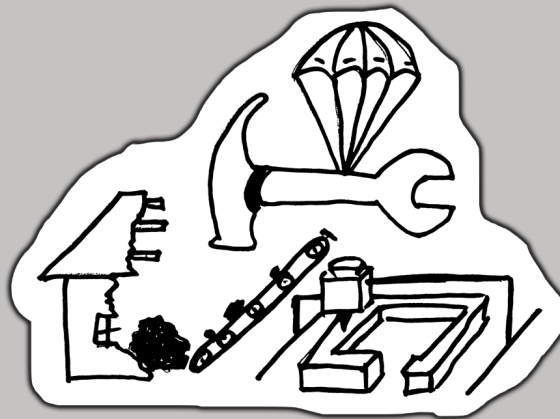# THE Port - Hackathon at CERN

Air Droppable 3D Printing for Housing & Shelters

Summary:

Often there is a need for the rapid deployment of robust and secure housing for humanitarian relief. At the same time many natural disasters create enormous amounts of debris. It's removal has high priority as it hinders humanitarian help. Currently tents and temporary shelters are transported as needed but could 3D printed technologies replace or supplement it? Could 3D printing be used for further use cases in refugee camps?

Goals:

Identify materials and techniques that could be used for 3D printing of houses/parts of houses. Finding requirements for different contexts where 3D printed houses or parts could be of use. Test printable materials for suitability as building materials. Explore printing methods for robustness, price and suitability as well as design structures that are printable, affordable.

Resources:

A Chinese company, WinSun can already 3D print concrete houses in under 24 hours. The Open Source Ecology project foresees making an open source toolkit to build a functional, self-sustaining village
http://www.cnet.com/news/worlds-first-3d-printed-apartment-building-constructed-in-china/
http://opensourceecology.org/

www.theport.ch