

# NXT generation of construction disruption

A Perth-based construction technology company plans to disrupt the industry with a building system it claims will deliver faster, cheaper, greener and higher-quality projects.

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PICTURE a building site without scaffolding, cement mixers, welding materials or any other conventional building fabrication – that's the future Natasha Di Ciano is working towards with the application of her business's NXT Building System.

Managing director of Western Australian-based construction technology company NXT TEC, Ms Di Ciano believes the innovative construction assembly technologies could disrupt the way commercial and residential projects are built across the globe.

The technologies had been under development for several years, ahead of Ms Di Ciano coming on board and forming NXT Tec in 2013 to start the commercialisation process.

**“NXT components are manufactured locally, transported to site and the builder assembles; it's like Meccano, but on a larger scale – Natasha Di Ciano**

The company last month received a \$479,726 grant from the federal government under its Accelerating Commercialisation program – the first time a company offering a building technologies solution has achieved this recognition under the program.

The grant will be used to accelerate the global commercialisation of the patented system through NXT Tec's development of a 10-storey hotel in Rivervale.

Global group Wyndham has signed as operator of the hotel, which will be branded the Wyndham LUX Hotel, with assembly on site next year.

The system is made up of several core components (technologies) that lock together in six steps to form the building structure: foundation piling, footing, column, beam,

floor decking and panel walls, with no limit on building height or size.

Ms Di Ciano, a 40under40 winner in 2011, said it was the world's first integrated, scalable and entirely prefabricated structural building system from foundation to complete build for on-site assembly.

“It's a fully manufactured and assembly system that disrupts traditional construction methods because there is no construction on site,” Ms Di Ciano told *Business News*.

“We looked at design and construction methodology – how to erect a building differently so that it's faster and more cost-effective, without compromising on quality.

“The NXT components are manufactured locally, transported to site and the builder assembles; it's like Meccano, but on a larger scale.

“Because the technology allows a builder to assemble not construct they can control the time, budget and the quality. This results in less risk for the developer and builder.

“In re-designing the workflow it changes the use of labour – you'll be able to reapply that labour to produce more buildings faster.”

Ms Di Ciano said the NXT system eliminated on-site wastage, such as timber framework, steel and concrete as seen on traditional sites.

The building materials, she said, also presented a sustainable solution by reducing energy consumption.

For example, the NXT Spacedeck floor technology uses 25 per cent less concrete than a conventional flooring product; the internal and external panel technologies have integrated insulation and the system's structural elements use materials that are reusable and recyclable.

The technology is in full compliance with Australian Building Standards.

Through the federal grant the system's environmental impacts will be identified, measured and further minimised to drive sustainability by tracking the progress of the Wyndham LUX Hotel and NXT technologies it contains.



**INNOVATIVE:** Natasha Di Ciano says the NXT Building System has already generated interest from Asia. **Photo:** Attila Csaszar



**PILOT:** The Wyndham LUX Hotel project in Rivervale will start on-site assembly of the tech next year. **Image:** NXT TEC

This process will produce an independently verified and registered Environmental Product Declaration – an international certification that quantifies the environmental performance of a product.

There are no buildings in Australasia that have an EPD, Ms Di Ciano said.

“Sustainability is an important discussion point internationally and having this EPD will help promote the technology to governments, architects and builders to achieve environmental targets for construction projects,” she said.

“We've had a lot of interest from Asia, particularly China, which has experienced unprecedented population growth and a critical supply issue across different asset classes, from affordable housing right through to commercial infrastructure.

“NXT is able to provide a sustainable solution to get buildings up quickly on a large scale.

“It's the one industry that hasn't experienced true disruption to date, so it's about time.”