Circular Case Study: Circular Building

The Challenge

- The construction industry produces three times more waste than all UK households.
- Construction materials, consume vast amounts of raw materials - in the UK 400 million tonnes equivalent to 60 pyramids.
- Concrete generates large amounts of carbon - 5% of manmade emissions.
- When a building is demolished - this represents a massive loss of material value. Can buildings be designed more like Lego, so the components can be reused to make new buildings?

Question: what is a circular building?

A building that is flexible, so that throughout its life it can be easily reconfigured for new uses.

A building that at the end of its life, all its components can be re-used, remanufactured or recycled.

The Solution

- Arup, Frener and Reifer, BAM and the Built Environment Trust collaborated to create a building that is flexible, disassemblable and reusable.
- Stewart Brand’s ‘Six S’s’ concept is a good starting point.
- Clamp connections between the cladding and steel frame
- Sustainably sourced, reusable decking and cladding
- Standardising and modularisation of components
- Tagging of all items for tracking and facilitating reuse

To find out more visit:
http://circulatenews.org/2016/09/the-circular-house/
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