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IN ITALY, 3D PRINTER BUILDS AFFORDABLE HOMES FROM MUD

 PROPERTY & CONSTRUCTION

WASP are producing a full sized, portable 3D printer which can print mud houses up to 3 metres high.

3D printing is now being used to produce anything from [personalized action figures](#) to [tactile maps](#) that help the visually impaired navigate. Now, Italian social business [WASP](#) is developing a full size portable 3D printer which prints bio-architecture houses — combining one of humanity’s latest technological developments with one of its oldest building materials, mud.

In many parts of the world where affordable housing shortages are a growing problem, mud remains the most affordable and widely available raw material. However, building with it is an arduous and labour-intensive process. WASP intend to produce a commercially-available three armed, 20ft portable 3D printer which can be assembled on site, by two people, in two hours and print structures up to 3 metres high. For now they have been demonstrating their process with the scaled down Delta WASP 3D printer.

Both models require the earth to be sifted into a powder and mixed with water and local binding fibers — be that wool or tamarind. The concoction is fed into the printer and extruded one layer at a time according to the object’s design. It currently takes two weeks for the machine to print a mud house and there are plans to build a full-sized house in Sardinia later this year.

You can watch the demonstration at Rome’s “Maker Faire” in the video below:

WASP were inspired by the bio-architecture of the mud dauber wasp which builds its home entirely from mud. Could any other structures in nature inspire the next wave of 3D printed products?

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