

# The road to a thriving construction and engineering sector

By [Monty Ditibane](#)

22 Aug 2018

The construction and engineering industry is a cornerstone of the South African economy but one which is under pressure and if nothing changes, it will become increasingly unsustainable. The industry is further pressured due to its slow adoption of new technologies.



Monty Ditibane, director, DBI Consulting Engineers

Slow domestic economic growth - South Africa has been lagging behind its peers in Africa and the world for quite some time – exacerbates the situation.

After falling to a record low of 12 in the first quarter of 2018, the FNB/BER Civil Confidence Index rose by three points in the second quarter to 15. This means that the overwhelming majority of respondents are dissatisfied with prevailing business conditions. This sustained low confidence is due to a deterioration in almost all of the underlying indicators, most notably construction activity and tendering competition. The civil construction sector therefore remains under tremendous pressure with little, if any, improvement likely over the short term, according to the researchers.

## Long-term inclusive growth

The subdued economic growth locally – the South African economy grew by 1.3% in 2017 and the expectations are that 2018 isn't going to be much better – is one of the factors contributing to the country's high unemployment rate. The official unemployment rate increased to 27.2% in the second quarter of 2018, up from 26.7% in the first three months of the year.

To address these issues, infrastructure investment has been a key priority of the government and it forms part of the foundation of long-term inclusive growth for a prosperous country.

If infrastructure is key to turning things around for the economy, so is the construction and engineering sector, because the one can't function without the other. And although the industry therefore has an enormous role to play in economic development, it faces numerous other problems besides the ones already mentioned, including a lack of access to funding, corruption, and a lack of skills.

Staying on the current path will mean that the industry's role and positive impact on the economy will steadily decrease.

One of the solutions to foster a sustainable construction and engineering sector is the upskilling of the labour force in South Africa and the rest of Africa. This must be done with the Fourth Industrial Revolution in mind. It is transforming whole industries, as well as redefining the skills and competencies needed to thrive.

However, over the same period, the construction industry has continued to operate as it has for the past 50 years, according to the WEF.

## **Skills development**

To keep up, players along the construction value chain need to attract new talent and improve the skills of the existing workforce – deemed one of the priorities by 74% of industry CEOs at the 2018 World Economic Forum held earlier this year in Davos. Improving integration and collaboration along the value chain (65%) and adopting advanced technologies at scale (61%) were other key actions they considered.

According to the WEF, adequate upskilling processes are largely not in place in the industry, but the future requires talent with substantially different skills than today's workforce.

Unfortunately, in South Africa, and elsewhere on the continent, we are not providing our youth with the skills needed to be successful in this new economy. South Africa, and the rest of the continent, should assess its strengths and weaknesses, and address its challenges and take advantage of its opportunities, in this context.

In terms of the Fourth Industrial Revolution and its impact on the construction and engineering sector, government and all stakeholders should compare the skills needed to be successful in this new reality, and compare it to what we have and what skills we are providing our future generations with. The identified gaps should be addressed and a new generation of skilled workers should be created.

## **Emphasis on STEM education**

An emphasis should be placed on science, technology, engineering and maths education in our schools for the youth to have relevant skills, and for the country to be able to compete globally, but this is one of the areas we as a country are critically lacking.

The industry must also integrate and collaborate across the construction industry's value chain, adopt advanced technologies at scale, and maximise the use of data and digital models throughout processes, says the WEF.

According to the Boston Consulting Group (BCG), many of the digital technologies pervading today's industrial landscape are readily applicable to all three phases of the value chain in the construction and engineering space — design and engineering, construction, and operations.

“Digitisation will change the game fundamentally, not only enabling efficiency and quality gains along the value chain but

also reshuffling the competitive league table of companies and countries,” according to BCG.

## **Cross-border business**

At a regional level, the Southern African Development Community (SADC), comprising 15 member states, needs to open up its borders for better trade and maximise cooperation and innovation across the value chain. The region can also move towards the standardisation of regulations, making it easier for companies to do business.

All these steps will lead to more certainty and consistency in the industry, and more cooperation will lead to increased learnings from best practice and the upskilling of the workforce by learning from each other.

At a time when the world is seeing increasing trade wars and closed off borders, with President Donald Trump at the forefront, the SADC should take the lead and make it easier for construction and engineering companies to work across borders.

Established in 1992, SADC is committed to regional integration and poverty eradication within Southern Africa through economic development and ensuring peace and security, and with better cooperation, policy agreement and open borders it can actually fulfil this commitment.

## **ABOUT THE AUTHOR**

Monty Dtibane, director, DBI Consulting Engineers

For more, visit: <https://www.bizcommunity.com>