



DesignIntelligence[®]

Quarterly

Q1 2019

“Modernise or Die”—A Look at the Future of the Construction Industry, Part 2

David Ronksley—managing director of C2R Consulting (a DFC Australia member firm)—talked with Mark Farmer, founding director and CEO of Cast Consultancy, about the future of construction. This is part two in a two-part series.

DAVID RONKSLEY WITH MARK FARMER

David Ronksley (DR): So, to go back to the offsite construction challenge, what remains the biggest barrier?

Mark Farmer (MF): There are various barriers in my world of residential. You have to bear in mind the difference between doing prefabricated hospitals or schools compared to homes. With homes, the end consumer is the general public, not the government. If they're renting it, then it may be less sensitive, but if they're buying it there is a perception issue. Does a “prefab” equal temporary? Does it equal low quality? Can I get a mortgage? And so on.

I think this is becoming less and less of an issue, as the energy efficiency credentials and general quality improves together with a functioning mortgage market in the UK. The biggest barrier, in my opinion, is within the industry.



It's an important point that we don't just do things differently in isolation—we also need to share with the industry so that people can learn from it.

It's the perceptions and the prejudices. Sometimes there is the baggage of bad experiences for clients who may have used manufactured construction 15 or 20 years ago. It's also an issue to overcome vested interests that do not want to change because they see a threat. There's also an element within the industry about a lack of education. People just don't understand what manufactured construction really means. They default to perhaps images from 1970s or 80s prefabs, and they just don't know what's out there now.

To help overcome those barriers, a few people within the industry need to demonstrate what 21st-century manufacturing looks like. That is beginning to happen, and we're seeing real life jobs with the latest advanced platforms opening up.

It's an important point that we don't just do things differently in isolation—we also need to share with the industry so that people can learn from it. Many people are videoing (and posting to YouTube) how technology is used throughout a whole process. Some manufacturing businesses are videoing the whole onsite install process and are using it as a promotion tool. They're using technology as a means of connecting with a wider audience, and that could be transformative.

DR: Are you experiencing any industrial relations issues in the UK?

MF: We have vested interest trade bodies in the UK, but not powerful unions as such. With the unionization piece, you need to go on a journey, and from what I understand, this has happened in New York. There have been discussions about how this is not about replacing work, it's about reskilling people. Some of the things we do onsite will be different in terms of precision working—for example, working to tighter tolerances, etc. Also, it becomes more palatable when the factory might be close to or even adjacent to the site, so the manufacturing employment is actually in the location where the building is being built and you're not displacing employment to 250 miles away. That has become a bit of an issue where there is devolved or state government. We're moving toward devolution in UK—for example, London has its own elected mayor with his own powers. There has also been an interesting debate as to whether using modular manufactured housing in London seems a threat to London jobs because they might be built in Birmingham, Manchester, Leeds, or Liverpool. But what has actually happened is mature, healthy debate about realizing that London doesn't have enough construction workers to deliver the work anyway.

To deliver our buildings, we need these approaches. It's not going to put people out of work; it's just supporting the process. So, we need the people we already have to continue doing what they're doing traditionally, but we also need these new ways and new skills. It takes a bit of time for that to land as a concept.



If you're weather dependent through building traditionally, it becomes a point of economic significance at a macro country level. This, again, is the benefits case for offsite construction in that dependency on the weather is removed.

DR: With respect to offsite construction increasing productivity, are there examples where the ability for the weather to adversely impact the construction program has been reduced?

MK: In February (2018) in the UK, we had a very bad spell of weather, the so called “beast of the east.” It brought freezing temperatures, blizzards, then torrential rain. Our national statistics for construction output clearly showed the impact of that cold wave. For the whole of the UK there's a big hole in output during that period. This just goes to show that if you're weather dependent through building traditionally, it becomes a point of economic significance at a macro country level. This, again, is the benefits case for offsite construction in that dependency on the weather is removed.

DR: Are there concerns that architectural design creativity is constrained in an offsite solution?

MF: There's an interesting discussion going on in the UK. The current president of the RIBA is the chairman of an architectural practice that does a lot of modular construction, so he's been good at promoting the debate amongst a lot of sceptics. He's trying to say, “Why would we want to keep redesigning the plant rooms or the staircase or the lift shaft or that corridor area? Why aren't we concentrating on what makes buildings beautiful, like facades, the public realm, etc.?” He's absolutely right and that's what platform-based design may be able to do if it is done well. It's fair to say there is still a little bit of a divergence of opinion.

To optimise the effectiveness of this approach, we still have to address the design process. If an architect designs something unique, the modular solution to fit the design has to be reverse engineered. So, it comes down to the application of DfMA (Design for Manufacture & Assembly) which has to start at the outset (not the usual way, in which a developer gives a brief to an architect with a blank canvas to get a planning consent or a permit, and then working out retrospectively how you might apply modular manufacturing).

DR: In NSW, we are seeing a number of government agencies, particularly the Department of Education, embracing new

delivery methodologies and driving the market to respond. Are you seeing similar approaches in the UK?

MF: Yes, it's a real opportunity and government procurement teams are going to have to take responsibility for driving this change. It links to the announcement that was made by the UK Chancellor that the Department for Health, Department for Education, the Ministry of Defence, the Ministry of Justice and the Department for Transport—five of the largest spending government departments in the UK—have been told they will use modern construction delivery methodology by 2019 ... or show why they're not.

The government is making a presumption in favour of modern construction, including offsite. Public procurers will therefore have to abandon any personal prejudices and rethink how they procure. This initiative has to be led by quality, so any concern people have that this will lead to poor quality buildings has to be proven to not be the case. So, the design and manufacturing platforms that come forward in response to this government initiative have to be robust because if they're not, it will just play into the hands of the naysayers.

Productivity and efficiency through a manufacturing process have to go hand in hand with high quality outcomes. This requires long-term investment in building an effective and competitive supply chain rather than simply commodity-procuring modules from competing manufacturers.

DR: This comes back to one of your earlier points. There's a wonderful quote from [a recent] SALUS European Healthcare Design conference where an architect from a development organisation said, "As all of us architects know, Form follows Finance."

It is a signal that this is getting traction when the private sector is doing it and the cash is following it. That's probably the acid test of whether this is a better delivery methodology.

MF: Yes, I think so. That's why I referenced the private equity money because it's a good barometer. There are some very

intelligent people investing their scarce resources into this market approach. I made the point that this is still housing-led because it's a fundamentally under-supplied asset class in the UK and in many other countries, and delivering it better and at a lower price is the Holy Grail.



Productivity and efficiency through a manufacturing process have to go hand in hand with high quality outcomes. This requires long-term investment in building an effective and competitive supply chain rather than simply commodity-procuring modules from competing manufacturers.

If funders see manufactured housing as the way forward, then that has to tell us something about the fact that we should follow the money. It's an interesting lead indicator of where the sentiment might be shifting. We still need some of these to launch and to deliver hundreds of homes at a time for people to go and see them, for it to be in the media and in peoples' wider consciousness.

I think we are now in that cycle of doing that in the UK. There are at least two new technology-led ventures in the UK that are capable of completely transforming people's views of what offsite manufactured homes look like. We need them to be out there front and centre. We need them to be on the news. We need them to be in the papers.

Mark Farmer is founding director and CEO of Cast Consultancy and the author/researcher of *Modernise or Die: The Farmer Review of the UK Construction Labour Model*.

David Ronksley is managing director of C2R Consulting.

The Way of Authentic Leadership – Part I	DAVE GILMORE
The Influencer Mindset Growing Relevance in the Face of Change, Challenge and Opportunity	BOB FISHER
Increasing Industry Vitality Through Innovation	RAY DADDAZIO
The Evolution and Future of Immersive, Real-Time Technologies	JOEL PENNINGTON
Sustainable Design: A Worthy Investment	JESSE DEVITTE
Searching for Connections—For the Future “of Education/Practice Partnerships	TROY THOMPSON & DAVID FERGUSON
The Transactive Network: Supporting New Building Paradigm	DR. NORA WANG
On Climate Change and Hope: Despite rising carbon dioxide emissions, we can still tackle global warming	RIVES TAYLOR & BRENDEN JACKSON
DFC FIRM HIGHLIGHTS: The New tvsdesign	JANET SIMPSON
The Death of the Architecture Firm	THOM MCKAY
Celebrating Success: 25 years of the Design Futures Council	JIM CRAMER
A Vision for the Future	DESIGNINTELLIGENCE WITH DAVE GILMORE
“Modernise or Die”—A Look at the Future of the Construction Industry, Part 2	DAVID RONKSLEY WITH MARK FARMER
Playing Catch Up	ALEXIA LIDAS