The Hype Cycle

**EXPECTATIONS**

- First-generation products
- Lots of customization needed
- Mass media hype begins

**Peak of Inflated Expectations**

- Negative press
- Company failures

**Plateau of Productivity**

- High growth
- 20-30% adoption

**Slope of Enlightenment**

- 2nd-generation products
- Best practices developing

**Trough of Disillusionment**

**Gartner’s Hype Cycle for 3D Printing, 2016**
3D Printing in Construction

The Hype

The Reality

A Giant 3D Printer Builds Ten Houses In One Day

Instant Concrete

Inflated Expectations?
Realistic Expectations

- Embrace “low-hanging fruit”
- Fill gaps in current construction technologies
- Learn from AM advancements in other sectors
Novel Forms

Forms in construction:

Forms in nature:

Dead Cholla cactus

Evilldesign.com

ARUP
Nonstructural Components

Aesthetic 3D printed cladding

www.constructionmanagermagazine.com
3D Printed Molds


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Safety & Reliability

Structural Design

Process-Structure-Property (PSP)
(Example from Sandia National Labs)

Property Uncertainty

Standardized testing, reporting, & databases of large-scale AM parts are critical!
Thank you!