

**19th Annual Global CEO Survey: Engineering and Construction key findings**  
*Growing in complicated times / Addressing greater expectations / Transforming: technology, innovation and talent / Measuring and communicating success*

# ***Redefining business success in a changing world***

## **Engineering and Construction key findings**



**133**

*Engineering and Construction executives interviewed in 45 countries*



## About the 19th Annual Global CEO Survey

In this year's survey, global business leaders voice fresh concerns about economic and business growth. At the same time, they see a more divergent and multi-polar world where technology is transforming the expectations of customers and other stakeholders. In *Redefining business success in a changing world*, we explore how CEOs are addressing these challenges. We surveyed 1,409 CEOs in 83 countries and a range of industries in the last quarter of 2015, and conducted face-to-face interviews with 33 CEOs.

Today's business leaders have a tough job finding growth and delivering results year in, year out. But they know an even tougher task lies ahead: to prepare their organisations for a more complex future where customers and other stakeholders increasingly expect them to do more to tackle society's important problems.

To equip themselves for this challenge – and to build trust and ensure long-term success – CEOs are focusing on three core capabilities. Firstly, they're focusing even more strongly on customer needs as well as drawing on their organisational purpose – what their companies stand for – to define a more comprehensive view of how their business operates within society. Secondly, they're harnessing technology, innovation and talent to execute strategies that meet greater expectations. And finally they're developing better ways to measure and communicate business success.

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## About the Engineering and Construction key findings

This report looks in more detail at the views of 133 engineering and construction CEOs in 45 countries, as well as drawing on in-depth interviews with:



**Manuel Manrique**  
President and CEO,  
Sacyr, Spain



**Fernando Gonzalez Olivieri**  
CEO,  
CEMEX, Mexico



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***Engineering and Construction CEOs are wary about this year's growth prospects, with political risks looming large. CEOs see customers as their most important stakeholders, together with governments, peers and investors. Technology, climate change and urbanisation are changing expectations, and trust remains an issue for the industry.***

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### Growing in complicated times

**Today's CEOs face a business environment that's becoming increasingly complicated to read and adapt to.**

Government responses to debt and deficits tops the list of forces engineering and construction CEOs need to contend with – 77% are concerned they could threaten growth, and 39% are extremely concerned, even more than across the sample as a whole. That reflects the importance of governmental spending on infrastructure like roads and bridges to the industry's prospects.

Next up are over-regulation and geopolitical uncertainty. And not surprisingly, engineering and construction CEOs are much more concerned about increasing interest rates, which could be a damper on residential and commercial construction. These are risks which are largely outside of companies' control, as is economic growth – the number one predictor of future growth for the sector.

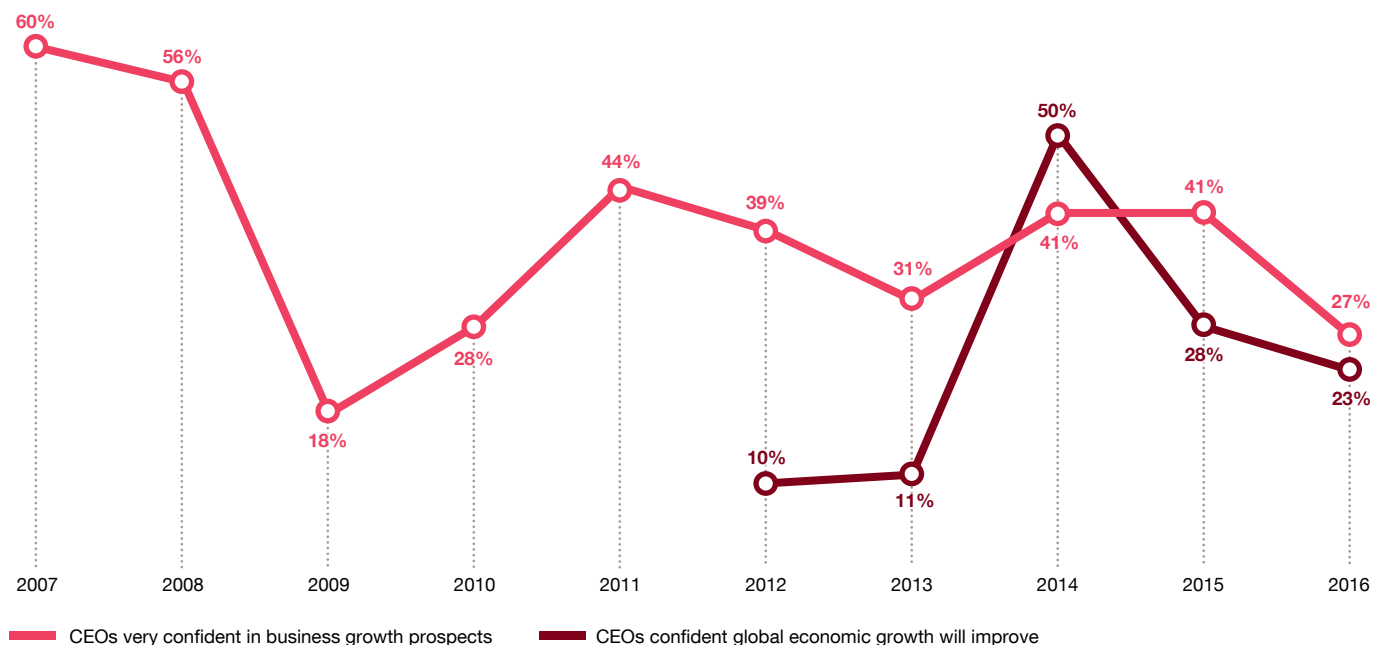
This year, just 23% of engineering and construction CEOs expect the global economy to grow, down slightly from 28% last year. So it's not surprising that near-term confidence levels have dropped this year. Only 27% of engineering and construction CEOs are very confident of growth over the next 12 months, down from 41% last year. Less than half of engineering and construction CEOs believe there are more growth opportunities for their company than there were three years ago, well below the overall average of 60%, while 64% say threats have increased.

Slowing growth in China and low oil prices, with the resulting pressure on infrastructure investments in some markets, are undoubtedly having an impact on CEOs' confidence levels. If China's enormous emphasis on infrastructure spending slows dramatically, there will be a significant impact on the sector. The USA (32%) and China (23%) are still the markets where the greatest number of CEOs expect growth, followed by Germany (17%). And the UAE is on the radar for 12% of CEOs as well, as is the UK (10%).

And while confidence levels looking forward three years increase somewhat, engineering and construction CEOs are still notably less optimistic than their peers in other industries.

**Figure 1: Engineering and construction CEOs are less confident about global economic and business growth prospects**

Q: How confident are you about your company's prospects for revenue growth over the next 12 months? Do you believe global economic growth will improve, stay the same or decline over the next 12 months?



Base: All respondents (Engineering and construction, 2016: 133; 2015: 114; 2014: 102; 2013: 100; 2012: 83; 2011: 77; 2010:75; 2009: 80; 2008: 68; 2007: 52)  
 Source: PwC, Annual Global CEO Survey data  
 Note: In previous years, respondents were asked 'Do you believe the global economy will improve, stay the same or decline over the next 12 months?'

## Addressing greater expectations

### Customers, governments, peers and investors are all on CEOs' radar

As with most industries, customers stand out as the top priority, with 92% of engineering and construction CEOs indicating they have a high or very high impact on their business strategy. Next on their list are government and regulators with 68%, followed by industry competitors and peers (62%). And with financing always a concern, it's not surprising that more engineering and construction CEOs are paying attention to providers of capital too (51%, compared 41% of CEOs overall).

For engineering and construction CEOs, as for their peers across the sample, technological advances are most likely to impact stakeholder expectations. While the engineering and construction industry has historically been fairly slow to adopt new technology, recent advances have started to transform everything from surveying to building, where off-site manufacturing techniques are becoming increasingly sophisticated.

### And the industry's paying attention to resource scarcity and climate change too

Technology isn't the only trend driving change in the industry. Compared to the overall sample, more engineering and construction CEOs believe resource scarcity and climate change will transform wider stakeholder expectations of their sector (56% vs 43% of CEOs overall).

The built environment is a significant carbon emitter and the industry potentially has a strong role to play in achieving climate change goals. We've flagged "green building" as a growing trend in the industry in previous surveys, and its importance continues to grow for design firms, contractors and building materials companies.

Urbanisation also rates higher for engineering and construction CEOs as a force driving stakeholder expectations. New solutions are being sought for building in urban environments, with transportation and walkability increasing in importance.

### Concerns around trust are growing

CEOs know that they must start preparing their businesses today for the more complex customers of tomorrow. They worry that not doing so could impact trust in their brand, creating a significant risk to the long-term viability of their business. Three-fifths of the engineering and construction CEOs surveyed are concerned about the lack of trust in business today – compared to 43% just three years ago.

For engineering and construction, bribery and corruption remains a key threat that can undermine the trust of both customers and governments. This year, more than a third of sector CEOs (37%) are extremely concerned that it could threaten growth. In New York City the problem was so acute that an investigative task force accused 50 construction workers and building inspectors of bribery in 2015. This is one threat that the industry can, and must, meet head-on, and some companies are taking proactive steps to build trust.

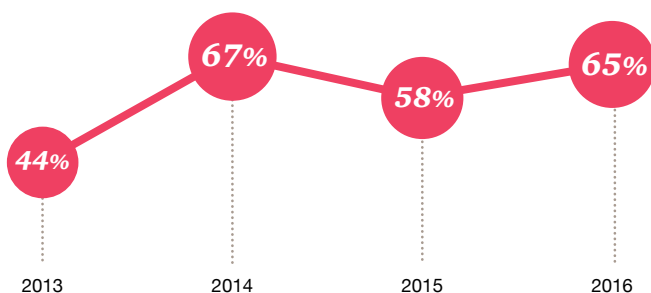
*As we work in the construction and engineering industry, the responsible use of public resources has taken on greater significance – and for this reason, the group has created a new risk control department and a regulatory compliance unit, which is in charge of ensuring the efficiency of our recently-approved code of conduct.*

Manuel Manrique  
President and CEO,  
Sacyr, Spain.

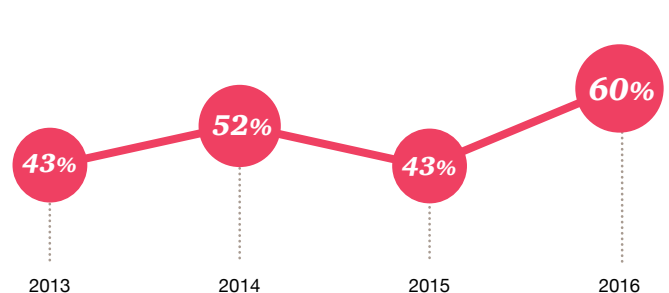
**Figure 2: Engineering and construction CEOs' concerns around trust, bribery are trending upwards**

Q: How concerned are you about the following potential economic, policy, social and business threats to your organisation's growth prospects?

#### Corruption and bribery



#### Lack of trust in business



Base: All respondents (Engineering and construction, 2016: 133; 2015: 114; 2014: 102; 2013: 100)  
Source: PwC, 19th Annual Global CEO Survey

# Transforming: technology, innovation and talent

## Getting better but regulation and costs are barriers

Engineering and construction CEOs are addressing everything from people issues like workforce rights and wellbeing to operational concerns around how to partner and maximise societal value of R&D as they look to balance the needs of stakeholders. Managing the brand, defining and managing risks, and using technology stand out as areas receiving particular attention.

What's holding them back? Regulation and costs, primarily. Engineering and construction CEOs say the top barriers to making changes are unclear or inconsistent regulation (48%), customers' unwillingness to pay (44%) and additional costs to doing business (44%).

## Technology is changing the construction industry

88% of engineering and construction CEOs plan to make changes – and nearly half plan to make significant ones – in how they use technology to assess and deliver on wider stakeholder expectations. One example for the industry is Building Information Modelling (BIM). By modelling a wide variety of data about a project in 3D, in real time, BIM helps improve efficiency throughout a project life cycle. Many governments are strongly promoting or even requiring BIM, and it can help companies interact with customers too. For building materials companies, technology is also helping make production more efficient and less resource intensive. And technology can help the industry meet stakeholder expectations in less visible ways, too. For example, new payment technologies can help cut waste and improve productivity, improving relationships with customers and supply chain partners.

## But people make the ultimate difference

The construction industry is facing major skills shortages in many markets – 72% of engineering and construction CEOs are concerned that lack of skills could threaten growth. The global financial crisis hit engineering and construction companies particularly hard; many cut staff and have found it difficult to replace those skills, despite an improved outlook. This year 42% of engineering and construction companies plan to increase their headcount, down slightly from last year.

Engineering and construction CEOs are focusing most strongly on developing their people's skills and adaptability. Many see it as a key responsibility for business – more than three-quarters say business should help deliver a skilled, educated and adaptable workforce. Many believe government should contribute too – 58% say a skilled, educated and adaptable workforce should be a priority for government; only a stable tax system rates higher.

Compared to other industries, engineering and construction CEOs are somewhat more focused on changing pay, incentives and benefits – 40% plan to make changes in this area, compared to 33% of CEOs overall. That's in line with their views on what motivates top talent; 40% say they prefer to work for an organisation with competitive compensation, compared to 30% of CEOs overall.

*...I think the use of technology is really allowing global companies to be conceptualised and managed in a different way.*

Fernando Gonzalez Olivieri,  
CEO,  
CEMEX, Mexico.

**Figure 3: Engineering and construction CEOs are changing to meet stakeholder expectations**

Q: To what extent are you making changes in the following areas in response to changing stakeholder expectations?



Base: All respondents (Engineering & construction, 133)  
Source: PwC, 19th Annual Global CEO Survey

## Measuring and communicating success

What more should businesses be doing in order to measure impact and value as stakeholder expectations evolve? Engineering and construction CEOs listed better measurement for innovation at the top, and the measurement of risk a close second.

There are several areas where engineering and construction CEOs are more likely to see a need to better measure their impact and value, including employee practices (51% vs 39% of overall), business strategy (50% vs 39% of overall) and organisational purpose (44% vs 33% of overall).

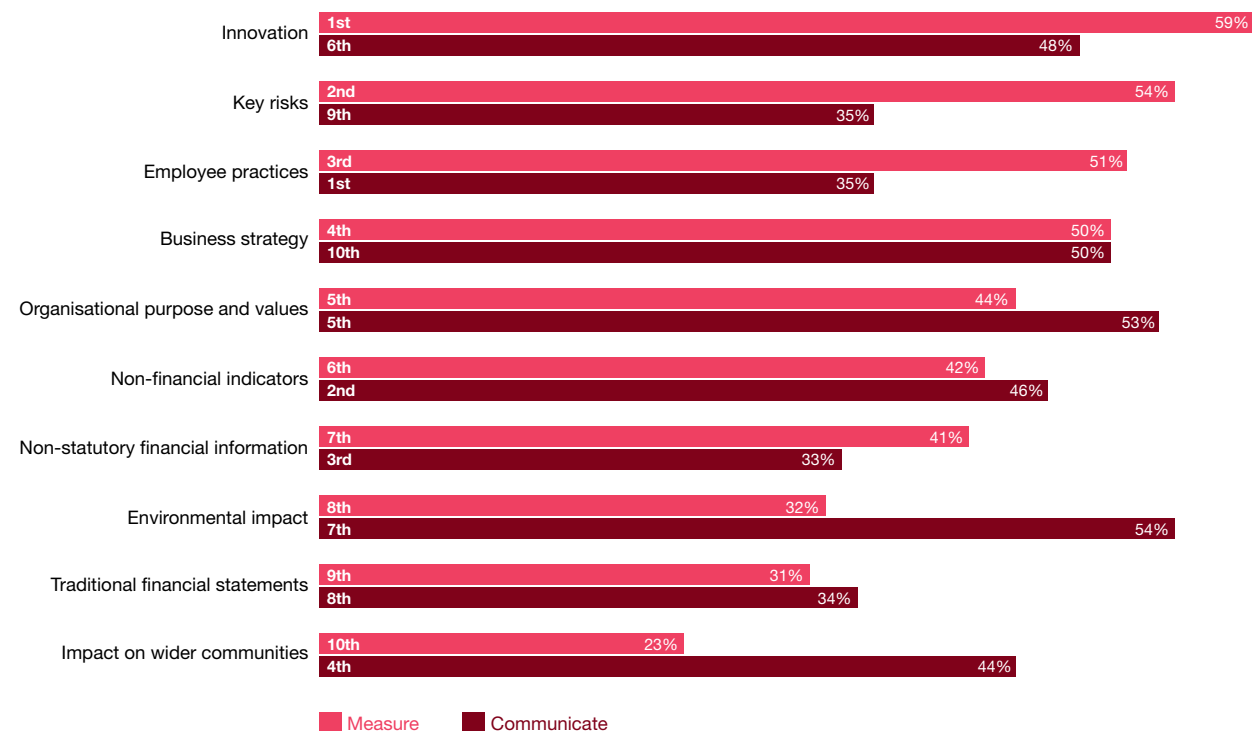
When it comes to getting the word out more effectively, engineering and construction CEOs say they need to do more around their organisational purpose and environmental impact in particular, as well as their business strategy. Fernando Gonzalez Olivieri, CEO, CEMEX, Mexico, explains how all three can fit together:

“...very recently we reviewed the company’s purpose, and we made a slight change. It used to be ‘Building the Future’. Now it’s ‘Building a Better Future’. Cemex is a company that embraced sustainability a long time ago – and we believe that sustainability is creating a new economy, a different type of economy, reshaping certain economic activities. And we’re saying that the first companies to understand and embrace this will be the companies that will be on top of the trend and doing better business than others.”

The sector has a major role to play in enhancing quality of life around the world which is not always fully recognised. Manuel Manrique, President and CEO of Sacyr, Spain, describes his company’s contributions this way: “Perhaps society is not fully aware of how our activities help to develop the communities we operate in. Our presence and activity in certain communities lead to significant developments, including better infrastructures, greater services and a more prosperous population.”

**Figure 4: Engineering and construction CEOs want to measure innovation and key risks better and communicate more on their environmental impact, purpose and values, and business strategy**

Q: In which of the following areas do you think business should be doing more to measure/communicate impact and value for wider stakeholders?



Base: All respondents (Engineering & construction, 133)  
Source: PwC, 19th Annual Global CEO Survey

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## Explore the data

See for yourself what else engineering and construction CEOs told us about leading in complicated times.

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## Acknowledgments

PwC gratefully acknowledges the contribution to *Redefining business success in a changing world: Engineering and Construction key findings* provided by the CEO who participated in our in-depth interview programme, listed below. Watch the CEO video interview for more great insights.

**Manuel Manrique,**  
President and CEO,  
Sacyr,  
Spain

**Fernando Gonzalez Olivieri,**  
CEO,  
CEMEX,  
Mexico  
[Watch the full interview](#)

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