



Around 70 to 80 per cent of the home is 3D-printed | Photo source [Habitat for Humanity](#)

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## A 3D-PRINTED ANSWER TO THE HOUSING CRISIS

 ARCHITECTURE & DESIGN

### **A non-profit organisation is developing a model for fast, cheap homebuilding using a combination of 3D-printing and traditional techniques**

**Spotted:** Global non-profit Habitat for Humanity (HFH) has helped more than 4 million people around the world to construct, rehabilitate or preserve homes since 1976. The work, conducted by volunteers, helps to fulfil the organisation’s vision of a world where everyone has a decent place to live, and provides a critical foundation for breaking the cycle of poverty. Now, HFH may have found a way to increase the number of people they can help – 3D-printed homes.

HFH is working on a pilot project in Tempe, Arizona which involves construction of a custom, single-story home, using a mix of 3D-printing and traditional construction methods. They hope that this could provide a model for scalable, cost-effective homebuilding that can help to address the affordable housing crisis facing many communities. The project consists of a three bedroom, two-bath home with a total area of 2,433 square feet.

Around 70 to 80 per cent of the home is 3D-printed, including all internal and external walls. The remainder of the house, including the ceilings, is a traditional build. The printing is done using PERI’s BOD2 gantry printer, which is specially designed for large construction projects. The BOD2 works in three dimensions, allowing the printer to move to any position within the structure, building up both inner and outer walls layer by layer.

Jason Barlow, President and CEO of Habitat Central Arizona [described](#) the project as, “a moonshot opportunity for Habitat for Humanity Central Arizona. When we consider the housing issues facing Arizona, the need for affordable homeownership solutions becomes clear. If we can deliver decent, affordable, more energy-efficient homes at less cost, in less time and with less waste, we think that could be a real game-changer. Think of the implications.”

Indeed, HFH are not the only ones considering the implications of being able to build houses faster and more affordably with 3D printing. At Springwise, we have chronicled the increasing use of this technology for housing solutions. Recent innovations include 3D-printed [schools](#), a 3D-printed [clay house](#) and an entire 3D-printed [community](#).

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Website: [habitat.org](https://www.habitat.org)

Contact: [habitat.org/contact](https://www.habitat.org/contact)

## **Takeaway:**

Habitat has made clear that this is not a demonstration home – a Habitat-selected family will live in the completed building. However, it could also be a model for wider affordable home-building. Tempe Mayor Corey Woods certainly thinks so. She has expressed her hopes that 3D-printed houses could help the city develop more affordable housing. “Working with valued partners, we want to ensure that everyone who wants to live in Tempe can do so,” she said, adding, “Beyond our city borders, this project can serve as a model for other communities as we all work to meet the critical needs of families who truly are the faces of this growing housing affordability crisis.”