

Open Source Ecology & Open Building Institute Partner to Develop Affordable, Ecological Housing

The organizations to deliver affordable housing by integrating open source hardware with eco-friendly modular design.

Maysville, MO — June 29, 2016 — [Open Source Ecology](#) (OSE) and [Open Building Institute](#) (OBI) launch a joint venture to make affordable, ecological housing widely accessible. The goal is to enable anyone to design and build their own house—quickly, cheaply and easily—using a library of engineered modules and a series of rapid-build procedures.

At the core of the project is the OBI toolkit which contains a completely open source toolchain for all phases of building. The toolkit includes modular designs, instructionals, materials recipes, software, open source machines for construction and production of building materials, and a training program for builders. All design assets are available free of charge and are open source forever, with no exceptions. Users are also encouraged to contribute designs back to the project. ([How it Works Infographic](#))

“This partnership will transform home design and construction, placing affordable homeownership and home construction within the reach of virtually anyone - while retaining an eco focus,” said Founder of Open Building Institute, Catarina Mota, Ph.D.

Rapid Builds, Affordable Housing

Beginning in 2016, the joint venture plans to offer aspiring home owners all the designs and tools necessary to build a 700 square foot Expandable Starter Home at 1/10th the cost of an average new home. This incremental home is loaded with [ecological features](#) and can be built in 5 days, from raw materials, and then expanded as needed.

OBI’s rapid build approach is based on OSE’s Extreme Manufacturing workflow, which the organization developed over 12 previous builds (since 2006) at its Missouri headquarters. These modular design and build techniques can produce an 800 square foot structure, from raw materials, in 5 days, with a team of 30 people without trade skills.

Collaborative Development

“The average American spends \$1.2 million over their lifetime just to have a home. We think that our open source approach can offer a solution to this issue,” said Open Source Ecology Founder, Marcin Jakubowski, Ph.D.

- As part of its launch, the initiative is opening a crowd design effort for its first Expandable Starter Home prototype - to be built at its Missouri headquarters in November, 2016. Anyone is welcome to download the design library, and enter the OBI Design Challenge, which includes a reward.

- To increase OBI's building capacity, the initiative is also announcing an immersion training program for builders - starting with a pilot program in 2017. To make this widely replicable, the venture aims to double its training program annually until it reaches enrollment of 24 students, from which point it intends to scale operations to other locations. ([2 Year Roadmap](#))
- To fund refinement of the system and development of a wide range of utilities, the venture is launching an [OBI Kickstarter campaign](#) today.
- The initiative is also inviting the contributions of all subject matter experts related to regenerative construction. This initiative builds heavily upon expertise from leading practitioners, who are being sought actively for the [OBI advisory team](#).

Ece-Housing

The joint project puts a strong emphasis on self-sufficiency, localization, and regenerative design—with the goal of attaining Living Building Challenge certification in 2017, which is the highest standard for ecological and regenerative construction. The standard OBI house model is off-grid and will have an [Aquaponic Greenhouse option](#), prototyped initially in the fall of 2015, which produces all the fish and vegetables that a family can eat.

The 2017 plan includes the build of a 4000 square foot [Eco Materials Production Facility](#) at the OBI site. This solar-powered facility will produce stabilized Compressed Earth Block (CEB), lumber, insulation, paint, greenhouse glazing, and concrete - from natural and recycled materials within a 50 mile radius. OBI plans to open this facility to the public in 2017. The goal is reduction of environmental impact, as construction is the single most polluting sector - at 39% of all carbon emissions in the US.

Open Source Ecology is developing the Global Village Construction Set (see [TED Talk](#)) - 50 industrial machines for building civilization from scratch. - <http://opensourceecology.org>

The **Open Building Institute** is an open source effort to make ecological housing widely accessible. The project was founded by Catarina Mota ([TED Talk](#)) in partnership with Open Source Ecology and is the culmination of several years of experiments building ecological, affordable housing at their farm in Missouri, USA. - <http://openbuildinginstitute.org>

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- Kickstarter Video - <http://kck.st/28Rm7El>
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