

Advanced Knowledge Networks for the Innovation beyond the ATLANTIC ARC

The Triple Helix to the Economic Growth in the European Regions: Universities, Government and Enterprise

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A Coruña, 28 January 2011



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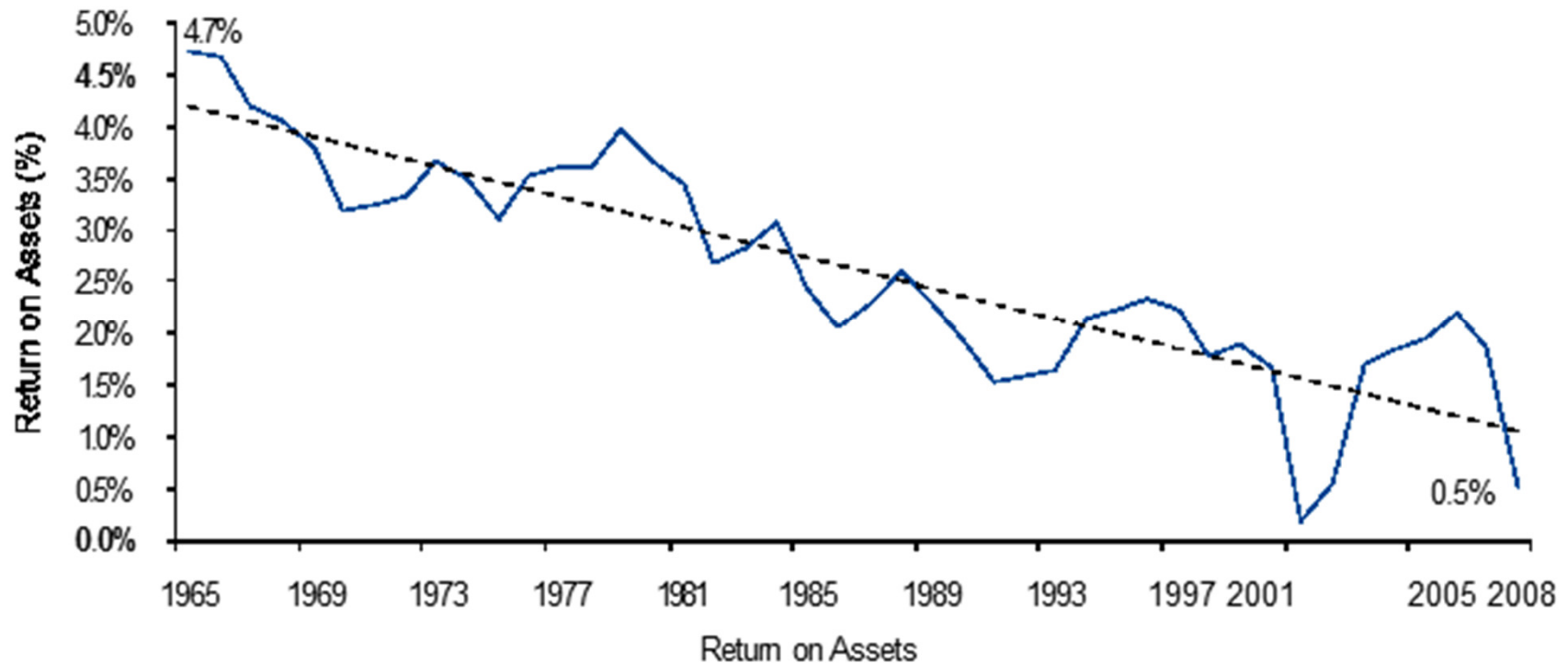
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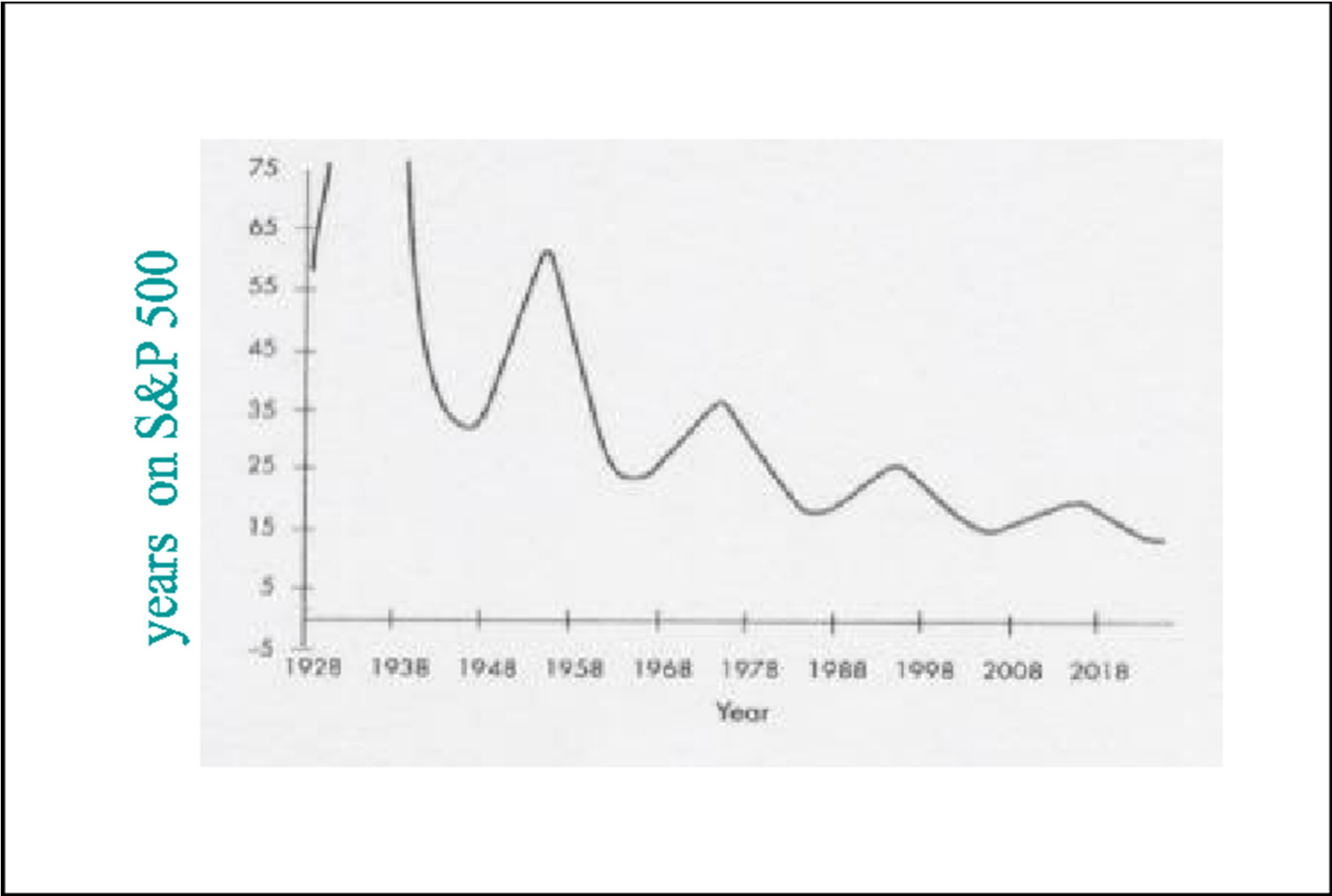
The return on assets (ROA) for U.S. firms has steadily fallen to almost one-quarter of 1965 levels

Economy-wide Asset Profitability (1965-2008)



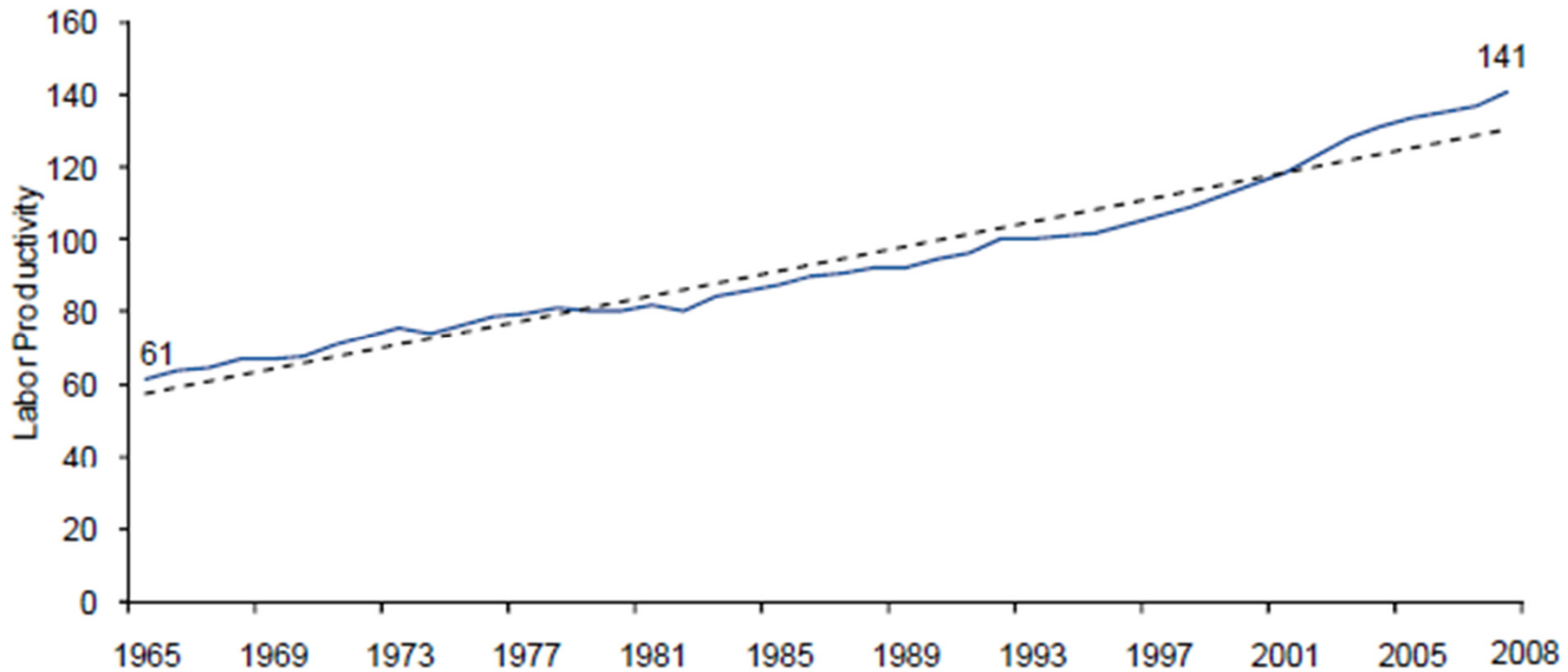
Source: Compustat, Deloitte analysis

Average Lifetime of S&P 500 Companies



Labor productivity has doubled - largely due to advances in technology and business innovation.

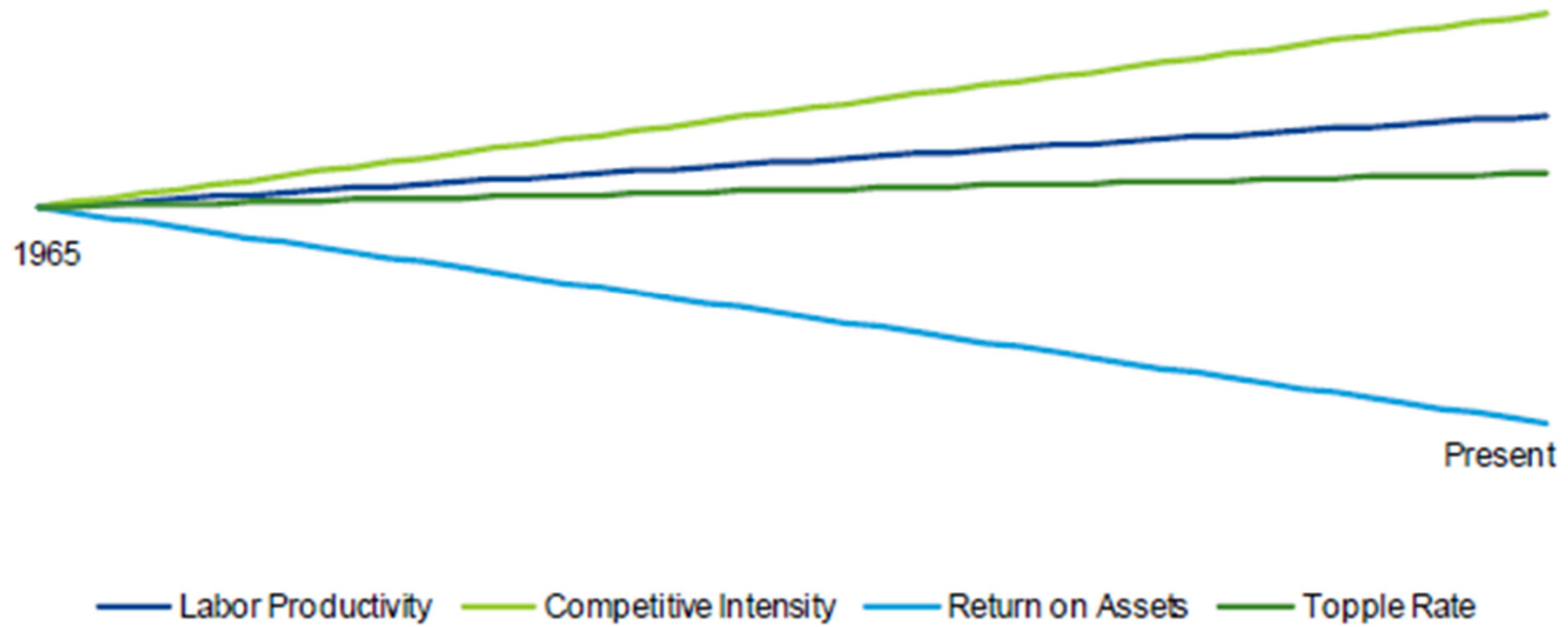
Economy-wide labor productivity (1965-2008)



Source: Bureau of Labor Statistics, Deloitte analysis

The performance paradox: ROA has dropped in the face of increasing labor productivity

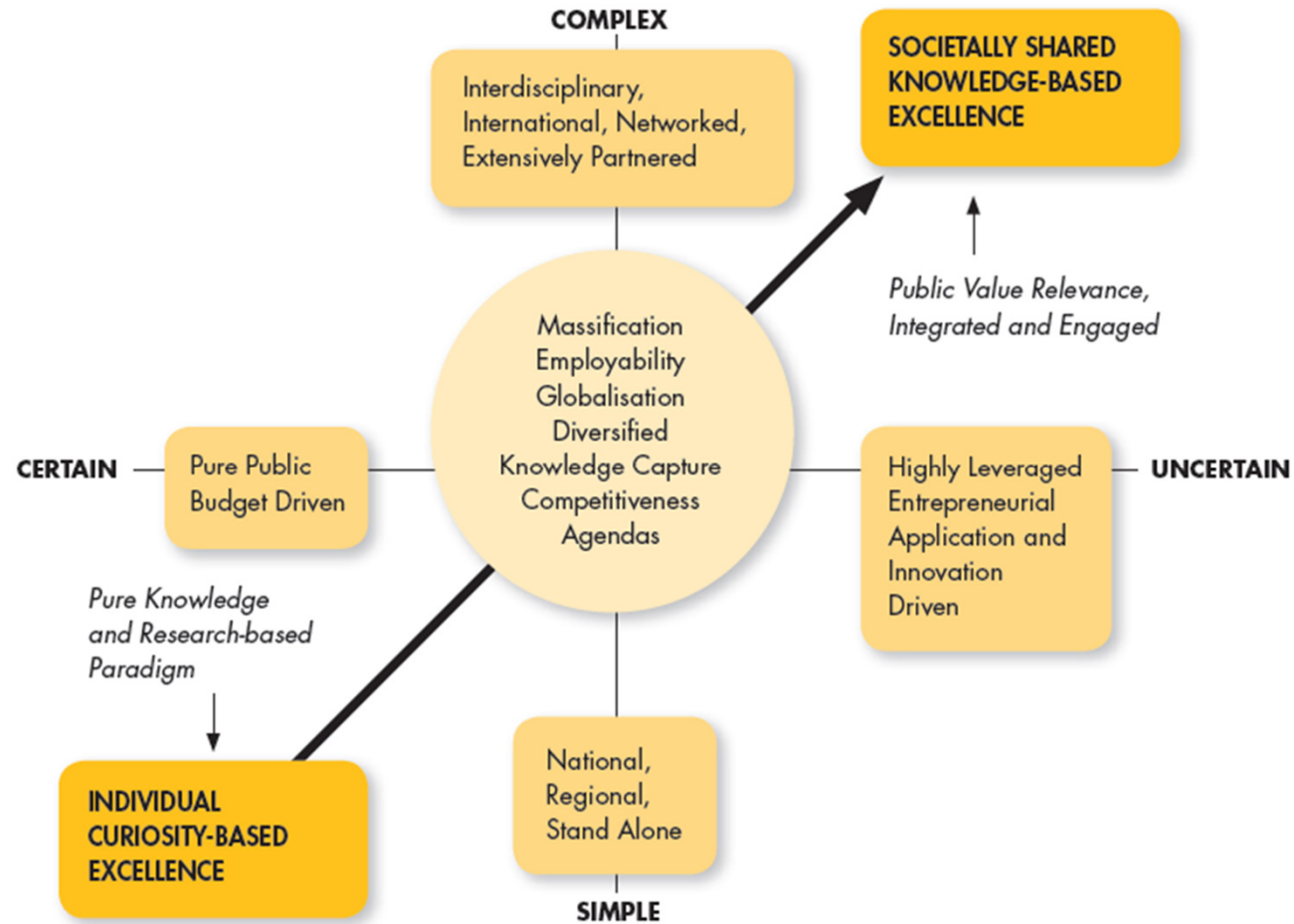
Firm performance metric trajectories (1965-2008)



Source: Deloitte analysis

A CRISIS of Globalization

Open Systems: more complex and more uncertain



Economist Robert Reich

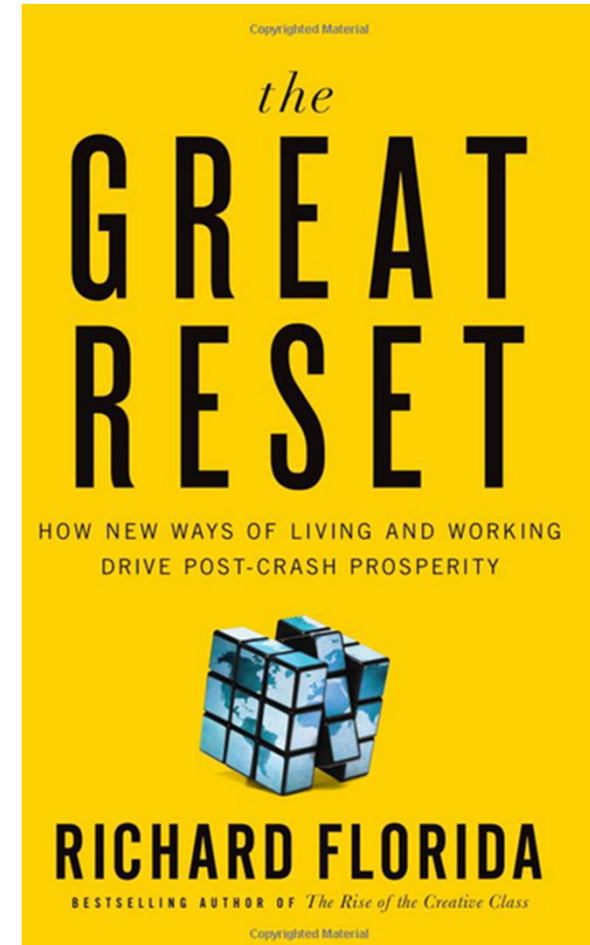
- What will it look like? Nobody knows.
- All we knows is the current economy can't 'recover' because it can't go back to where it was before the crash.
- We should be asking when and how the new economy will begin.



CRISIS Today: The Great Reset

Richard Florida

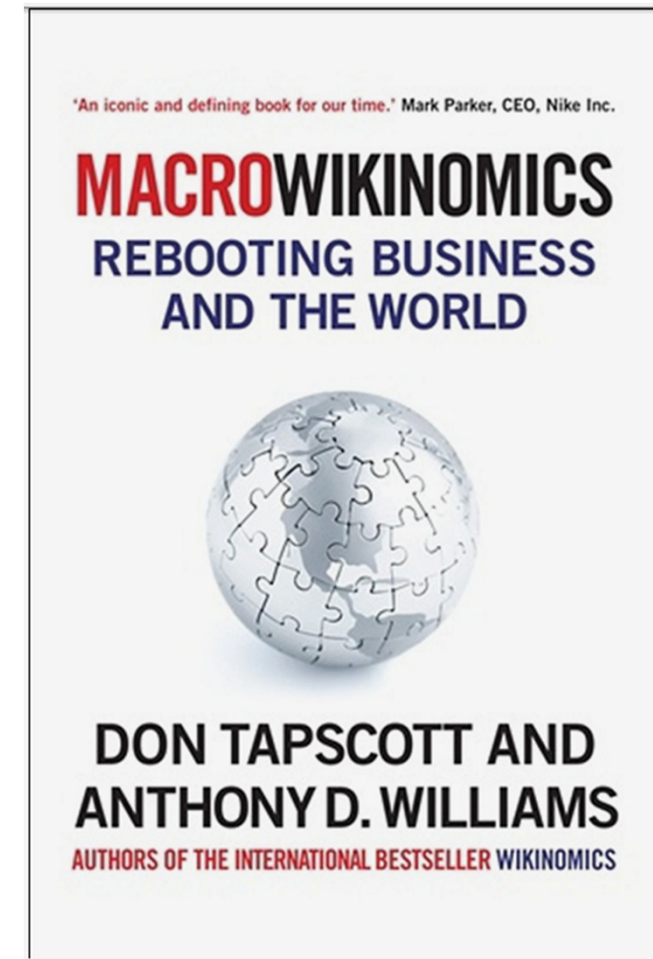
“The First Great Reset occurred in the 1870's, the second in the 1930's, and the third is now under development”



CRISIS Today: **MACROWIKINOMICS**

Don Tapscott and Anthony Williams

“The world has reached a critical turning point: reboot all the old modelsSociety has at its disposal the most powerful platform ever for bringing together the people, skills, and knowledge”



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WHERE IDEAS COME FROM Kevin Kelly and Steven Johnson

“Why the best environments for creativity are diverse, collaborative and tolerance of failure.
WIRED Oct 2010”



WHERE IDEAS COME FROM

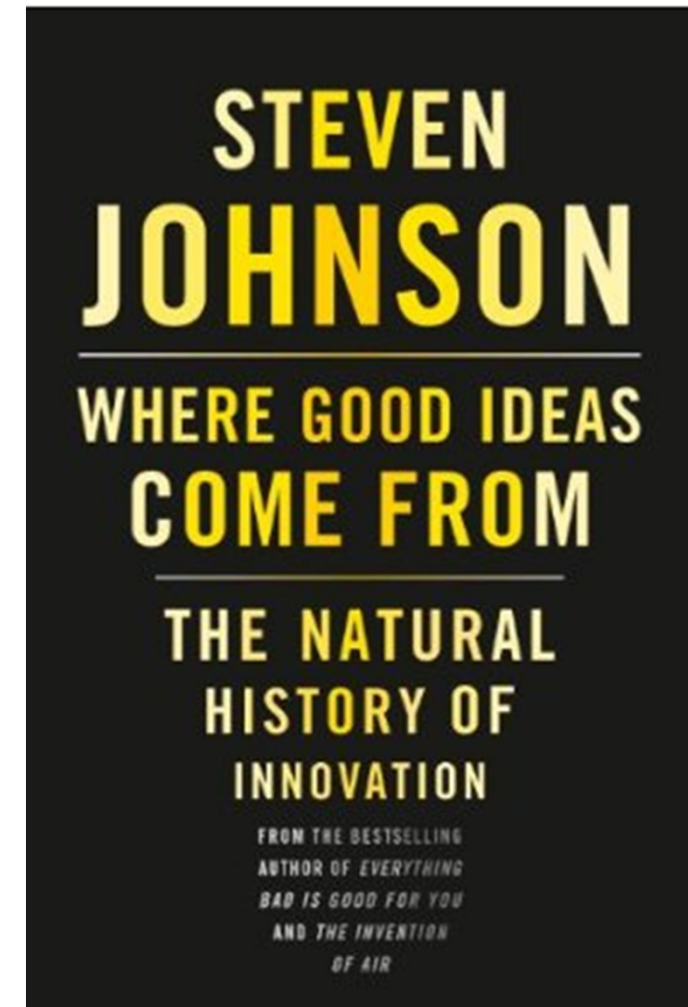
Kevin Kelly and Steven Johnson

- We should think of IDEAS as connections, in our brain and among people.
- Ideas aren' t self-contained things; they' re more like ecologies and networks.
- Ideas travel in clusters.

The Natural History of Innovation

Steven Johnson

- Johnson draws on seven centuries of scientific and technological progress, from Gutenberg to GPS, to show what sorts of environments nurture ingenuity.
- The great creative milieus, whether MIT or Los Alamos, New York City or the WWW, are like coral reefs, diverse colonies of creators who interact and influence one another.



Coral reef as a model of innovation

Steven Johnson

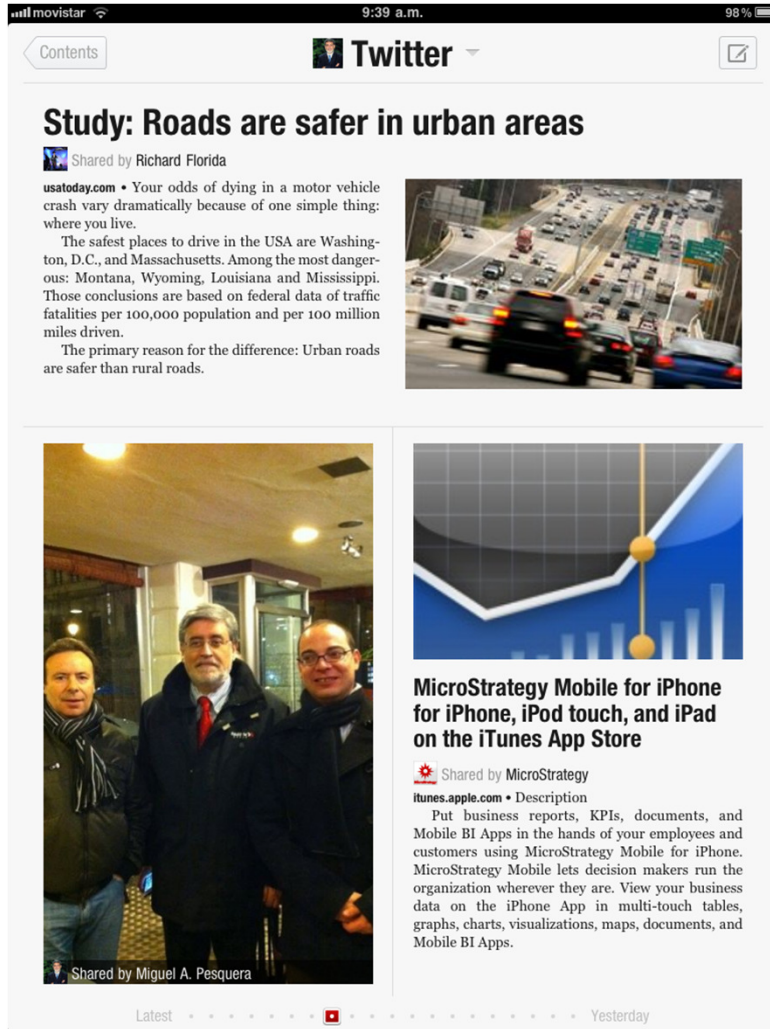
- Ecosystems that form in the portion near the coast that is under a shallow depth water.
- Often called “rainforests of the sea”, coral reefs form some of the most diverse ecosystems on earth.
- Vulnerable to certain natural events, pollution, sedimentation.



Coral Reef: Examples

- **TWITTER:** not to see what people are having for breakfast, but to see what people are talking about, the links to articles and posts.
- **UNIVERSITY:** As much as we sometimes roll our eyes at the ivory tower isolation of universities, they continue to serve as remarkable engines of innovation.

Twitter in Flipboard



- SEREMPATY
 - It is the combination of serendipity (which is achieved by chance) and empathy (putting yourself in the other).
 - Is "contact with luck, " the use of empathy for what we want to randomly.
- SCENIUS
 - Innovation doesn' t come just from giving people incentives; it come from creating environments where their ideas can connect.
 - The innovation comes from social scenes, from passionate and connected groups of people.

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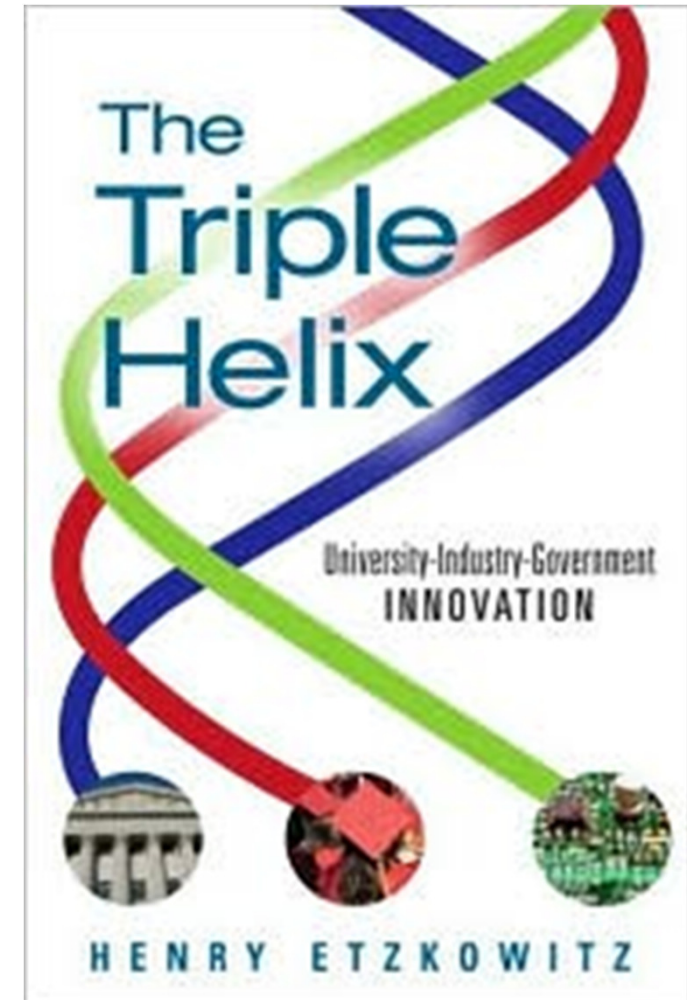
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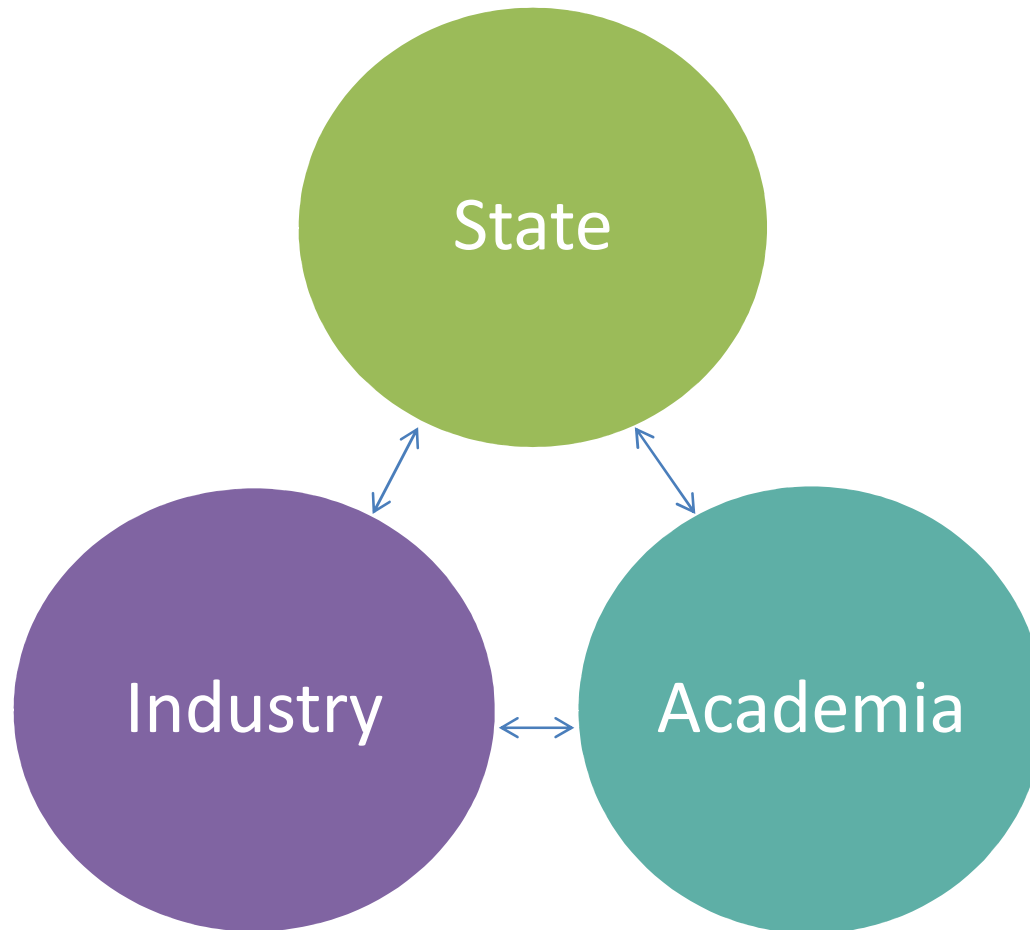
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Innovation model of Triple Helix

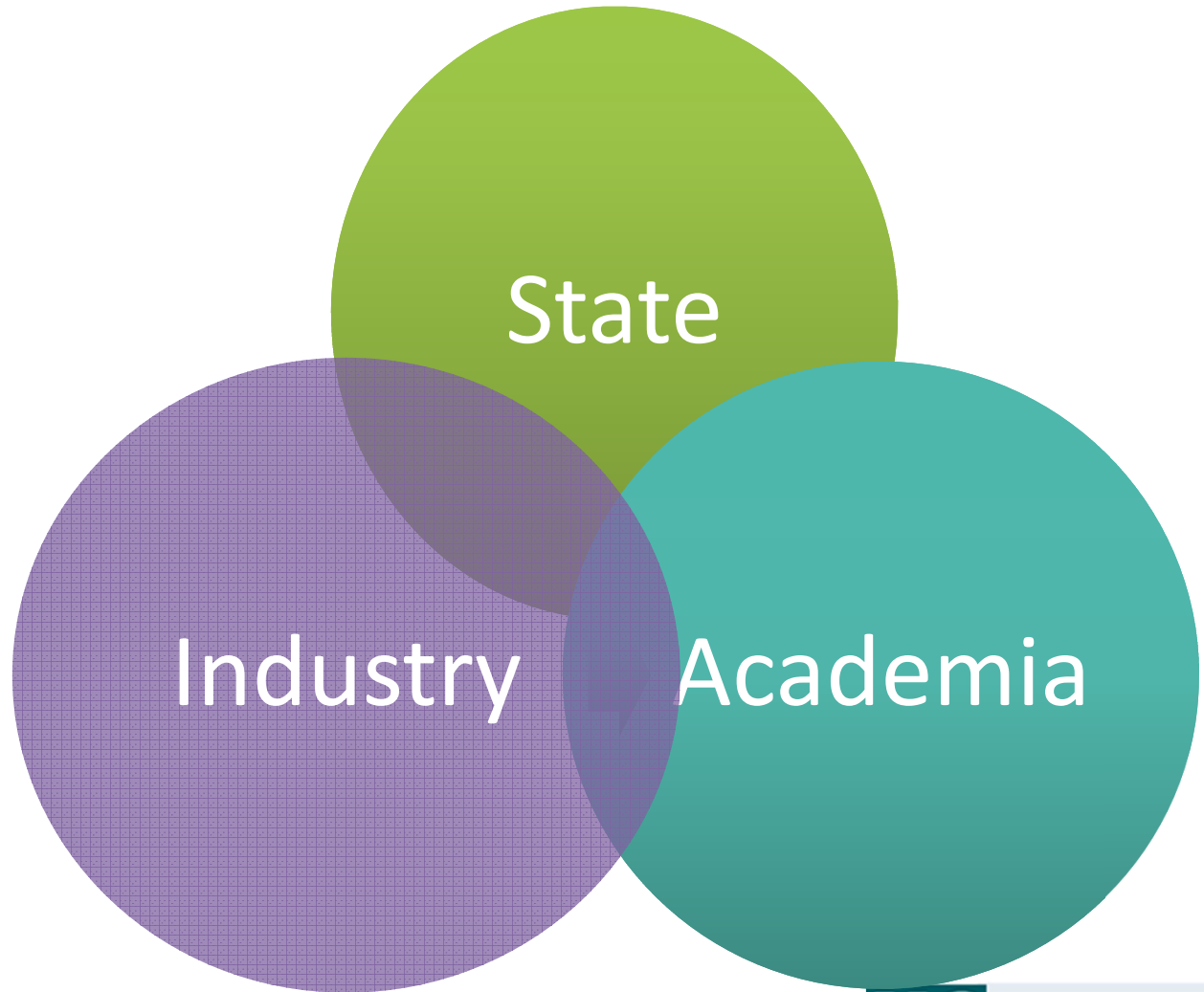
- **Government:** Guarantor of society's rules and regulations.
- **University:** Generator and transmitting knowledge.
- **Enterprise:** Source to generate productive activities.



Laissez-faire Triple Helix



Hibrid Organizations



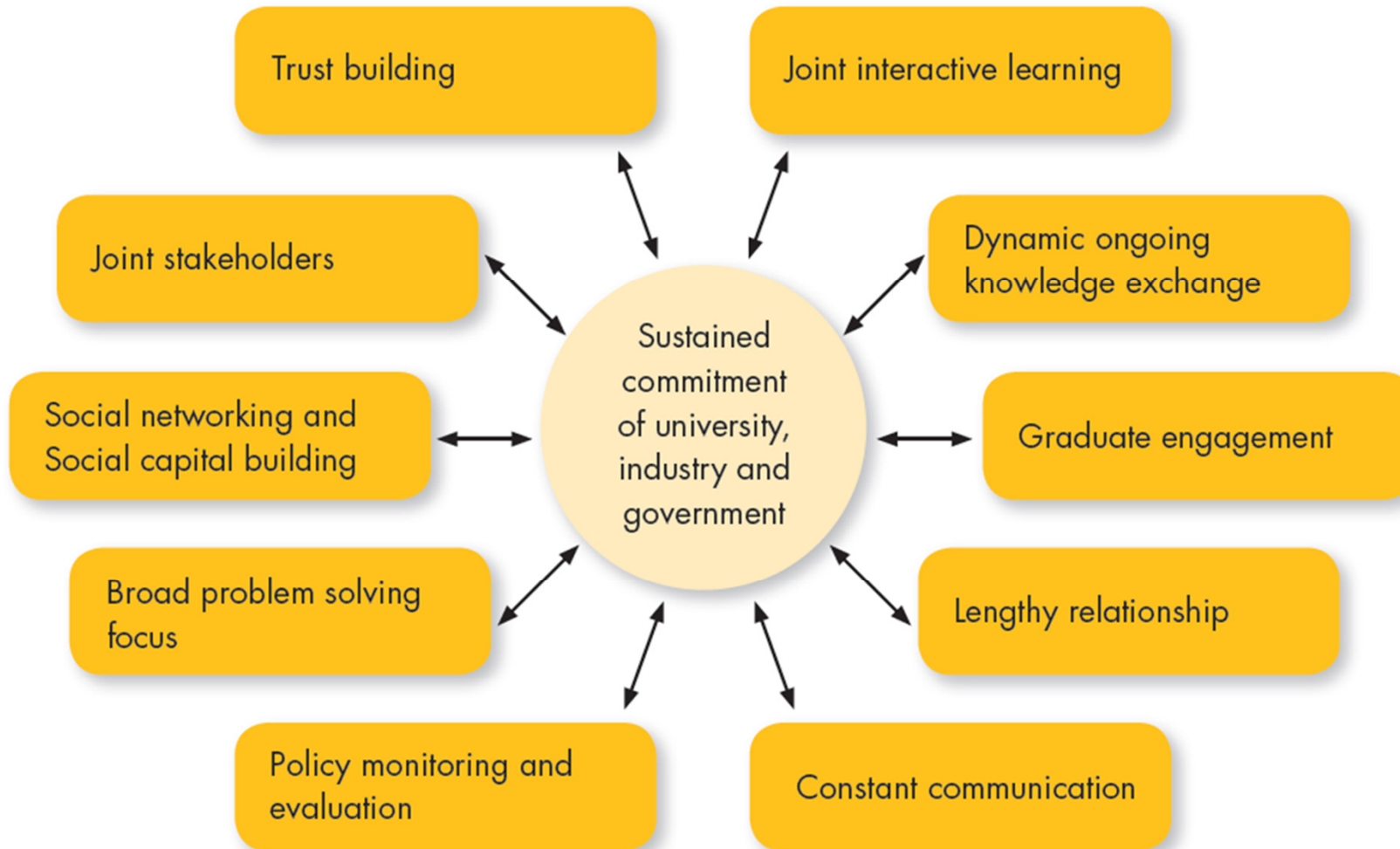
Triple Helix Paradigm

- Innovation is a non-linear ‘system integration & networking’ process.
- Competitive success depends on localised concentrations of skilled people and technology.
- Universities should be direct contributors to wealth creation.

Triple Helix spaces and science-based economic development

Spaces creation	Characteristics
KNOWLEDGE	Focus on <i>collaboration among different actors</i> to improve local conditions for innovation by concentrating related R&D activities and other relevant operations.
CONSENSUS	Ideas and strategies are generated in a “triple helix” of <i>multiple reciprocal relationships</i> among institutional sectors (academic, public, private).
INNOVATION	Attempts at realizing the goals articulated in the previous phase; establishing and/or attracting public and private venture capital (combination of capital, technical knowledge and business knowledge) is central.

THE BASIS OF THE TRIPLE HELIX MODEL



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From PUSH to Pull Economy

The New Economy and Culture of Networking Technology

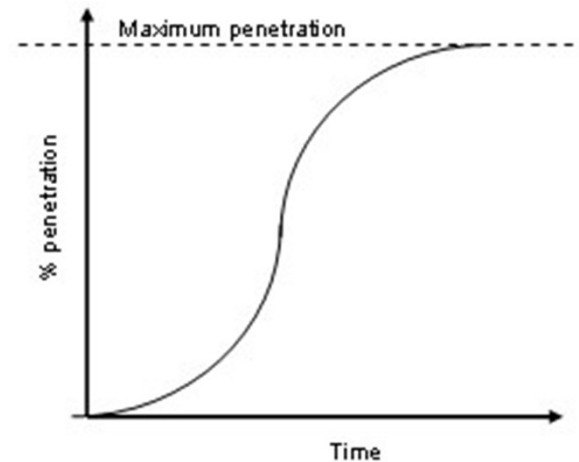
John Hagel definition

- **PUSH Economy**
 - essentially the mass production economy, as based on the company's anticipating consumer demand and then producing the right resources at the right time and place to meet that demand.
- **PULL Economy**
 - open, flexible production platforms that use networking technologies to orchestrate a broad range of resources

PUSH Economy: Scalable Efficiency

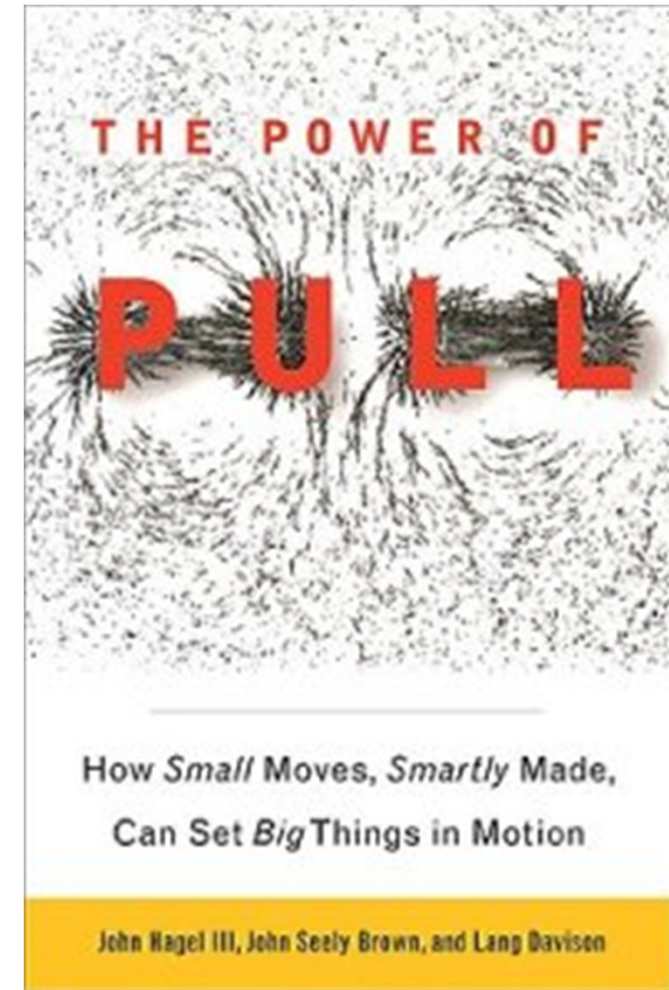
- Predictable
- Hierarchy
- Control
- Organizational routines
- Minimize variance

S Curve



Pull Economy: The Power of Pull John Hagel III, John Seely Brown

“The book's central premise is that *institutions will be shaped to provide platforms to help individuals achieve their full potential by connecting with others and better address challenging performance needs.* This is greatly possible thanks to the use of technology and digital media.”



The Power of Pull: Three principles

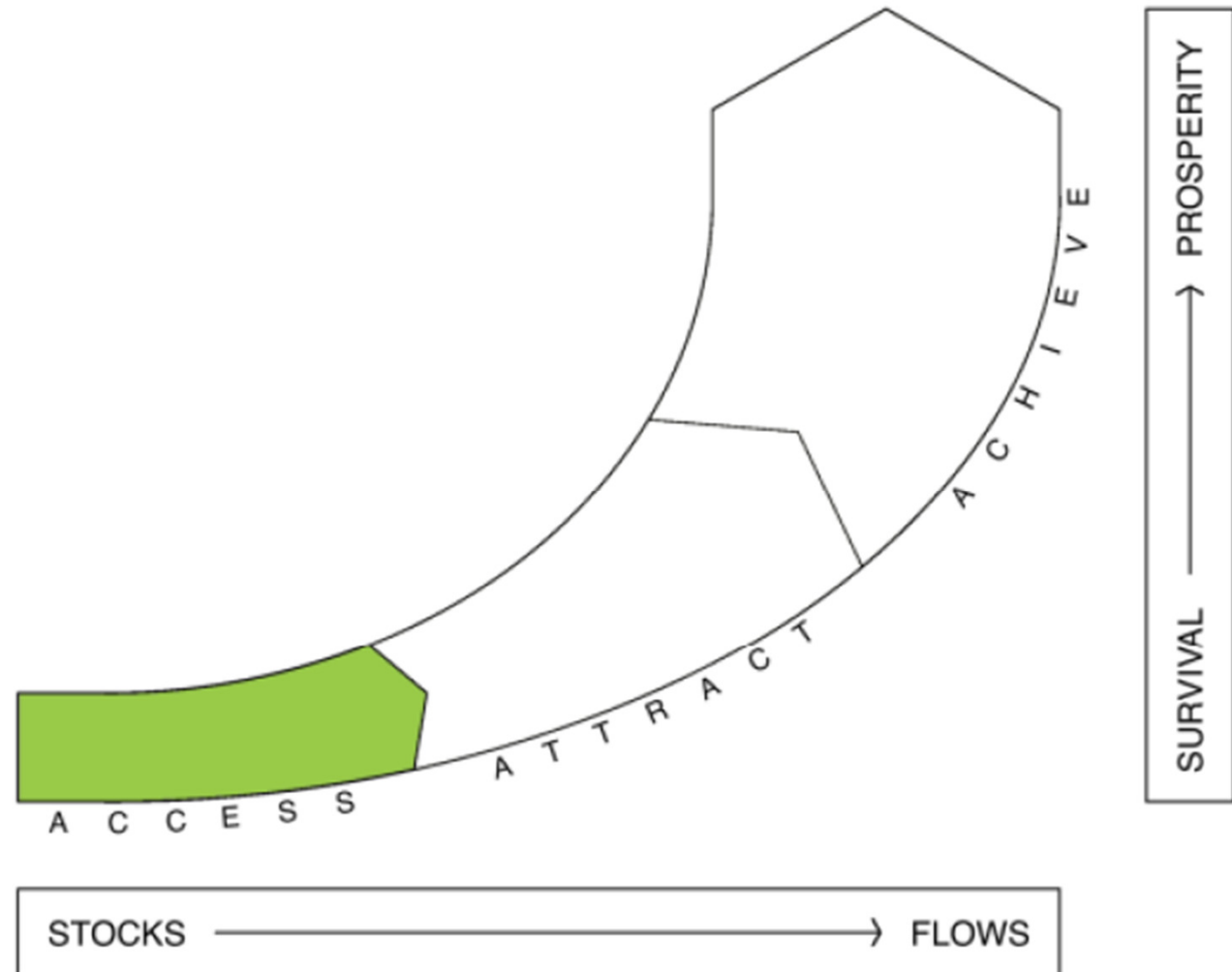
- **Access** people and resources where you need them.
- **Attract** people and resources you didn't even know existed.
- **Achieve** potential with less time and more impact than you imagined possible.

Access

on-demand access to resources

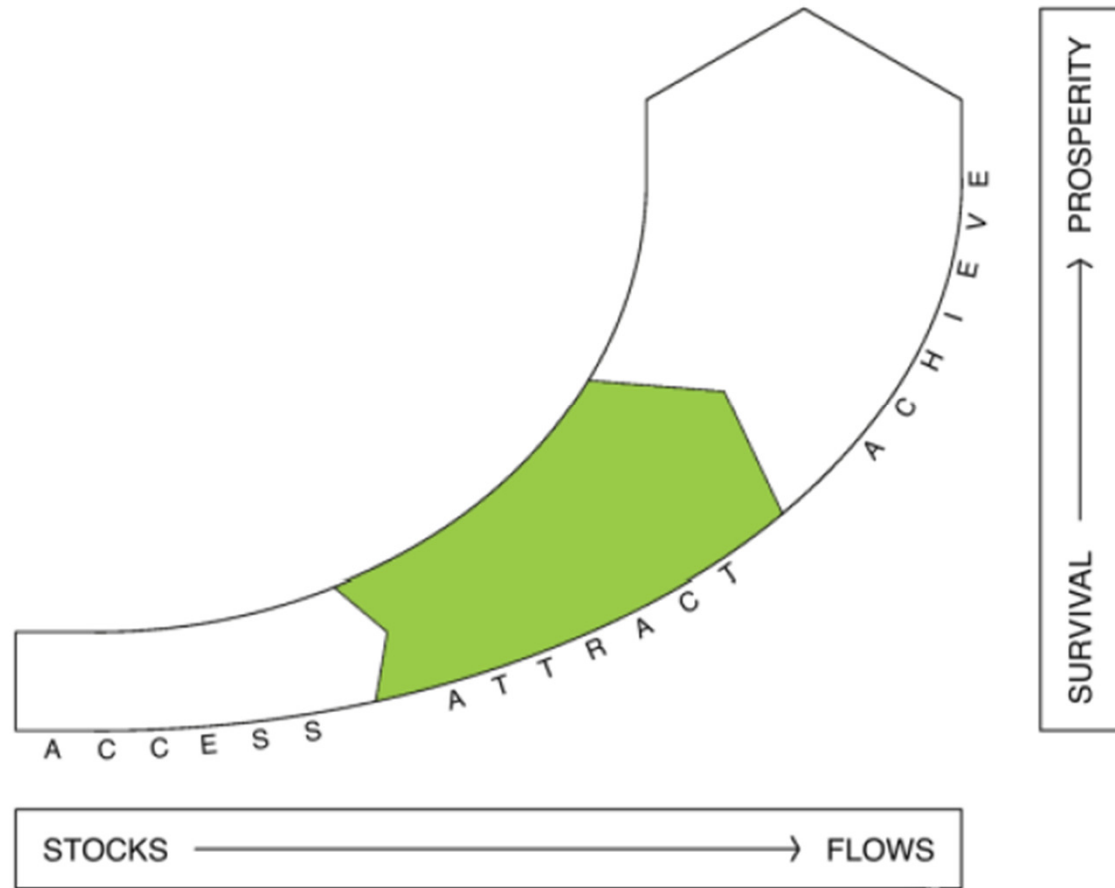
Access involves the ability to find, learn about and connect with people, products, and knowledge to address unanticipated needs.

- **Individuals:** Social Networks that can scale.
- **Firms:** From Push Programs to Pull Platforms



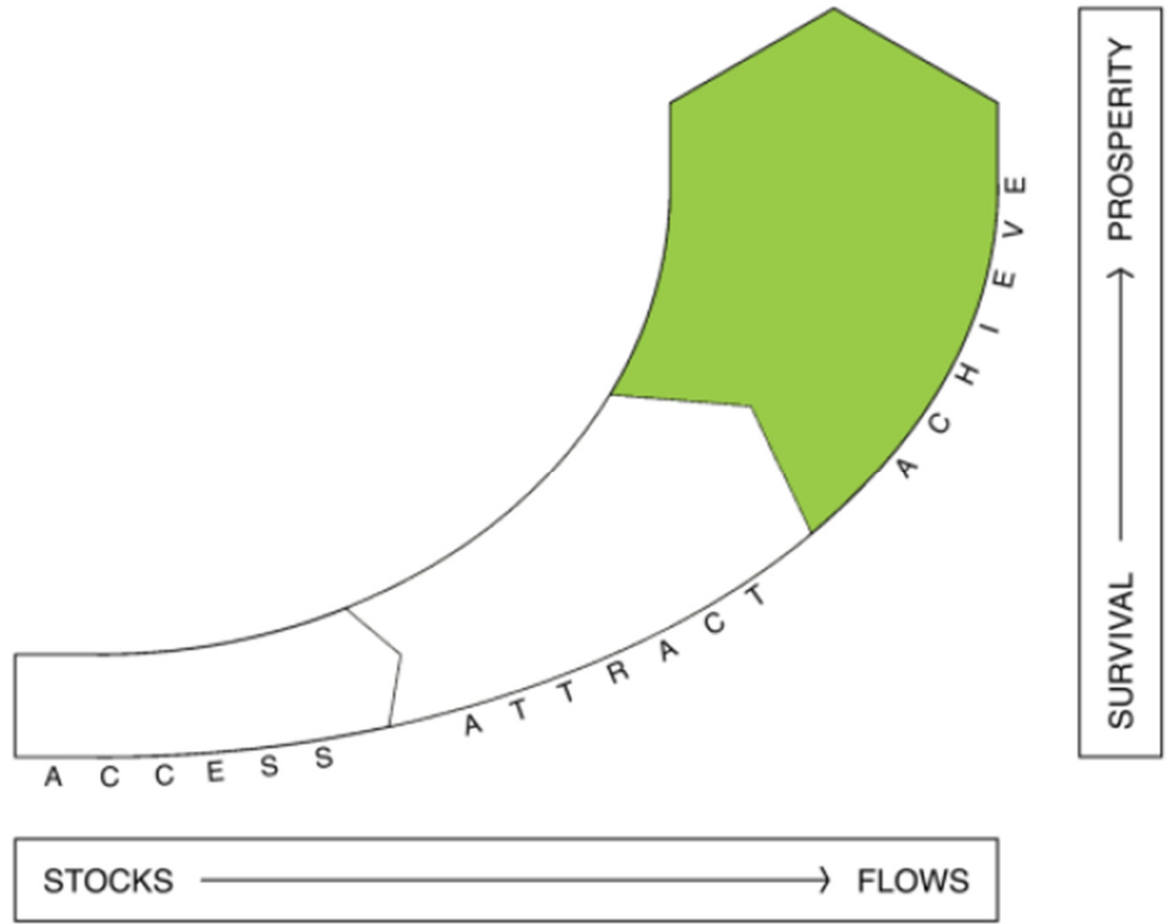
Attract

Attract involves techniques for drawing people and resources to us that we were not even aware that existed, but prove to be relevant and valuable.

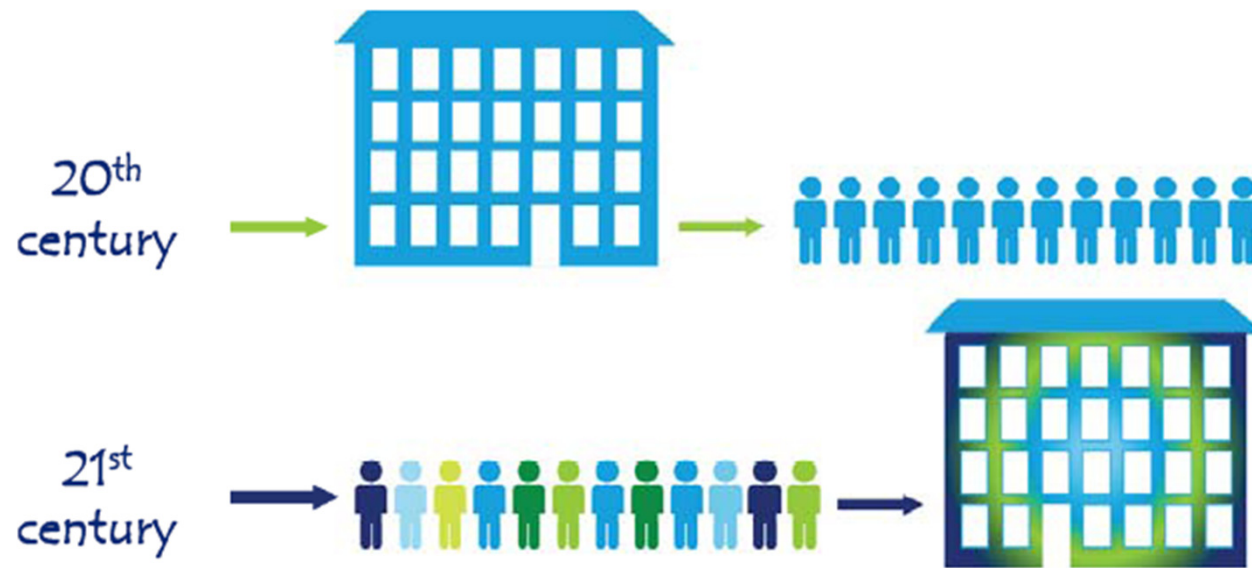


Achieve

Achieve pulling out of each of us & our institutions our full potential and harnessing effects.



Individuals and Institutions

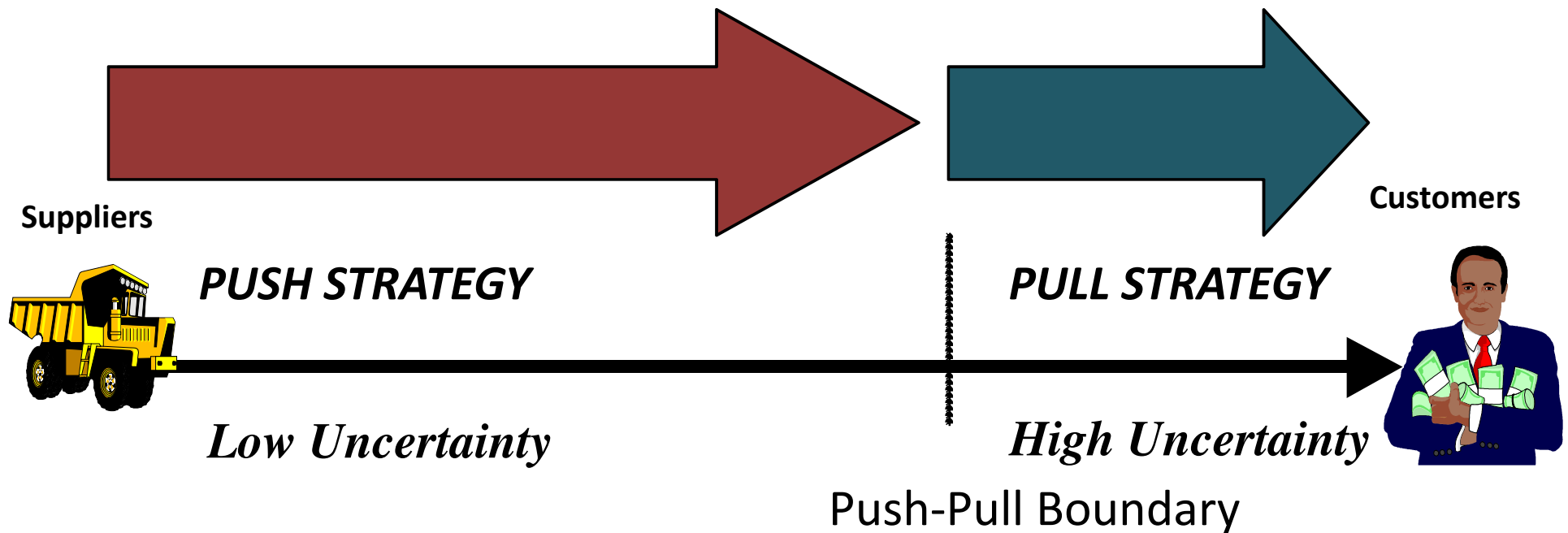


Agile tools, agile networks, agile clouds, agile clouds social media shift power to the edge

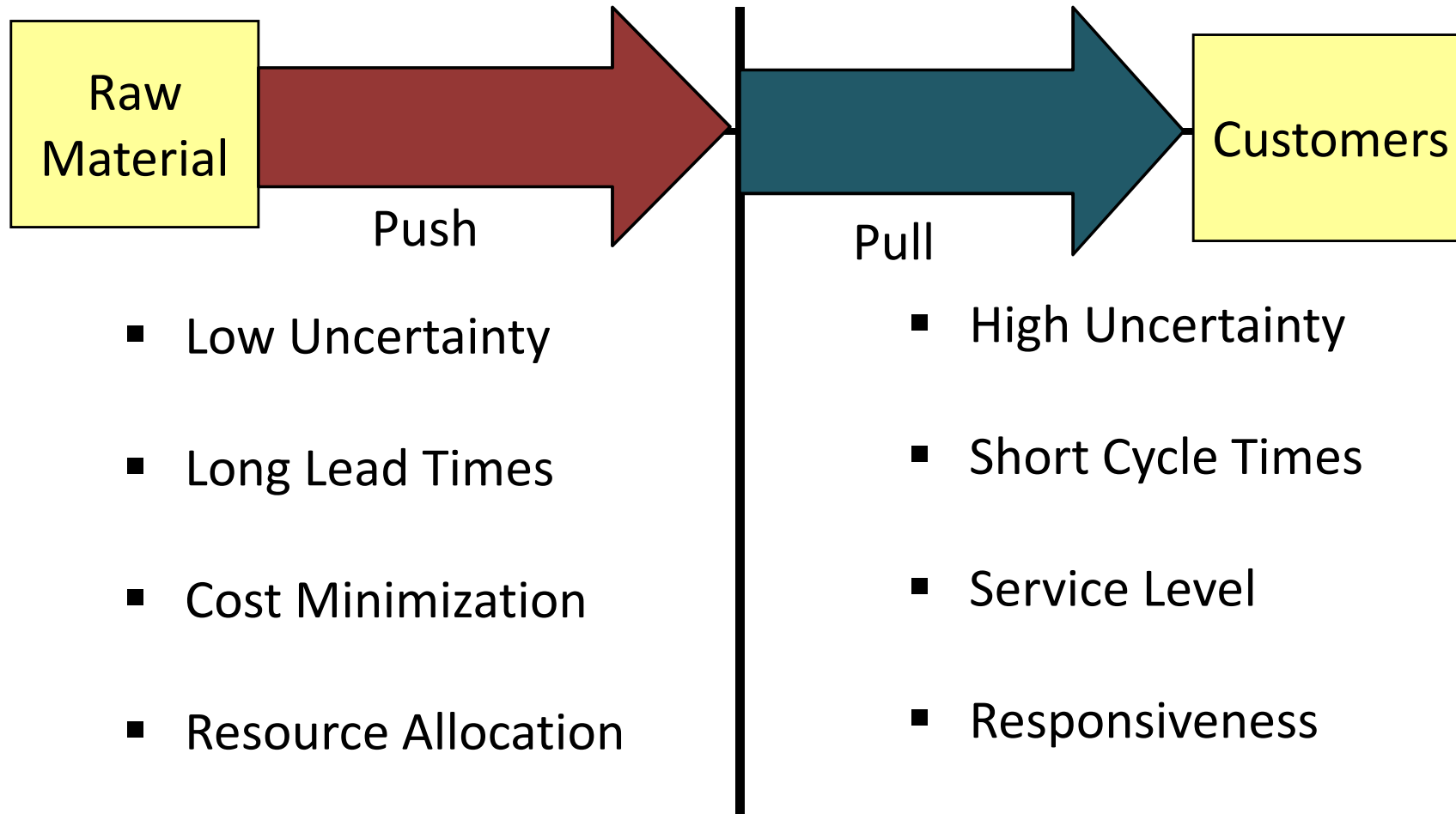
Source: John Seely Brown

Push-Pull Supply Chains

The Supply Chain Time Line



Organizational Skills Needed



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Work area for the group of the University of Cantabria

- Develop a network of excellence and best practices about new topics of the Knowledge Society as
 - Creativity (4T + Social Capital)
 - Social Media
 - Open Government
 - Open Innovation
 - Internet of Things
 - Web squared and

Relevant Projects to Knetworks University of Cantabria

TRANSMODALBOTS – Intelligent Multiagent Platform to search and aggregation of knowledge at the Internet. Created a new firm as spin-off of the University (2004)

COMODALWEB 2.0 – Web 2.0 Tools and Platforms to develop Comodality and Collaborative Logistics. New model of Port Community Systems based in comodality

ECOMODALUMLANDPORT – Develop a Pull Collaborative Platform to Green and Efficiency Logistics Corridors

UIMP 2.0 – Knowledge Social Network of the International University Menendez Pelayo

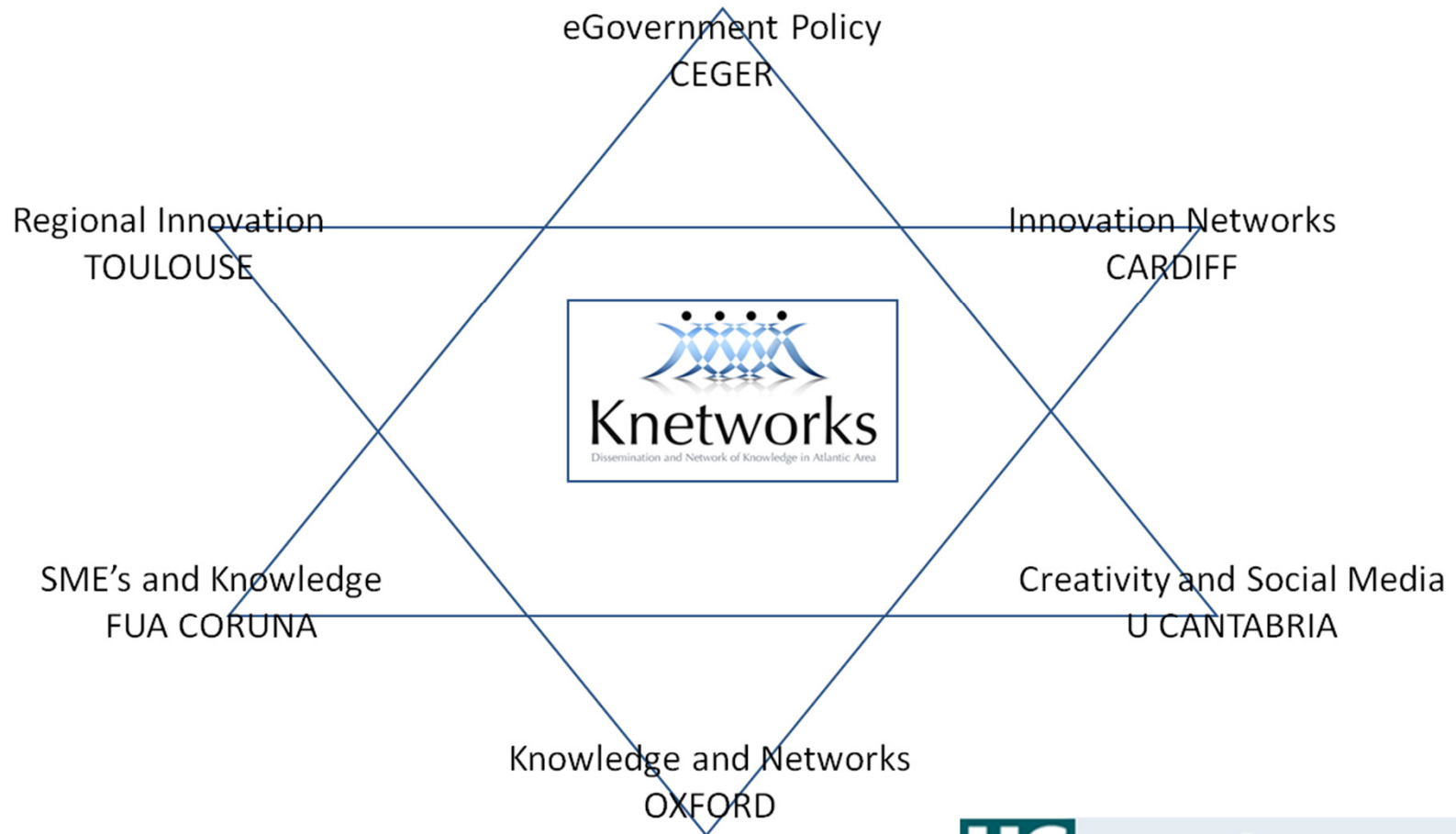
CONCEPTUAL KLT S.L. – Created as a start-up of the University of Cantabria (2007)

The age of networked intelligence: Principles for Knetworks

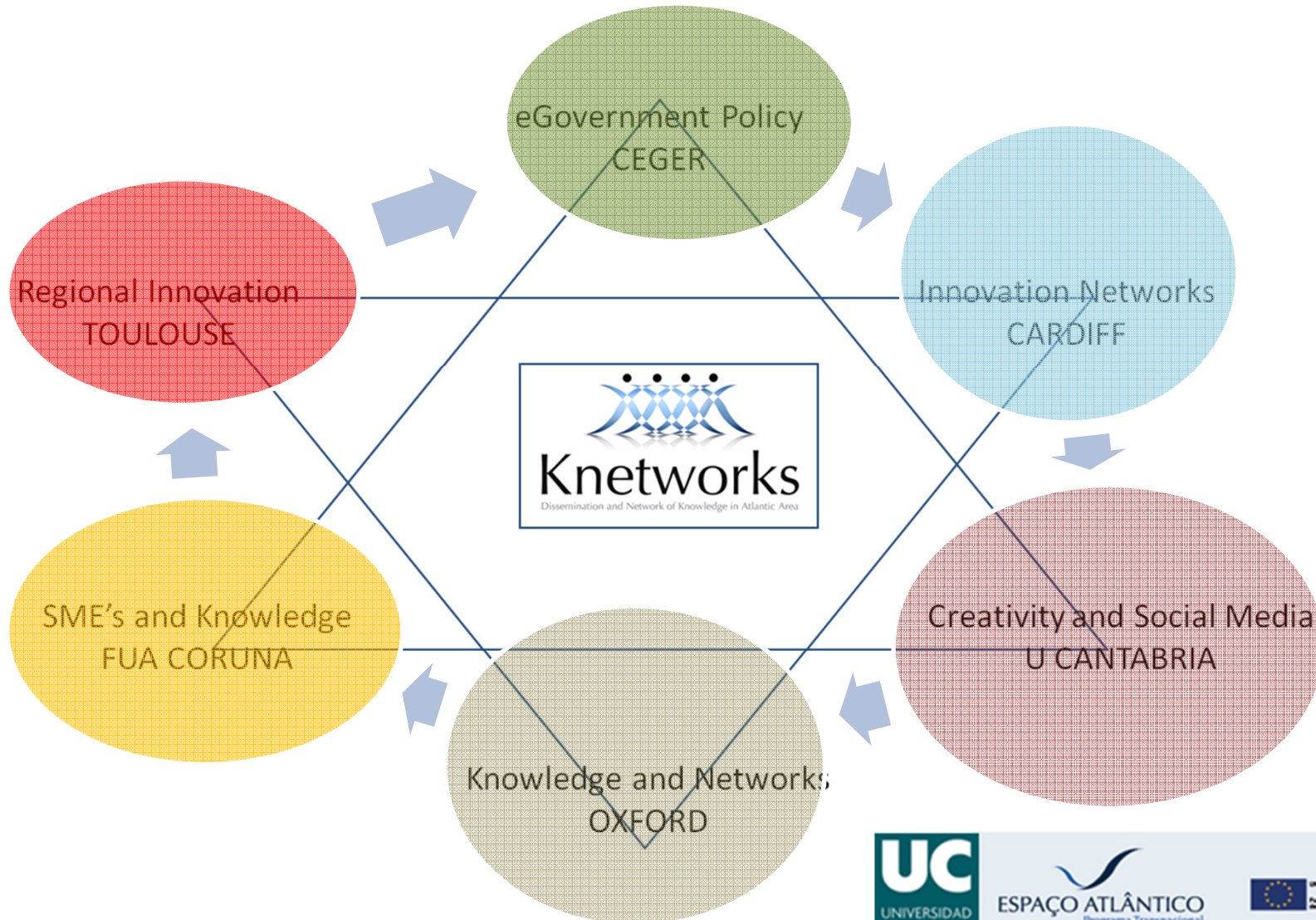
- Collaboration
- Openness
- Sharing
- Integrity
- Interdependence

Source: Macrowikinomics, Don Tapscott

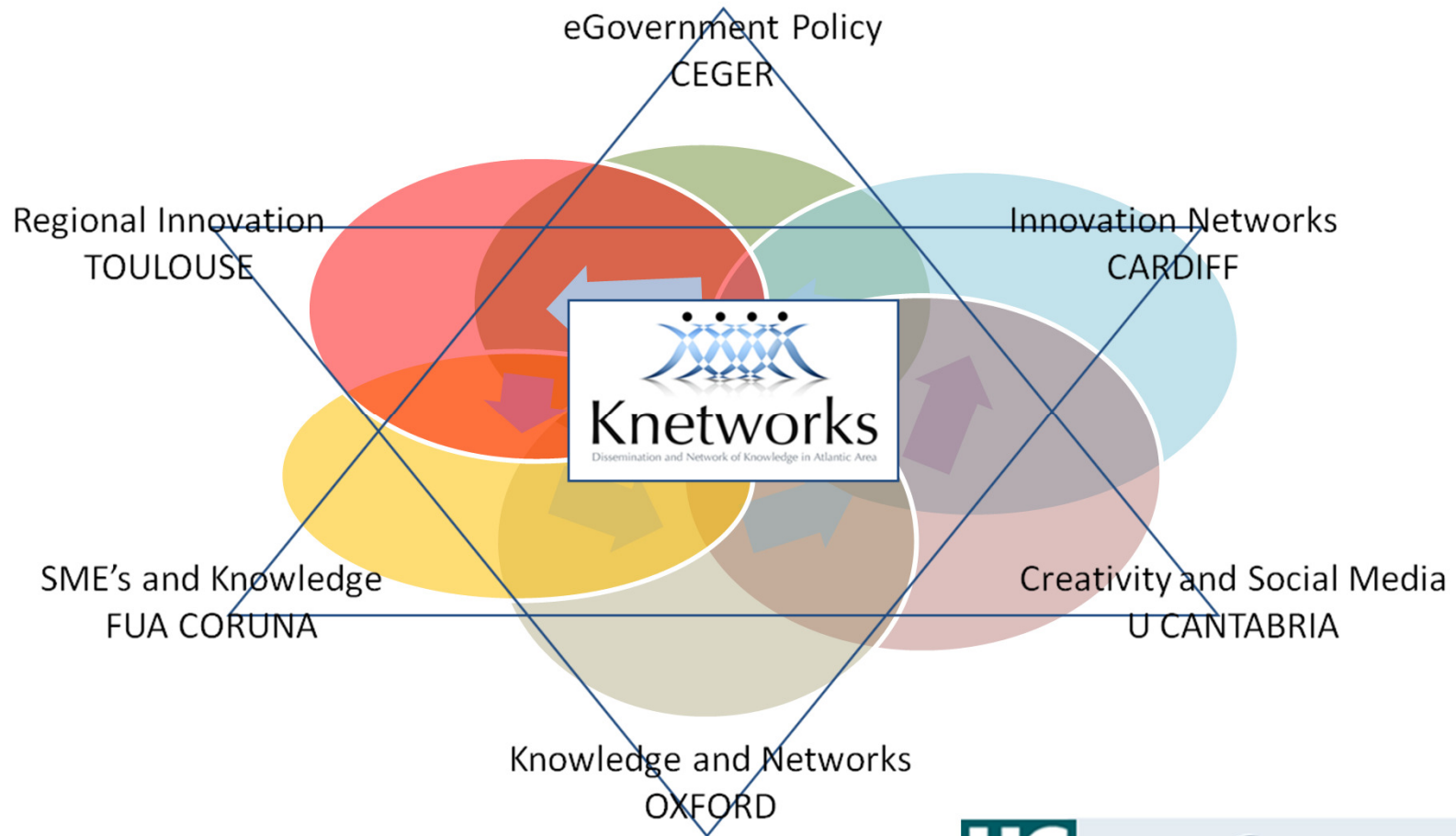
Creation of European Knowledge Center (EKC)



Creation of European Knowledge Center (EKC) From Stars



Creation of European Knowledge Center (EKC) To Hibrid Model



- ***Discretionary emotional energy***

Passion, excitement, enthusiasm, and dedication.

