

CREATING



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# Knowledge Re-Use and Business Spaces in Regions New Models to Counterbalance Crisis

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# Citizen Manufacturing

Fab Lab (Neil Gershenfeld, MIT, 2001)  
Center for Bits and Atoms  
"How to make (almost) anything"

CNC milling

Laser cutting

3D printing

Microcontroller programming

Electronics



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# Maker Movement

## Makerspaces

MAKE magazine

MAKER faire

MAKER shed

<http://makermedia.com> (ex O'Reilly)

## Techshop Inc.

Bay Area

The Maker Movement Manifesto:  
Rules for Innovation in the new World of  
Crafters, Hackers and Tinkerers



Duplo Brick to Brio Track adapter by Zydac



# Who Takes Notice

## Global Players

Fab Lab: Schlumberger, Aramco, Chevron

Techshop: Ford, BMW

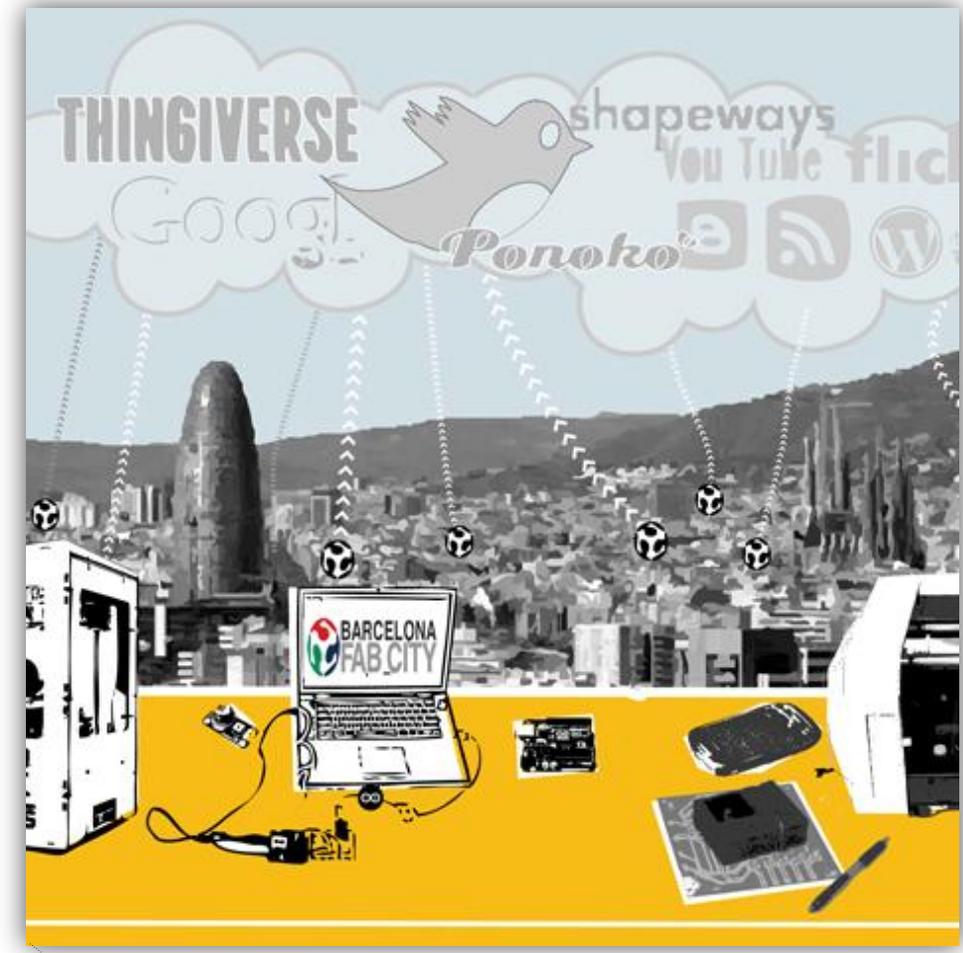
MAKE: DARPA

## Regional Players

Dutch Order of Inventors

Fab City Barcelona

- Hierarchical Growth → Lateral Growth
- Gonzo inventor → Regional Innovation System
- Neoliberal Entrepreneur → Social Entrepreneur



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# The Issues

Equity

Fairness

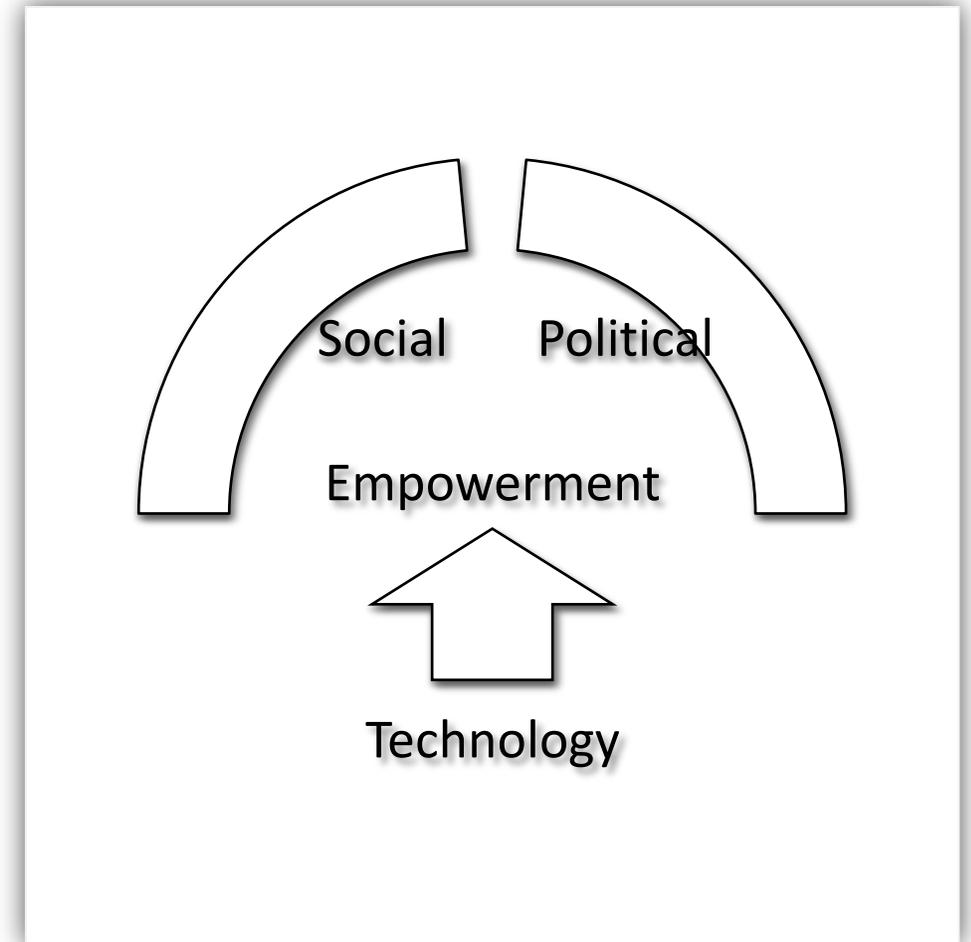
Diversity

Power and Economic Relations

Responsible Use of Resources and Sustainability

Third Places

Distributed and Collaborative



# Smart

## Smart as a Concept of Control

Smart Phone

Smart City – Songdo International Business District  
and Masdar City

## Smart as a Concept of Empowerment

Economy, Mobility, Environment, Citizenship, Quality  
of Life, Governance

## Self-decisive, Independent and Aware Citizens

## Flow of Knowledge

Open Access, Open Knowledge, Open Source  
as Key Business Principles



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# System of Systems

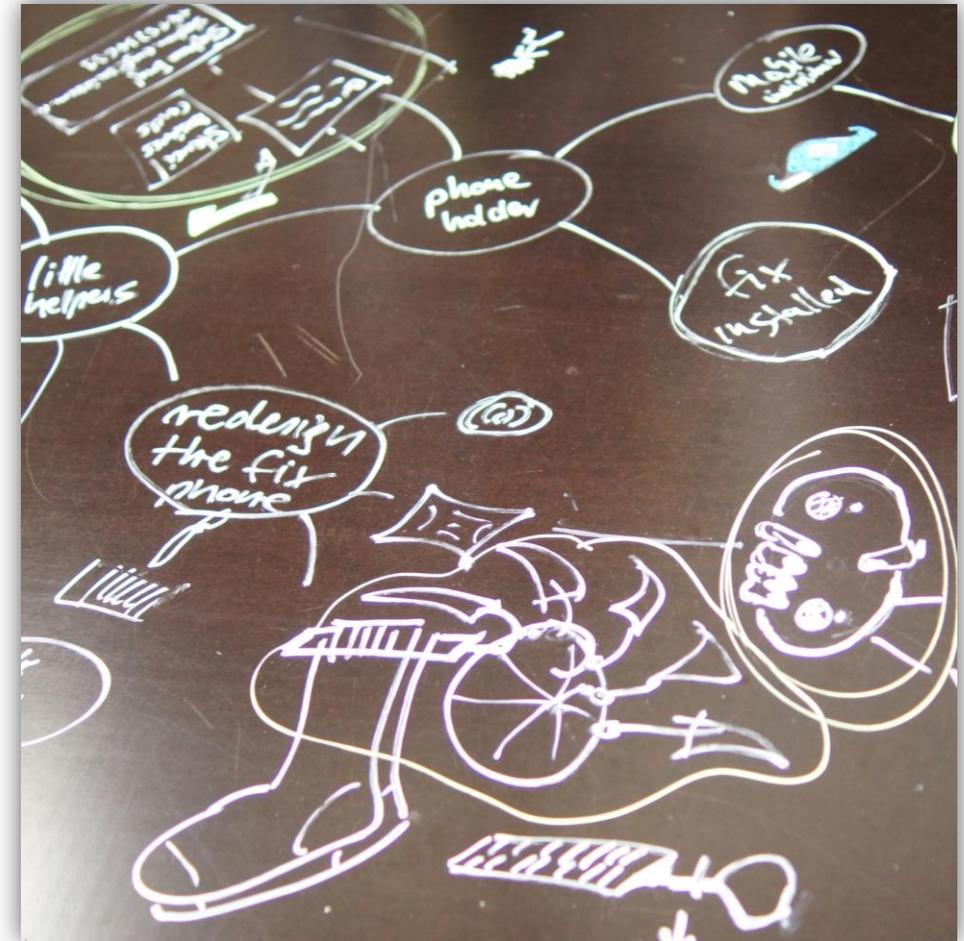
Not a top-down vision delivered solely through government investment

Organic “system of systems”

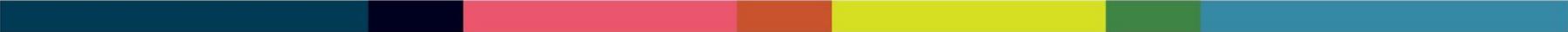
Government

Operational → Tactical Level

Short Term → Mid Term



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# Core Values

## Openness

'right to produce'

open source in design & hardware

## Ownership

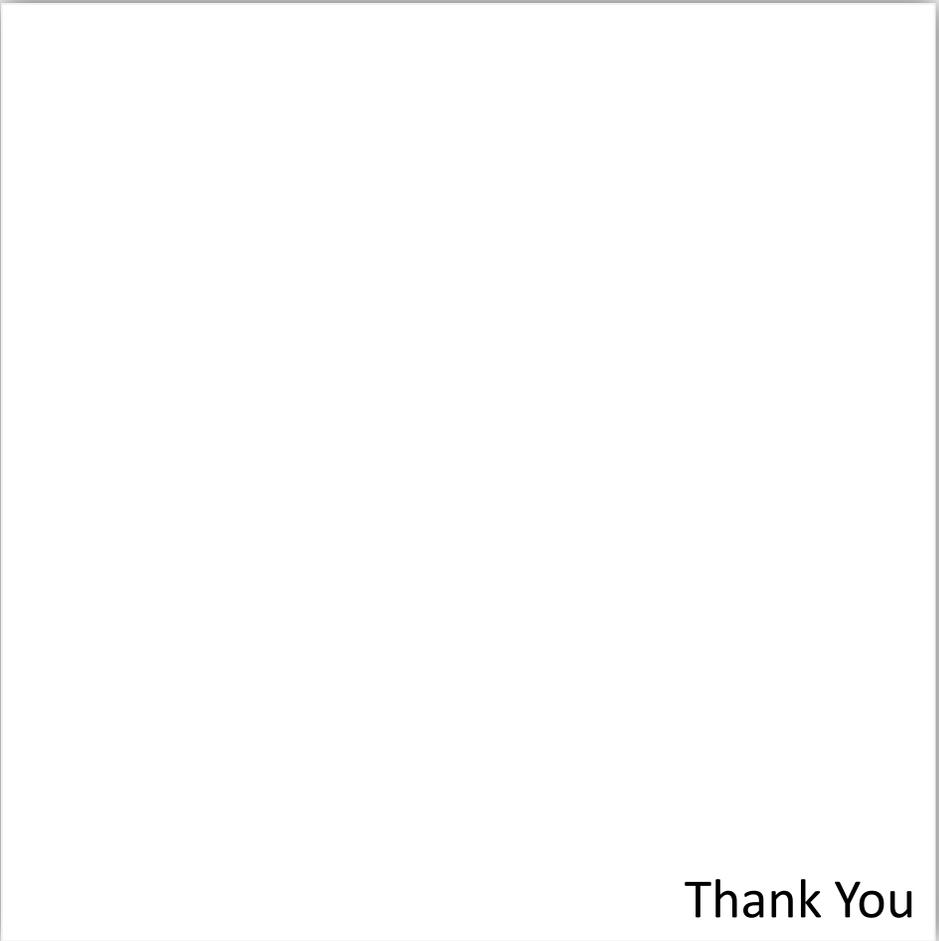
making city

responsibility

## Experiment

fail quickly

but cheaply



Thank You

