







All industries need to keep pace with changing economies, disruptive technologies and public policy. But for companies building and operating large capital assets — whether in engineering and construction, infrastructure, energy or transportation — the challenge is different. While there is pressure for continuous improvement, projects take time.

In the UK, Crossrail, an east-west London tunnel, was first proposed in 1974. After several different plans and proposals, work finally began in 2009. Passengers will not use the service until 2018. Building extensions and related projects could take until 2026.

In such a world, talk of transformational change and market disruption doesn't fit the reality on the ground, or in this case, in it. Still, there is a constant pressure on companies in these markets to evolve. And pressure to build capital projects with fewer resources has just notched up a gear or three.

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The collapse in oil prices to near \$50 a barrel is sending a seismic wave through capital-intensive industries. For starters, oil firms are slashing capital spending. In January, the Financial Times reported billions of dollars of spending on oil and petrochemicals projects has been scrapped or put on hold, with Royal Dutch Shell and UK-based Premier Oil announcing the first big cost-cutting moves of 2015.

Morgan Stanley's Vincent Reinhart said in December 2014 that its exploration and production industry analysts believe that if Brent oil prices are sustained under \$75 per barrel, "the US CapEx cuts inflect more dramatically".

Inside these oil and gas companies the impact is clear. They will cut projects, but those that remain will be expected to do more with less. Much more. Unless these companies can execute these projects on much lower budgets then they cannot operate at a profit.

Related industries are also changing. In electricity generation, there is a move away from big coal and gas-fired power stations. Instead, companies are focusing on green energy, distributed energy production and energy-efficiency technologies.

<sup>1</sup> Oil projects worth billions put on hold http://www.ft.com/cms/s/0/dc94b628-9be7-11e4-b6cc-00144feabdc0.html#axzz30n6d05K1



# **Utilities** *changing focus*

As a result of this trend, E.ON, Germany's biggest utility, announced plans in 2014 to split in two and spin off most of its power generation, energy trading and upstream businesses, responding to a crisis that has crippled the European energy sector.

E.ON said it wanted to focus on its renewables activities, regulated distribution networks and tailor-made energy-efficiency services<sup>2</sup>. This was a result of "dramatically altered global energy markets, technical innovation, and more diverse customer expectations", it said.

Low wholesale power prices and reduced energy demand has contributed to this shift, together with an increase in renewable energy sources that are set to replace gas-fired and coal-fired power plants.

That's a massive change for such a large company. E.ON boasts sales of €122 billion. Nor is it alone in embarking on such a huge challenge.

GDF Suez, a company with 81 billion revenue, took a €15 billion write-down in its 2013 results, mainly for gas storage and gas power plants whose value was hit by a price slump. This reflected long-term changes in the electricity generation sector. "The deterioration of the situation in thermal power generation in Europe is durable and profound," GDF chief executive Gerard Mestrallet said.

These changes mark a move towards more distributed power generation. That means creating smaller power stations closer to where energy is consumed. According to the Economist<sup>3</sup>, global engineering firm GE has just set up a new business bringing together parts of its transport, aviation and engines divisions, to meet what it calls this "\$100 billion opportunity".

But the sea change in the industry does not necessarily mean investment will halt. In the period to 2035, the investment required each year to supply the world's energy needs will rise steadily towards \$2,000 billion, a cumulative global investment bill of \$48 trillion, according to the International Energy Agency<sup>4</sup>.

This includes \$23 trillion for fossil fuel investment, \$10 trillion for power generation, \$6 trillion for renewables and \$1 trillion for nuclear.

Pressures on energy industries from the fall in oil price and move to distributed power will have a massive impact on other industries throughout the world. Chief among these will be engineering and construction.

While both of these industries have seen increased activity in the last two years, immense pressure on prices remains. Not only does the energy industry expect more bang for its buck, but government-backed infrastructure projects want to see building firms do more with less as a result of the ongoing battle to reduce public sector deficits.

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<sup>&</sup>lt;sup>2</sup> German utility E.ON to split in two in major overhaul http://uk.reuters.com/article/2014/11/30/uk-e-on-divestiture-idUKKCN0JE0TZ20141130

<sup>3</sup> Devolving power http://www.economist.com/news/business/21598668-big-batteries-threaten-big-power-stationsand-utilities-profits-devolving-power

<sup>&</sup>lt;sup>4</sup> World Energy Investment Outlook http://www.iea.org/publications/freepublications/publication/weio2014.pdf



This is not the only reason engineering and construction firms need to become more efficient. While tender prices are kept down, input costs - aside from fuel - are actually increasing.

Research into the top 100 construction firms in the UK by trade journal Construction News and consultancy EC Harris found that the top 25 companies were seeing falling margins despite increased workloads and order books.

"An analysis of corporate profitability shows few signs of improvement and, overall, contractor margins remain under severe pressure," EC Harris partner Simon Rawlinson said.

"Pricing is tough; many contractors are still having difficulty getting the prices they want and contracts are still being bid at a relatively low rate," PwC partner Chris Temple told the magazine<sup>5</sup>.

Both labour and materials costs are increasing as the sector emerges from a deep recession, but there is no commensurate rise in tender prices. "The key point for contractors trying to get their pricing right is to take on board the fact we have margin pressure as a result of materials, but also a shortage of labour," Temple said. "If you don't have a lot of labour, the price per hour goes up."

The pressures on all kinds of capitalintensive industries make it clear that the future of the company cannot be sustained by business as usual. The rules that applied in the past will no longer serve industries that desperately need to cut costs.

<sup>&</sup>lt;sup>5</sup> Profit margins remain under pressure for contractors http://www.cnplus.co.uk/data/cn100/financial/profit-margins-remain-under-pressure-for-contractors/8668644.article#.VLfAlyusVhY



Fortunately there is room for improvement. Among water utilities, consultants Turner & Townsend found a structured approach to capital efficiency that could yield up to a 30 percent gain for companies between 2015 and 20206.

Looking out to 2025, its analysis with industry body Constructing Excellence shows that there is a huge opportunity to improve capital efficiency across the wider UK infrastructure sector by up to 50 percent.

One weakness in capital industries is a lack of strategic grip on data throughout project lifecycles. Analysing the leaders in capital-project efficiency, consultancy and research firm Accenture found that they made wider use of advanced analytics and ensure that the organisation has better access to performance data across multiple dimensions such as timeliness, accuracy, range and sources.

## is king

Accenture found that among utilities, energy and chemicals companies, leading players outperformed the field in meeting internal targets for cost, schedule, quality and the delivery of reliable production capacity.

"Companies in this group made significantly fewer changes during the construction phase. They also effectively managed the transition from a capital project to an operating asset due to their superior upfront planning as well as the ability to transfer engineering data, information and assets from the project phase to ongoing operations,7" it said.

Accenture concluded: "Given a capital project's often extensive and complex ecosystem of stakeholders, partners and suppliers, companies need to develop integrated information systems and processes. Better, more relevant and timelier data are crucial not only to enable operational readiness - they also play a key role in making a well-executed project possible. 7"

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<sup>6</sup> Maximising capital efficiency http://www.turnerandtownsend.com/maximising-capital-effici/\_21306.html

<sup>&</sup>lt;sup>7</sup> How to boost capital project performance http://www.accenture.com/us-en/outlook/Pages/outlookjournal-2013-how-to-boost-capital-project-performance-chemicals-energy-utilities-metals-mining.aspx



Keeping capital projects on track is tough. Businesses need to plan resources, create milestones, track performance, adjust to new circumstances and demonstrate return on investment. But companies executing multiple projects also need to improve performance across the whole organisation. This means collecting and sharing data on a global enterprise level. It even means setting up project planning systems across multiple organisations to benefit joint ventures

accurate and timely project data across

organisational boundaries in order to

improve performance.

technical data can be recorded across a portfolio of projects, allowing analysis of how they interact. If things go wrong, the consequences can be understood throughout the organisation and outside partners, allowing corrective measures to be executed quickly.

The oil price, public spending cuts and climbing input prices are forcing industries building and running large capital assets to up their game. Companies exploiting Oracle Primavera's enterprise-class project portfolio planning tools have the opportunity to win.

#### Get in touch for more information

and other forms of collaborative working.

Visit Primaverabestpractices.com to learn how Primavera can support your capital asset lifecycle management program - and get a bespoke report showing how software can support your needs. You'll also find case studies from other heavy users of capital assets who have benefited from Primavera.

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#### About Oracle's Primavera

Oracle is the leading worldwide provider of project portfolio management solutions for project-intensive industries. Our Primavera enterprise project portfolio management applications help organisations propose, prioritise, and select project investments and plan, manage, and control the most-complex projects and project portfolios.

#### Contact

If you want to find out more about effectively managing your network across its entire lifecycle, we'd love to hear from you.

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