

New-gen technology will drive construction in 2023

By  Morag Evans

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A new dawn has risen in the form of digital, eco-friendly technology, signalling a new era for an industry that is essential to an emerging economy.



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Those in the know are already gearing up to exploit this technology to enrich their business, but also to help redefine the industry.

There is no doubt that 5G network infrastructure, cloud services and solutions, as well as renewable energy will stand out this year.

5G more reliable and stable

I am convinced that 5G will have a profound impact on commercial construction, especially for companies that make use of remote operations, equipment tracking and building information modelling or BIM.

These all rely on stable, reliable and fast internet connection, something that – until now – has been an ongoing challenge for operators.

Not only is 5G more reliable and stable, but it also promises speeds ten times faster than 4G networks. Indeed, some experts are predicting speeds up to 100 times faster.

A recent report by Africa Analysis reveals that while the South African 5G market is still in an early growth phase, 5G subscribers in the country are expected to reach 11 million by 2025, with a 43% population coverage. This is significantly higher than the 90,000 subscribers and 4.4% population coverage at the end of 2020.

This holds numerous advantages for the internet-connected construction site, especially in the areas of collaboration, productivity and safety.

Cloud cover

Along with 5G, the availability of cloud services and solutions will also have a lasting effect on construction – particularly in terms of data management.

Cloud computing offers access to tools that will help industries track and manage deliverables. Construction and allied industries are deadline-driven and project-intensive in nature. Data is essential and the ability to derive insight from the information is a game-changer.

With cloud and virtualised data management, construction businesses are able to monitor progress in real-time and adapt project plans, resource management and other key factors.

Cloud computing and cloud service adoption continues to escalate as decision-makers look to big data analytics, intelligent systems and automation to bolster operations.

In construction and allied industries, intelligent systems means an instant end-to-end or panoramic view of the entire project... any delays mean immediate fines or financial penalties. So it is not difficult to understand why cloud or virtually managed systems are gaining popularity.

They offer flexibility, more efficient management, cost-effective control and interlinked, streamlined networks to be able to address every facet of project management – from initial discussion and engagement to identification of deliverables and strategy.



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Age of 3D printing

We expect that other emerging technology, like 3D printing, while still in its infancy, will play an increasingly important role in construction. The sooner our construction industry embraces 3D printing technology, the sooner we will reap its manifold benefits.

3D printing is not new to construction. Since the first 3D-printed commercial building was constructed in Dubai in 2016, the technology has been used all over the world – including Africa – to create office spaces, homes, schools and even pedestrian bridges. Indeed, Malawi recently became home to the continent's first 3D-printed house and the world's first 3D-printed school.

The technology involves the use of enormous 3D printers which extrude or 'print' layers of a specially mixed material, not unlike concrete, to create the required structure. A significant advantage of the technology is that recycled materials can be used to create the concrete, which reduces the build's impact on the environment.

But the benefits go much further and include faster construction, cost-effective builds, and improved safety.



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Eco-friendly industry

As is the case with many industries operating in the modern, digital-centric economy, the issue of energy – or more specifically renewable energy – is a major consideration. The construction industry is under increasing pressure to alleviate the strain placed on the environment during construction activities.

Wind energy could play an integral role in the industry's transition to renewable energy sources. This energy plays a vital role in powering machinery and equipment as well as critical issues like air conditioning and lighting, which are central to construction projects.

When electricity is not available – either because the site is situated in a remote location that is not on the grid or the country's ongoing energy crisis has made the grid unreliable – diesel generators are often an option. However, renewable energy like solar or wind should be strongly considered as it is more readily available, accessible and cost-effective.

Databuild is a strong promoter of the adoption and application of digital infrastructure. Construction businesses must keep ahead of the tech curve and position themselves to capitalise.

ABOUT MORAG EVANS

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