IDEAS CITY PART ONE: ADHOCRACY

CATEGORY

LEARNING/DESIGN

SUMMARY

Technologies such as 3D printing and the Lean and Agile organizational philosophies are producing the 3rd Industrial Revolution

Ideas City is one of New York's many emerging conferences that are less industry specific and more multidisciplinary, gathering experts from a range of fields to tackle single issues. In part one of this series covering the highlights of the conference we'll discuss the topic of the first panel: adhocracy, agility and distributed production.

To begin with a formal definition of Adhocracy: "A form of business management which emphasizes individual initiative and self-organization in order to accomplish tasks. This is in contrast to bureaucracy which relies on a set of defined rules and set hierarchy in accomplishing organizational goals. The term was popularized by Alvin Toffler in the 1970s."

The idea of distributed decision making is not new, nor is it particularly interesting on its own. But when placed within the context of distributed manufacturing and the Lean Startup movement, adhocracy (or at least an approximation thereof) gives us a framework to consider what is surely the most fertile ground for innovation since the first industrial revolution. True to its nature, distributed manufacturing is widely geographically distributed, with Hacker Labs forming everywhere from Brooklyn to Shanghai to Lagos, the host of last year's Maker Faire Africa. Maker Fairs are gatherings of people whose only discernible common interest is hacking and remixing technologies to serve a new purpose. This movement is made possible by

technologies such open source CAD files and 3D printers, a technology that is getting cheaper and cheaper. Consider that when HP's first commercial desktop printer went on sale in 1988, it had a price tag of $1,900 in 2013 dollars, about the same as what the low end commercial 3D printers cost today.

But for the maker movement to take root and produce serious commercial and non-commercial applications there needs to be a parallel organizational philosophy. This is where the Agile and Lean movements come in.

Lean is a term borrowed from Toyota's Lean Manufacturing model that seeks to eliminate waste and focus on value creation by limiting as much as possible the time for a product/service to go through the loop of production, feedback and iteration. The idea is that the sooner you can market test a prototype product/service the sooner you are able to discern which features provide the most value to your user. You can then direct resources to the development and deployment of those features, eliminating possible wasted time and money chasing features that do not create value.

Agile has its roots in software development and shares much of the same characteristics of Lean: it is a set of iterative development processes performed by self-organizing, cross-functional teams.

The Agile Manifesto:

"Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan"

Agile relies heavily on collaboration, communication and adaptability; as circumstances and objectives change (often as a result of the Lean feedback loop), so must methodologies and objectives. Lean and Agile complement each other in that they both seek to eliminate waste and form teams on an ad hoc basis as projects demand. From the Agile Manifesto: "Our highest priority is to satisfy the customer through early and continuous delivery of valuable software."

What is so profound about this moment in the Lean and Maker movements is that technology and organizational tools are coalescing to form what Emeka Okafor terms the "3rd Industrial Revolution": the ability to rapidly and (crucially) cheaply develop and test prototypes; organizing teams, projects and even economies around the

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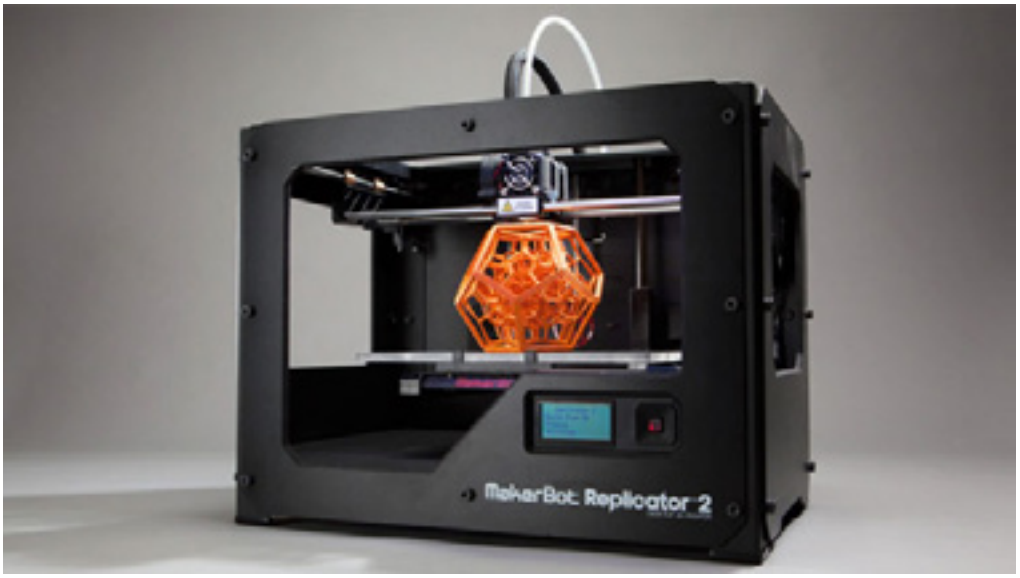
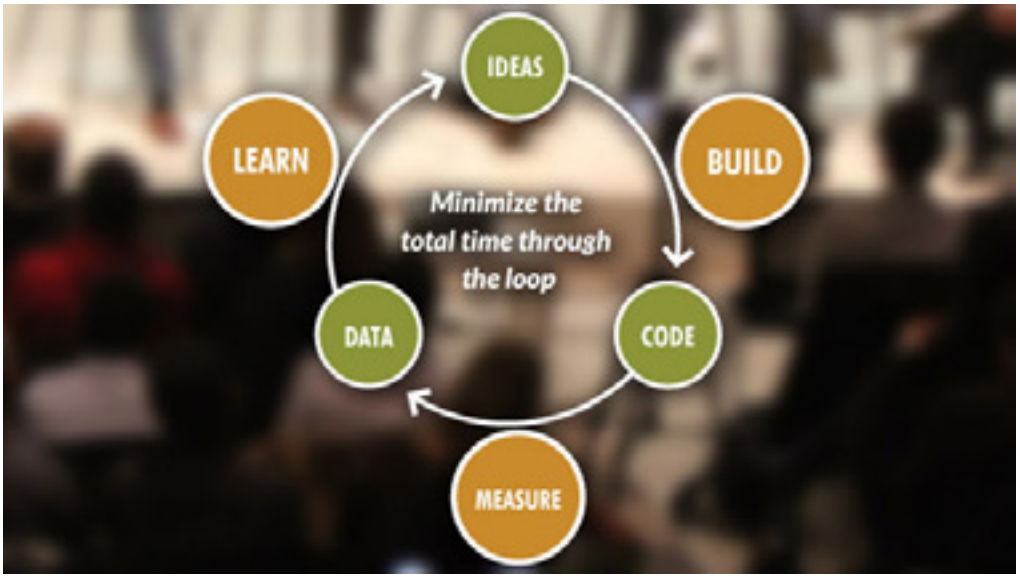
Maker Faire Africa



Makerbot Replicator 2



The Lean Development Loop