

connected
everything.



Participatory housing manufacturing

Project team

The project is led by Dr Alejandro Veliz Reyes, Assoc Professor in Digital Design, University of Plymouth. Our team includes Tim Crabtree (Director, Wessex Community Assets) and research assistant from Alex Carr (design for fabrication), Matt Holmes (CNC production), and Georgina Coleman (architectural design and construction).

The project

Digital production technologies are often devoid from the communities they are expected to support, increasing the gap between digital innovation and local skills, materials and knowledge. Throughout a year, this project challenges this technocentric approach to innovation and explores the intersections between distributed, standard manufacturing technology and local, specialised forms of community housing production in Bridport. Wessex Community Assets, our local partner, is part of Raise the Roof, a local organization that brings together creative, civic and community organisations for the delivery of sustainable housing.

What does the project demonstrate?

Through a series of prototypes, material studies and engagement activity with local communities, the project sets a research agenda around local development for a coastal community (Bridport) often marginalised from digital innovation and skills development. We are developing bespoke building elements which respond to local environmental and material concerns, including the use of local materials and supply chains.

What next?

This project is part of a long-term collaboration agenda, supported by additional streams of income such as Lottery Fund, impacting initiatives such as a local skills academy, and upcoming community housing projects. Our next steps are two-fold: to continue and further develop technical studies around local supply chains and digital manufacturing technologies for housing production; and to further explore the design and creative opportunities for local sustainable materials in the context of housing design.

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Engineering and
Physical Sciences
Research Council

Dissemination

Veliz, A., Carr, A., 2022. Participatory Housing Manufacturing. Connected Everything Conference 2022: Digital Manufacturing Research Collaboration and Innovation. 18-19 May 2022, Liverpool, United Kingdom. <https://www.youtube.com/watch?v=YCpKipTesPk>

Carr, A., Veliz, A., 2023. Placemaking by making: The techno-geographies of housing co-production. Creativity, Knowledge, Cities Conference 2023: New futures for creative economies. 29-30 March 2023, Bristol, United Kingdom. *Submitted, under review.*

Veliz, A., Carr, A., Crabtree, T., 2023. Emerging techno-geographies: Co-making and imagining community-built housing. IN: V. Fors and M. Berg (Eds.). The De Gruyter Handbook of Automated Futures, Volume III: Impact. De Gruyter. *Accepted for publication.*