

Harnessing the construction technology explosion

The last decade has been a tumultuous time for the New Zealand construction industry. A number of technology providers have stepped in to offer custom-built solutions to battle-weary project managers to bolster their arsenal of tools to better manage risk and productivity. David Speight, co-founder and CEO of construction tech company Acuite, gives us his view on how technology is benefitting an unpredictable industry.

Managing the many moving parts of a major construction project is hard enough and a little like juggling plates. But what makes it one of the most difficult industries to operate in is that everything is fast-tracked. There are enormous time pressures, predominantly because of financial implications – the longer things take, the more they are going to cost.

Construction companies regularly start projects whilst design is still being finalised, with contractors often onsite digging foundations even before the structural building consents have been issued. "This makes it difficult to see the full picture of what you are getting yourself into before starting on a site," David says. "You don't have a clear picture of what you are building before you start building it."

This translates to risk which has to be carried by someone, and David says that this is where the bun-fight happens and the lines blur for who owns the risk. "Construction revolves around communication and people. A machine does whatever you tell it, but when you're dealing with people, such as different subcontractors and consultants, this is where the challenge comes in – people are not as predictable. For instance, work not completed on time will create multiple roll-on pressures. Everything is inter-related; combine that with the weather and other unexpected variables and the job of a project manager can be highly pressured."

TECHNOLOGY EXPLOSION

The whole construction tech environment has exploded over the last decade, resulting in huge innovation that is ongoing – from field activities through to, more recently, reporting and analytics. Currently, there are an enormous number of tools on



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the market where people can assign tasks and track between teams. The progress started with document management and has now spread to health and safety, quality assurance and labour tracking, to geotagging people for site inductions and labour productivity.

David says all manual paper processes have been pretty much digitised now, and there is the opportunity to adopt a digitised solution for every aspect of construction, from tracking drawing revisions and document management, through to recording health and safety incidents.

"I think the industry is going through an exciting period of change which has seen a plethora of software tools popping up, each promising a solution to individual parts of the puzzle. Sometimes there are too many choices which can create additional problems," he says.

"As an industry, there is still a long way to go. Getting people to actually use the technology and the processes correctly is still evolving. Ensuring tools are easy to adopt and not create more work for people – that is the tricky part."

With over a decade of experience working in construction project management, David co-founded Acuite because he was determined to offer a better way to manage big projects. The company provides a construction-specific business intelligence reporting platform that plugs into existing software tools and systems to give real-time dashboard views into project and portfolio health.

"The dashboard brings all of the pieces of the puzzle together into one centralised

place which is vital," David explains. "It provides insights into trends and analytics, reporting across KPIs of time, cost, quality, health and safety, and relationships. This transparency means project managers can identify problems in real time before they turn into bigger issues."

INCREASED CLARITY

Hugh Johnstone, managing director of Johnstone Construction, knows first-hand the benefits that a real-time project management dashboard can offer. Acuite's recent partnership with photoSentinel means they can now offer their clients access to remote cameras for onsite monitoring within their dashboard.

For Johnstone Construction, this means they have increased clarity across their various projects by supporting data analytics with real-time visual progress. "The majority of our works are remote from the client and our head office. This integration means being in touch 100% of the time, from projects as far away as Israel to those throughout New Zealand," Hugh Johnstone says.

"Our commercial team can seamlessly update programmes, justify variations, and make informed instructions to contractors and clients alike, without pulling the site manager off their day-to-day tasks."

Hugh Johnstone says project reporting now uses real-time photos from photoSentinel cameras to produce a report at the click of a button, surpassing anything his company has been able to do previously. The technology is also a valuable new tool

in relation to health and safety. "We can include actual imagery to support health and safety events and investigations logged in Acuite," he adds.

AUSTRALIA VS NEW ZEALAND

Twelve months ago, Acuite expanded into Australia where David says there is a far greater commitment to infrastructure spending. "Major projects are underway everywhere you go. For instance, in Victoria, current projects to the tune of a reported AU\$57 billion are underway as part of a multi-year AU\$107 billion plan. In comparison, New Zealand's earmarked spend is \$12 billion over the next four years.

"As a result of this, we are seeing a big emphasis (in Australia) on contractors looking to enhance their reporting capabilities and better manage their own risk. This also provides them with greater transparency when reporting to key stakeholders, which in turns delivers a greater sense of comfort all round."

David says this is something construction companies need to embrace here in New Zealand as well. "In terms of technology, I believe the New Zealand construction industry is still in its infancy and we can look forward to some exciting times ahead."

As for Acuite, David has ambitious plans for expansion that are likely to see him move beyond Australia into North America, Asia and Europe in the not too distant future.

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