

## CONSTRUCTION & INFRASTRUCTURE:

# BUILDING

# BACK

# BETTER

While the impact of the COVID-19 pandemic still hangs over Australia's economy, the construction & infrastructure sector is currently enjoying some of its most promising conditions in years, spurred on in large part by generous government stimulus measures. For innovative advanced manufacturing businesses, there are big opportunities up for grabs. By William Poole.

The onset of the COVID-19 crisis last year brought with it a wave of pessimistic forecasts about Australia's economic prospects. Concerns were focused in particular regarding that key plank of the national economy – the property market. But while Australia did indeed slip into recession, the much-anticipated slump in the property market never materialised. Indeed, in many ways quite the opposite occurred.

House building approvals surged during the second half of 2020. According to the Australian Bureau of Statistics (ABS), building approvals for houses increased by 14.6% during 2020 compared to 2019, with 117,721 recorded nationally – the highest annual total since 2015. All of the state capitals reported significant increases in approvals; Perth was the top performer, recording an annual rise of 34.0%, followed by Brisbane (14.5%), Melbourne (13.3%), Adelaide (11.9%) and Sydney 7.2%.

Many analysts attributed these figures to the Federal Government's HomeBuilder grants program. The HomeBuilder program provided eligible owner-occupiers (including buyers of first homes) with a grant to build a new home or to substantially renovate an existing property. The aim of HomeBuilder was to assist the residential construction sector by encouraging the commencement of new home builds and renovations. Although the initial HomeBuilder offering expired on 31 December 2020, the Government subsequently extended the policy, albeit with a reduced grant, to the end of March.

ABS figures also showed that in January investors rushed back into the property market. Lending indicators for January found the number of loan commitments for investors soared by 9.4% over the month, having increased by 22.7% over the year. In NSW the value of new loan commitments to investors rose by 6.7% in January – the highest since about June 2018, according to the ABS.

At the other end of the construction industry scale the situation is equally promising. As part of its strategy to stem the economic impact of COVID-19, the Government has committed to delivering a \$110bn, ten-year pipeline of infrastructure investment. Last June it announced a \$1.5bn infrastructure stimulus package, comprising \$1bn in funding for shovel-ready projects that could commence within six months, and \$500m for Targeted Road Safety Works delivered by states and territories that could be completed within 12 months.

As Australia looks towards a post-COVID future, this buoyant outlook across the construction sector is seen as a promising route for the country to find its way out of recession. As a sector dominated by traditional processes and practices, it offers exciting opportunities for innovative businesses, not least advanced manufacturers.

## New Touch Industries – Overcoming the challenges of infrastructure projects

Few people get to see the results of their work out on public display on a regular basis, but for Brad Drury, Managing Director of New Touch Industries, it's definitely one of the perks of the job. The company manufactured the stainless steel skins adorning the bridge columns on the EastLink motorway in Melbourne, with their striking laser-cut perforations. With New Touch Industries based in two sites: in Bayswater and Clayton, Drury inevitably spends plenty of time on the EastLink, and on seeing the bridges he acknowledges feeling some pride.

"Absolutely," says Drury. "I think there's 88 bridges all up. When my kids were younger, whenever we'd drive past the bridges, up near Ringwood or down near the Monash, they'd always call them 'Daddy's holes'."

New Touch Industries has come a long way since the EastLink project was completed in 2008, but it certainly helped put the company on the map. Aside from its sheer scale, the project entailed cutting material to some highly exacting requirements, allowing the company to showcase its knack for overcoming technical challenges.

"We were a much smaller company back then," Drury adds. "That was actually cut on our first laser. It required an oversized machine; it couldn't be done on a standard ten by five machine. And we needed to be able to cut Rimex stainless steel with a PVC coating. Back then the machines struggled on Rimex, the PVC wouldn't hold that well, so it would actually blow up and stop the cutting head. We had a few challenges around that."

"It was ironic the time and effort that went into ensuring there were no scratches on the panels for the opening day photos, yet driving past at 100km an hour you're never going to see them. They went to a great expense to make sure they were pristine for opening day."

Drury founded the company back in 2001, originally operating as New Touch Laser Cutting out of one factory in Bayswater, and the company saw significant expansion in the early years, opening a second branch in Clayton in 2006. In 2010, Drury diversified, starting a separate fabrication business, with Alex Vandenbroeck coming in as a business partner to manage it.

"It was a bit of an experiment and I wasn't sure how it was going to go, so we set up New Touch Fabrications as a separate, arms-length business," Drury recalls. "But the customers embraced it and saw it was going to make their lives easier. Alex and I initially ran that business separately, and it was a real growth area."

Eventually Drury was running four businesses across three locations: the two laser cutting branches, New Touch Fabrications, and a separate operation up in Townsville. After a few years of this, he decided to consolidate the whole operation, getting out of Townsville and merging the laser and fabrication business, with Vandenbroeck becoming Drury's partner in the merged business. Finally, the company rebranded as New Touch Industries.

In that time, the company has expanded substantially. From that first factory, the Bayswater operation has progressively extended along the street to occupy the adjoining five units – the site now measuring 130m long overall. Meanwhile the Clayton branch relocated to a much larger site 18 months ago, raising its capacity from two lasers and a press brake, to three lasers, a press brake and fabrication equipment, with room for more. Today New Touch Industries employs between 65 to 70 staff, with significant further recruitment underway. Indeed the business has continued to thrive despite the COVID-19 pandemic.

"It's been quite a growth period," says Drury. "Admittedly, we ran quite conservative during the lockdowns; when people resigned we didn't necessarily rush out to replace them. But both branches have shown good growth during this COVID period."

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New Touch Industries partners Brad Drury and Alex Vandebroek outside its Bayswater plant.



A notable early infrastructure project for New Touch Industries entailed the production of stainless steel skins for Melbourne's EastLink motorway.



New Touch Industries's new facility in Clayton.



New Touch Industries recently invested in a new Trumpf fibre laser cutter with a STOPA warehousing system, as well as a Timesaver edge-rounding and deburring machine.

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Construction & infrastructure is just one of a range of sectors New Touch Industries services, including mining, rail, agriculture, aftermarket automotive, shop-fitting and general engineering – producing everything from machinery components to signage for Crown Casinos.

"We deal with an extremely diverse customer base," says Drury. "Basically if it's made of metal, we probably deal with it."

Since the Eastlink, the company has continued its involvement in notable infrastructure developments, such as the rail crossing removal program in Victoria, the widening of Melbourne's Westgate Bridge, and various gas and electricity projects, hospitals and police stations. It has supplied componentry for revolving restaurants in skyscrapers around the world, and has lately seen a COVID-related spike in work for the healthcare sector.

For Drury the challenges in these areas are similar to those in any of the markets New Touch Industries serves: "All sectors have their challenges, but in general, it's the expectation to always deliver high-quality product on time, and cater for everyone's different requirements. We're not mass-producing widgets. We dispatch tens of thousands of components a day. Some will just be one or two, others might be 500. And we could be servicing to a hundred customers a day, all with their own unique requirements. That's probably the biggest challenge, just keeping everyone happy."

The key to overcoming these challenges, for Drury, is continuous improvement.

"We're constantly looking at improvement opportunities, coming up with new ideas. If you're sitting idle you're going backwards. And investment in the latest technology is critical."

In that area, New Touch Industries has just come through a particularly busy spell. It began around four years ago with the installation of a STOPA warehousing system, supplied by Headland Machinery. Drury had been struggling to find a system that met the business' requirements for several years. It was only when STOPA introduced some design changes to its hardware that it became viable for New Touch Industries to proceed.

"That was a massive project," Drury recalls. "The overall system weighs 600 tons fully loaded. We had to knock down walls between factory one and two, engineer a concrete slab that was 1.2m deep, 34m long and 12m wide – and all while we remained open. It was the best part of a six-month project. The guys from STOPA were here for 10 or 12 weeks doing the install."

That was followed by a new Trumpf fibre laser cutter, again installed by Headland, which has been linked up with the STOPA system to enable more compact, efficient operations. Recently Headland also delivered a Timesaver edge-rounding and deburring machine. The Timesaver polishes laser-cut components, rounding off any rough edges and giving them a consistent surface finish. When working with mild steel, it also removes oxidation from the laser cutting operation, allowing a better bond when painting or powder coating the finished part.



Recently New Touch Industries has been constructing a robot welding unit with an ingenious enclosure to allow continual operations.

The next addition to the workshop is a robot welder, shortly to come into service. Built around a KUKA robot that New Touch Industries acquired second-hand, the team is currently constructing an ingenious new enclosure that will allow welding operations to run on one side of the unit while the operator can safely unload and reload on the other side, meaning the machine can work more or less continuously.

"We knew the history of the robot," says Drury. "It had hardly been used. What we weren't happy with was the enclosure. So I was visiting a friend in Queensland, who had just commissioned a robot welder with a cell he designed, and he was kind enough to give us the plans."

Regarding future plans, Drury's focus is on consolidation for the time being, building on the changes that New Touch Industries has brought in over the last few years.

"It's been a huge four or five years of growth, capital investment and recruitment, so we just want to get back to what we do best: providing laser cutting and metal fabrication services to our clients, without the distractions. I think it's just time for us to start getting all this investment and hard work we've done, and converting that into delivering outstanding quality service and on-time delivery to our customers."

### FormFlow – Reinventing sheet metal forming

Anyone strolling through Federation Square in Melbourne in recent months might have noticed something unusual. Displayed there from January to March, the Future Food System was a three-storey building developed by sustainability advocate Joost Bakker to demonstrate his concept of a fully self-sufficient, zero-waste dwelling. Chefs Matt Stone and Jo Barrett took up residence throughout its time in Melbourne, living entirely on food and resources produced within the building. Powered by solar panels, with everything from fruit and vegetables to shellfish grown on site, the Future Food System teems with invention, but from the outside, one of its more notable innovations might easily be overlooked. Amid the produce growing across the building's exterior, its cladding was supplied by Geelong start-up FormFlow.

Central to FormFlow's business is a revolutionary process that enables corrugated metal sheet to be bent at sharp, precise angles without stretching or damaging the material or coatings. Matt Dingle and Matthias Weiss devised the FormFlow Bend in collaboration with Deakin University,

"The science behind it was developed by a guy called John Duncan who lives in New Zealand," says Dingle. "He was a mentor for me and Mathias when we were doing our PhDs. It's based on the mathematics of origami, a clever but deceptively simple process."

Dingle and Weiss recruited Geelong-based engineering company Austeng to help develop the machinery to validate their concept, before founding the company four years ago with Austeng's owners Lyn and Ross George.

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FormFlow has developed a revolutionary process that enables corrugated metal sheet to be bent at sharp, precise angles.



FormFlow has also developed its own specialised machinery for producing the FormFlow Bend.