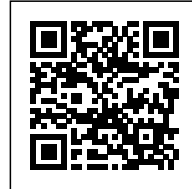




WIKIHOUSE

Posted on November 29, 2021 by xavigonzalez



Categories: [Contributors](#), [Densities](#), [expanding design practices](#), [Formats](#), [No Density](#), [Politics and economics](#), [Project](#), [Technology and fabrication](#), [Topics](#), [WikiHouse Foundation](#)

Tags: [3D printers](#), [Digital fabrication](#), [Efficiency](#), [Efficiency measures](#), [Knowledge](#), [Learning with wood](#), [Low budget](#), [Low impact](#), [Modular housing](#), [Open conversation](#), [Open data city](#), [Open Housing](#), [Project](#), [Sharing knowledge](#), [Technological Approach](#), [Third Industrial Revolution](#), [Timber](#), [Wood](#), [Wood construction](#)



This is for everyone. Over the last two decades the web has profoundly changed our economy and our society, putting the tools to produce information into the hands of everyone. We have moved from a world dominated by big, centralized producers to one where the few big can be outperformed by the many small; the long tail. Think YouTube, Twitter, Linux, AirBnB, Wikipedia.



The next industrial revolution

In the next decade that same digital revolution is coming to the way we produce physical things. Digital fabrication tools such as CNC machines and 3D printers are putting the capability to produce and control physical products into the hands of everyone. It has been called the 'third industrial revolution' and it's going to transform our economy even more profoundly.



Especially the way we design and build our homes and cities.

The first open, digital building system

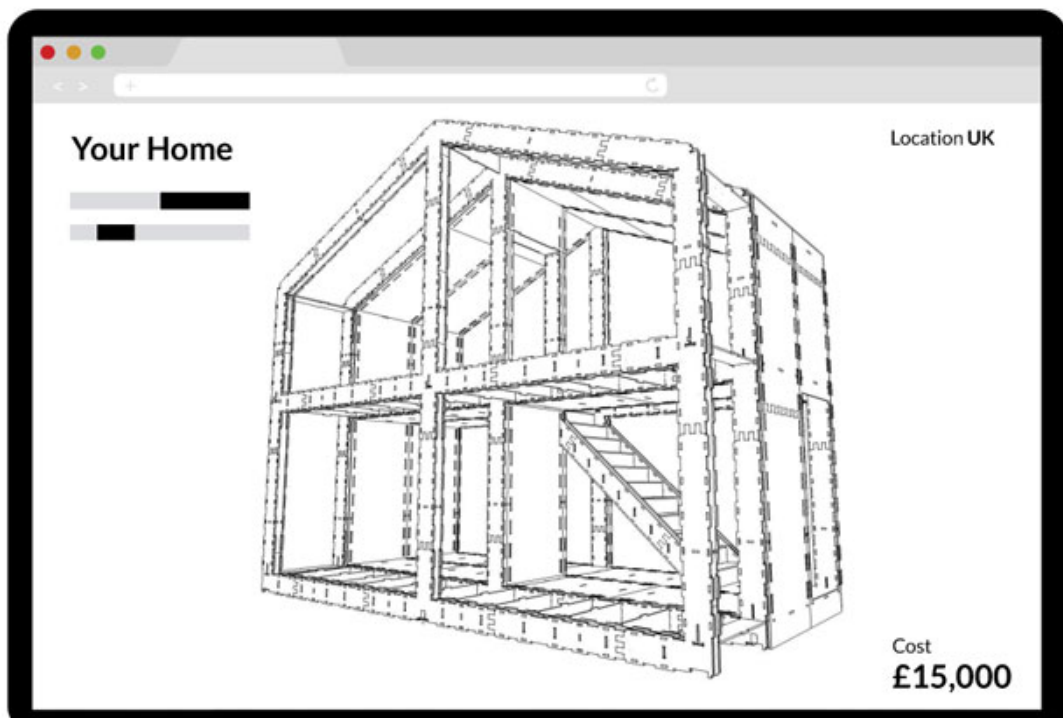
WikiHouse is a digital building system, a kind of digital 'Lego' for homes. It makes it simple to design beautiful, sustainable, low-cost, homes that are customized to their user, within preset rules. A coding language for buildings.

Parametric Demo by WikiHouse.

Imagine being able to accurately estimate cost, performance, and even weight as you sketch.

Then seamlessly producing manufacturing files and building information in seconds.

The system is an open source language, which anyone can use, adapt or improve.



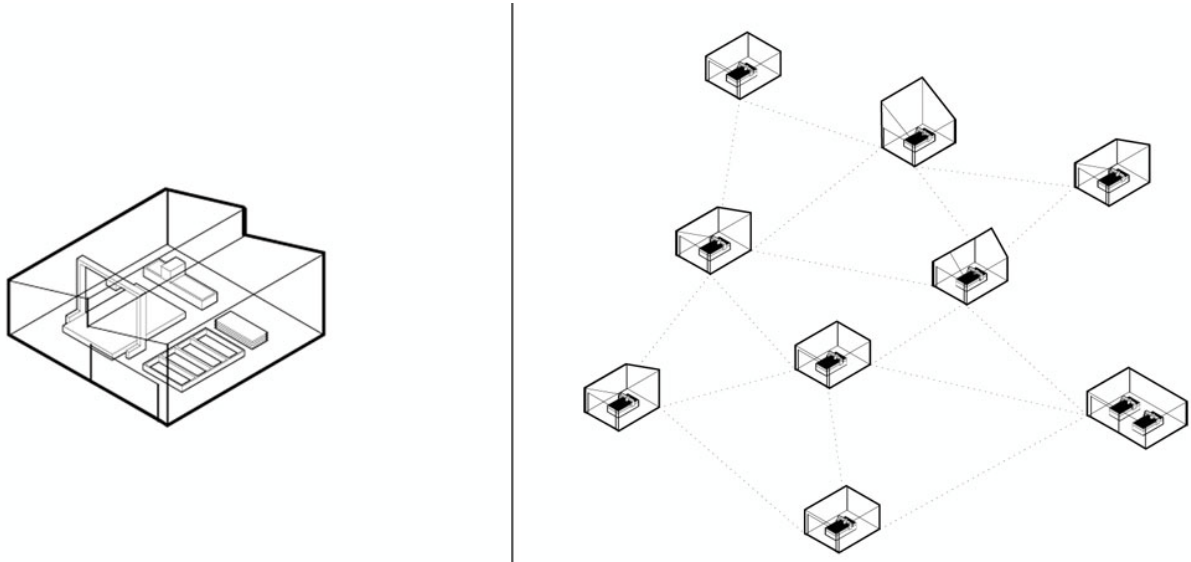


Manufactured locally, everywhere

WikiHouse components can be digitally manufactured not just in large centralized prefabrication factories, but by a distributed network of small businesses and maker spaces; using widely available tools & materials.







Centralized prefabrication

- £5m factory setup cost
- Purpose built for one product
- No capacity to scale
- No resilience to demand gaps
- One employer in one town

Distributed manufacturing

- £15k factory setup cost
- Many products on demand
- Limitless capacity to scale
- High resilience to demand gaps
- Jobs & capacity within local communities & economies







Self-assembled

Each unique design can be rapidly assembled like a large IKEA kit, even by amateurs. A group of friends can assemble a home in days, to millimeter precision. You can choose how much of the work to do yourself and how much you need support with.

Farmhouse by WikiHouse.

Low cost, high performance

The WikiHouse system takes levels of energy performance, quality, precision and user

customization that were previously prohibitively expensive, and dramatically lowers the thresholds of time, cost & difficulty.

STUDIO £12,500. Kit price, UK.

STUDIO £12,500. Kit price, UK.

STUDIO £12,500. Kit price, UK.

MICROHOUSE £45,000. Typical project cost.

TOWNHOUSE £150,000. Typical project cost.

LONGHOUSE £95,000. Typical project cost.

An open Ecosystem

The aim: to develop a 'full stack' building system, bringing together low-energy solutions for every component of the home, from structures to services & sensors. This allows many companies to combine their innovations together to create the world's best, most sustainable, low cost building systems, based on interoperable standards and design principles.



Open scales. Fast

WikiHouse is now being developed by a passionate R&D community of 1000s of designers, engineers, inventors, coders & social entrepreneurs. These are supported by 35 chapters across the world, and counting.

Our generation will reinvent housing systems

Every major urban economy now faces a huge housing challenge. It's not just about building enough homes, but also about breaking our dependence on fossil fuels and debt, empowering smarter citizens and building resilient communities and healthy, sustainable, economically productive, livable cities.

If we're serious about tackling the big design challenges of our time, we need new social and economic infrastructure for sustainable development: diffusing sustainable housing tools to every citizen & company on earth.

Alastair Parvin's TED talk

The age of mass housing

Since the Industrial Revolution, we have been dependent on big developers who buy the land and speculatively build rows and rows of 'one-size-fits-all' homes on our behalf.

In almost all the world's developed economies, those centralized systems & markets are now failing.

Unaffordable, unsustainable, undemocratic, unresilient, unhealthy, debt-heavy and in many places unviable.



Unlocking the citizen sector



Our aim: to build digital tools to unlock a new sustainable, resilient and scalable housing industry: the 'micro' or 'citizen' sectors; increasingly recognized by governments as the next mass-house building industry and an engine for sustainable, affordable, democratic development in the 21st century.

Cities made by and for everyone.



Base image courtesy of Rogue State Media

What next?

We have developed the first WikiHouse building technology and deployed it in early pilot projects. It works, and there is growing demand to use it. We now need to build the open web engine behind WikiHouse; to get better building tools into the hands of everyone. It's called the OpenChain.



The OpenChain

The OpenChain will be the first fully digital supply chain for buildings. This will be an industrial leap forward, replacing the guesswork, risk, paper drawings and endless emails that make up most of the costs & difficulties behind construction today with a direct, seamless, simple digital process from design to manufacturing to use.

A digital, shared marketplace

Supporting users through this process will be an open, distributed marketplace of companies providing compatible products & services from architects to manufacturers, builders, project



managers, certifiers, insurers and lenders.

A kind of 'Airbnb' for custom building services.

A design commons

Behind the OpenChain will be libraries of open design solutions and data, licensed for anyone to use, add-to, adapt and improve. A kind of Wikipedia for buildings, unleashing collaboration and innovation in housing design.

Imagine an economy where no problem ever needs to be solved twice, and a world where the best design solutions for basic sustainable development are common knowledge for everyone, always.



The WikiHouse Consortium

But no company can build this on its own. So we are forming a consortium of world-leading companies, organisations, government representatives and funders to share in the project and to build the shared infrastructure and open standards for the third industrial revolution in housing, from which all of us will benefit.



