

INDUSTRY ENGAGEMENT WITH TECHNOLOGY IS THE KEY TO CUSTOM BUILD AT SCALE



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Michael Kohn, Digitising Custom Build project lead and chief executive of Stickyworld, discusses the origins of the project and the journey so far...

Digitising Custom Build is a collaborative research and development project, part funded by InnovateUK, looking at how to bring custom build into the mainstream housing market in the UK. My company, [Stickyworld](#), leads a consortium of six other innovation-focused partners, forming a team that seeks to bring [new digital tools](#) and processes to the custom build sector with a view to helping custom builders scale.

Each organisation collaborates, either through process development, data management, briefing, technology development or field trial testing. As the project comes to a finale, I'm looking forward to coming together again in our [September event](#) to show the industry what we have achieved together.

In this blog, I will explain the reasons why we started this project, why the sector specifically needs to continue to develop digital tools, and how we formed the project team to embark upon 18 months of R&D together. I'll conclude why industry engagement during this development process has been key to developing our tools, and how custom builders can still come on board during 2016 to shape the tools through Stickyworld's beta programme.

MORE RESEARCH, MORE INNOVATION

Things don't move so fast in housing – that is well known. Bringing in innovative products, processes or services to this market has always been tricky, and early adopters are scarce on the ground. But innovation underpins the introduction of custom build to the UK, and there are many academics, property entrepreneurs, influencers and housing practitioners who have been trying for decades to push for alternatives to the volume house builders model. Years of government funded research has exposed the potential of alternative forms of housing procurement, drawing from Europe and further afield, and illustrating the many benefits these alternatives might bring to the market in UK.

If however, the UK's custom build model is to be capable of truly disrupting the normal mode of buying a new home or serving a broadly untapped UK market, a new breed of 'custom builder' needs to look to digital tools and technology to help them manage the potential complexities inherent in this process and sell convincingly. Without the help of technology, it's hard to see how any industry can scale efficiently, even one related to property. Thus back in 2015, Stickyworld's



research team made the case for funding support from InnovateUK to build digital tools for this new breed “custom builder”, and the Digitising Custom Build project was born.

THE NEED FOR CUSTOMER FOCUSED PROCESSES AND TOOLS

We now all live in a world where – in most industries at least – the customer is king. The growing availability of content and information across the internet means that the customer is more educated than ever before they buy anything, whether buying online or in traditional face to face exchanges. In part this has driven the introduction of more choice, the so called ‘long tail’ and also we see the emergence of ‘content marketing’ as an expert professional discipline.

So it makes perfect sense that this new breed of custom build developer should, from the outset, look to stay 100% focused on the customer experience at every stage of the process. This means looking to create better content and leveraging the full potential of digital tools and processes to meet the growing expectations of the customer.

The new custom build customer profile, like the emerging custom builder profile, is still a little unknown, but it is fair to assume they are likely to be modern and sophisticated buyers, who are not only looking for a new type of home to suit their needs, but a new type of buying experience and different degrees of involvement in the process.

This is a big change in how anyone can buy their own home in UK, but it’s the kind of change that won’t just happen by itself. It needs innovators, early adopters and pioneers to offer new housing products to this emerging market, experiment with different delivery models, and equally to try the new digital tools that can help support an enhanced customer experience, ultimately leading to a truly sustainable industry change. It’s a kind of change that demands investment in research and development and also lots of collaboration. No one organisation or individual has all the answers.

BUILDING THE TEAM

When InnovateUK announced a general call for projects around the theme of “digitising construction”, we saw an opportunity for a project in custom build with a multidisciplinary approach, with the right team mix from both digital technology companies and industry practitioners. Building a collaborative research team takes a lot of time, so it’s always wise to start early and build upon networks and connections you have built over time.

In the first instance, we approached [igloo](#). As an award winning custom builder with ambitious plans, they were already talking about the need for digital tools. I contacted Chris Brown whom I first met at the infamous Planning in the Pub group and had expressed his interest in the role of technology. Chris introduced me to [Jon Sawyer](#) who is the lead on their [Heartlands](#) project in Cornwall. For technical reasons, igloo couldn’t participate formally on our technology project, but agreed to become a formal project consultant as a developer who could test the tools.

Jon then introduced us to their architects [HTA Design LLP](#) who could provide the architectural input we needed. We had actually worked with HTA Design before, being one of four architects who had



engaged with Slider Studio in the original development of Stickyworld, and with an active research programme led by [Rory Bergin](#), they were of course a natural fit as project partners.

I also knew that the Custom build industry came in different shapes and sizes, so I was keen to invite a boutique custom home builder on board, so I approached [Bruce Bell](#) of [Facit Homes](#). Facit Homes is a unique custom home builder which has developed a digital fabrication method and home building system based on CNC cut plywood cassettes on site. Staffed in the main by architects, Facit delivers quality accurate bespoke design with the Client at the heart of their process. They were also already engaged with an ongoing research programme, and so were natural partners to bring their research around design process digitisation to the table.

[Rob Annable](#) of [Axis Design](#) in Birmingham had just started building his own home in 2014. Being the earliest of “technology early adopters” I knew that Rob was the natural fit as a small architect to contribute to the project. He has the ability to tinker, hack and create a new approach to managing and communicating design information for his home, which might then be adapted as a model for other home owners on any custom build project.

So in HTA, Facit and Axis we had found we had found research-friendly industry practitioners, all in the business of designing and/or building homes for people. The team then needed balance with some businesses purely focused on digital media, communications and software development.

[Slider Studio](#), now led by [Renee Puusepp](#), was a natural partner to collaborate. Renee brings CAD scripting and BIM tools expertise to the team, skills which are vital to solve the [3D configurator](#) challenge, whether working on desktop in CAD or publishing to the cloud. In [Commusoft](#) we found a growing SaaS company serving the heating and service engineering industry and offering field management software. Managing director [Jason Morjaria](#) had developed an interesting proof of concept Internet of Things (IoT) broker that could be used to power a “connected to a Home User Guide” by making its data available to Stickyworld, and he was interested to join the consortium to see where a collaborative research project may take this.

ENGAGING WITH INDUSTRY

To complete our team Jon Sawyer offers NaCSBA support to help steer project industry dissemination. The majority of technology research projects – especially in the digital space – require the significant engagement from end users and target industries in order to inform any technology development and user interfaces, help test through beta programmes, and avoid missing the point.

NaCSBA, being best placed to broker the relationship between industry stakeholders and technology providers, continues to drive industry engagement work culminates on the event on [15th September](#). At this event, we are sharing stories and insights from the project beta trials, we are demonstrating our various technology and we are listening to further ideas from industry and problems we can help solve.