
Hot rolled plates	US\$/tonne	485.00	563.33	603.33	620.00
Cold rolled coils	US\$/tonne	530.00	596.67	646.67	650.00
Prepainted galvanised steel, 0.35	US\$/tonne	761.67	860.00	895.00	887.50
Stainless steel HR coils 304 base	US\$/tonne	2,058.33	2,175.00	2,166.67	2,225.00
<b>Energy</b>					
Crude oil	US\$/barrel	48.58	49.91	59.43	65.17
Diesel (Dubai only)	AED/gallon	7.39	7.22	8.09	9.12
<b>Cement</b>					
Cement	US\$/bag	3.74	3.74	3.69	3.83
Cement (Dubai suppliers)	AED/bag	13.83	13.84	13.67	14.17
<b>Rubber</b>					
Rubber	US\$/100kg	217.00	212.86	201.31	201.06
<b>Bitumen 60/70</b>					
Bitumen	US\$/tonne	493.24	493.24	493.24	493.24

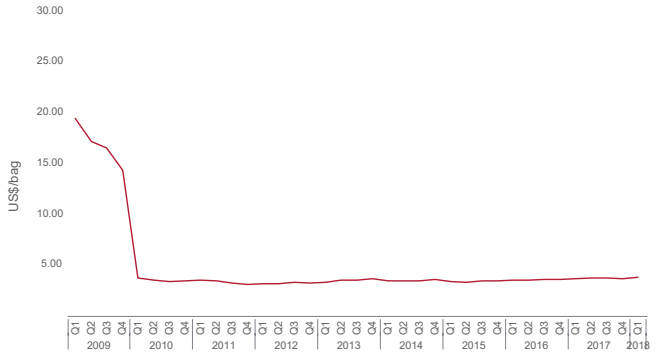
- All prices for commodities are based on bulk quantities, cash trade, US dollar.
- Non-ferrous metal prices are derived from London Metal Exchange, whereas steel prices are derived from Middle East steel price indications; all based on average prices for the month.
- Reinforcing bars are based on the average price from four UAE suppliers.
- The rate for steel beams - channel has been derived from Far East/Europe/India market.
- Crude oil price is derived from light crude Brent, US market.
- Diesel rates are from EPPCO.
- The price of rubber is derived from International Rubber Board, based on average prices for the month.
- Cement prices are derived from UAE local supplier.

Commodities

Crude oil (2009 - 2018)



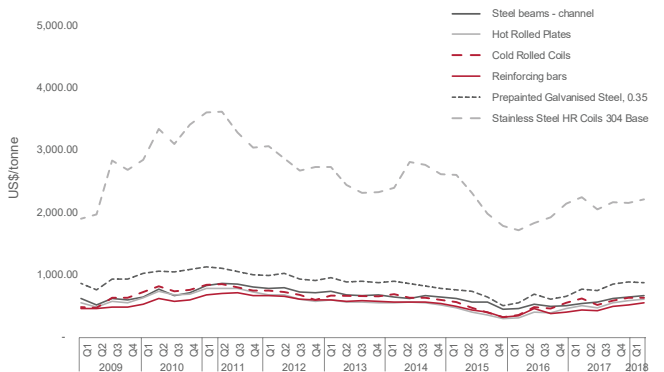
Cement (2009 - 2018)



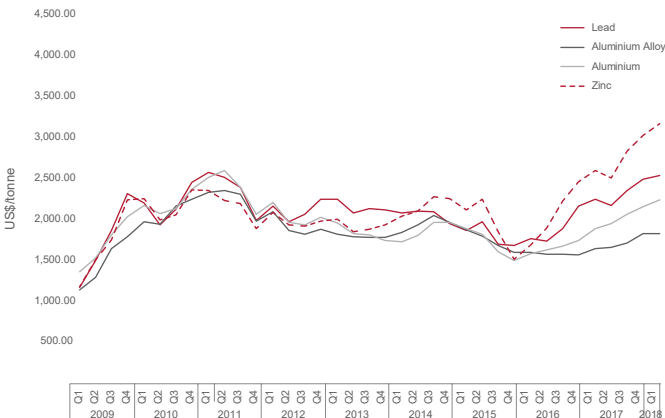
Diesel (Dubai only) (2009 - 2018)



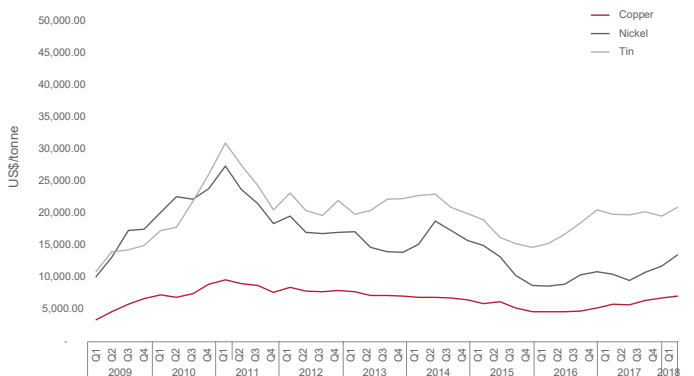
Steel (2009 - 2018)



Low non-ferrous metals (2009 - 2018)



Non-ferrous metals (2009 - 2018)





# Green issues have become a fundamental part of 21<sup>st</sup>-century construction planning



The construction industry has been moving towards a ‘going green’ philosophy for years, but today, increasingly, that means much more than a fashionable slogan. The twin forces of environmental regulation and cost pressure are having an impact at every stage of modern construction projects worldwide.

The business case for ‘green building’ has grown significantly during the last decade. The publishers McGraw-Hill found that the two main reasons for adopting ‘green’ stances are client demand (35 per cent) and market demand (33 per cent). Commercial building owners and managers are expected to have invested US\$960 billion globally during the eight years to 2023, mainly on making environmental and sustainable improvements to existing properties.

Major priority areas include more energy-efficient heating, ventilation and air conditioning, window glazing, lighting, plumbing fixtures and other key technologies.

This is an irreversible trend. Regulation is having an important impact in key markets including the Middle East, as is the demand for sustainable investment and the need to contain ongoing running costs. Buildings must be more energy-efficient, materials should be more recyclable, and project managers and clients can achieve that only by working closely together at the early stage of design and specification.

The new reality means that people need trustworthy standards, and the LEED (Leadership in Energy and Environmental Design) green building certification standard has emerged as the most widely recognised building rating system in the world. It provides a framework for creating healthy, efficient and cost-saving green buildings, currently covering nearly 100,000 projects in 165 countries. There are other standards around the world, with similar principles, such as the UK’s BREEAM, Australia’s Greenstar and, in the Middle East, Estidama.

## Reasons for going green

<b>35%</b> Client demand	<b>23%</b> Environmental regulations
<b>33%</b> Market demand	<b>18%</b> Market transformation
<b>30%</b> Lower operating costs	<b>16%</b> Higher building values
<b>30%</b> Branding/ public relations	<b>12%</b> Global competitiveness
<b>26%</b> Right thing to do	<b>11%</b> Local competition
<b>24%</b> Internal corporate commitment	

Source: McGraw-Hill

Owners of green buildings report improved returns on investment, at a level of 9.9 – 19 per cent in most cases. Generally, existing buildings with LEED or similar certification attract higher rents or sale prices, as do new buildings completed to the latest standards.

Typical issues might be decisions on building materials, water and energy uses, design and function. Others include the actual purpose of the built asset, its orientation to the sun's path, its planned use and anticipated lifecycle and its eventual disposal or replacement.

In Los Angeles, CoStar found that operating costs for new construction fell by 13.6 per cent and by 8.5 per cent for existing buildings. Building values increased, as did asset valuations.

Securing such accreditation is a competitive differentiator within most regional markets, delivering built assets, with lower operational

costs and better environmental qualities. These are more attractive to corporate and individual buyers, investors and the public as a whole. Tenants are attracted to the higher-performing features of LEED-certified new buildings – or renovated older buildings – because of the better experience they offer. Investors welcome both the better returns and the sustainable 'acceptability' to shareholders. Similarly, they appeal to buyers, either because they will use the improved spaces themselves, or they will find such spaces easier to lease.

A recent Nielsen global survey covering corporate social responsibility (CSR) found more than half of all respondents say they are willing to pay extra for products and services that are produced or offered by companies that are committed to making a positive social and environmental impact.

The global average of 55 per cent was helped by the perhaps unsurprising

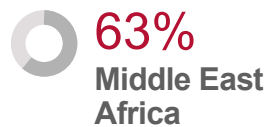
rates of approval in the Middle East (63 per cent) due to the level of new construction. Some would argue, however, that while people say they will pay more for something, fewer will actually do so in practice, especially where their duty is to ensure value for money for their shareholders.

This means it is important to integrate 'green thinking' into projects in such a way that it does not necessarily mean greater cost.

Local authorities worldwide are moving towards 'green building' solutions, usually by regulatory means. Dubai Municipality, acknowledged to be among the most advanced in the Middle East, adopted a 'green building' policy for new government buildings in 2011, and has since extended the rule to cover all new buildings.

Neighbouring Abu Dhabi has the Estidama system, a sustainable standard that must apply to all new buildings.

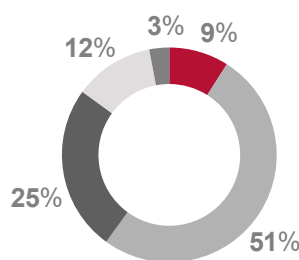
## Per cent willing to pay extra for products and services from companies committed to positive social and environmental impact



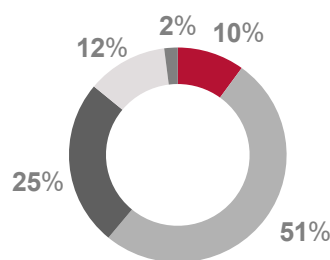
## Breakdown of global respondents

- Generation Z (Under 20)
- Millennials (21-34)
- Generation X (35-49)
- Baby boomer (50-64)
- Silent generation (65+)

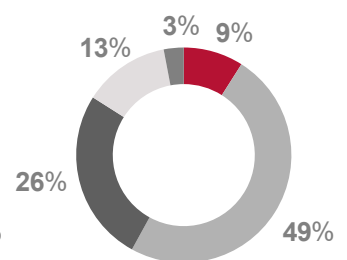
Pay extra for sustainable products



Check the packaging labels to ensure positive social/environmental impact



Prefer to work for a sustainable company



Source: Nielsen Global Survey of CSR

In China, massive growth meant that government strategy was driven originally by the need to build, rather than issues of sustainability. However, the drive towards 'green building' has accelerated in major cities, the country having adopted LEED standards more than a decade ago.

Successive research by industry and government points to a 'win-win' result from building 'green'. So, for strong environmental reasons, a trend that began as a 'nice-to-have' idea has become a key economic factor for construction worldwide.

Many have argued that the higher capital cost of green buildings is not worthwhile, but this view is mistaken for two reasons. Firstly, the higher cost is often not as great as expected and secondly, the cost can be recouped surprisingly early in a built asset's life.

The figures carry through the economic chain. Green buildings appear to be 'happier' buildings when it comes to worker satisfaction and increased productivity, especially if their clients and designers adopted the WELL building principles, which address issues such as indoor air quality.

Several scholarly reports covering environmental standards and productivity, office worker performance and the market impact of green buildings, have been very positive.

Research into the effects of LEED certification on 562 financial institutions found that:

- Annual utilities cost per employee in green facilities was US\$675 lower than in non-green facilities.
- Employees working in the LEED-certified branches of the same financial institution were found to be "more productive and engaged in their work".
- Using LEED-certified buildings increases revenue generated by bank branches, even when they offer the same products and services.

Recent research has also found that companies adopting more rigorous environmental standards are associated with higher labour productivity (an average of 16 per cent higher than non-green firms). Other research has found that office workers with the best possible physical view, as opposed to no view, performed 10 to 25 per cent better on tests of memory and mental function.

Use of LEED-certified buildings is also leading to increased recruitment and retention rates and increased productivity benefits for employers. More than 2.5 million employees are currently reckoned to be experiencing better indoor environmental quality by working in LEED buildings. This group is expected to grow to more than 21 million by 2030, resulting in increased productivity worth US\$90 billion.

A typical example of the benefit of LEED is Dubai Chamber of Commerce's head office. This high-energy and water-consuming glass façade building was transformed into a healthy 'green skyscraper'. During the 15 years after its initial construction in the 1990s, the 18-storey building reduced water consumption by 77 per cent and energy by 47 per cent, achieving its first-level LEED certification by 2008. Since then, it has undergone a major renovation and now enjoys Platinum LEED status, with the benefits of high financial savings, less pollution and greater occupant satisfaction.

As referred to earlier, the WELL Building Standard, an initiative of the International WELL Building Institute (IWBI), is increasingly making its mark among architects and designers worldwide. Launched in 2013, it has developed a suite of tools and standards aimed at promoting health and wellness in buildings and communities.

It recently announced five major 'community standard' initiatives in the United States and China, led by a massive 800-acre new community project, Gulf of Greenland, which includes the completion of townships, offices and commercial facilities at Ningbo, Zhejiang.

The WELL Building Standard is a performance-based system for measuring, certifying and monitoring features of the built environment as they impact on human experience. It aims to set a new precedent for planning, building and development based on a thorough understanding of how communities can employ strategies and interventions to support the health and wellbeing of their residents across all aspects of community life.

Grounded in evidence-based research, it demonstrates the connection between the buildings where people spend approximately 90 per cent of their time and those buildings' impact on health and wellness.

'Green building' is here to stay. Having moved well beyond the original concepts of environmental improvement, it has become embedded in everyday construction project planning. Whether it is new-build or renovation, the principles espoused by LEED and WELL, and other similar certification systems, now rank highly in the fundamentals of planning.

Designers, architects, clients and project managers now talk realistically about 'zero-energy' buildings, and about the enhanced returns to be gained by reducing costs and improving the attractiveness of places that are pleasant to work in and cheaper to run. Similarly, facilities managers and building operators are increasingly expected to participate in the building planning process so that installed systems are run correctly.

To make green buildings work means taking a fresh approach to planning – looking carefully at the way buildings will work, and where efficiencies can be made.

Many new projects in the Middle East are leading the way in this area now, and client expectations are rising year-on-year. More than ever, the industry needs to take a collaborative approach – involving every stakeholder – from an early stage of each project.

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