

Sustainable Innovation

SIAA

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Influences on My Perspective

Academic

Computer science
• UCLA
• Stanford
• early networking research
Advisory Boards

Entrepreneurial

• Bridge
Communications
• NCD
• Precept
• Packet Design, LLC
• Mother

Corporate

• CTO Cisco
Board member
• FedEx (current)
• Rockwell
• Sun Microsystems
• Disney (current)

Author - *Closing the Innovation Gap*, McGraw-Hill, 2008
Over 100 interviews with innovators, leaders, educators

Innovation Matters!

- Innovation drives economic growth, quality of life and is the only hope of addressing the major challenges that we face - it is also very personal, impacting our lives in and out of the office
- Innovation doesn't just happen, it needs to be nurtured - you need to be willing to invest without knowing the outcome
- We have become shortsighted at all levels of society, creating an innovation deficit which will impact future generations



Different Types of Innovation

1 Breakthrough Innovation

Invention of something completely new
(transistor, credit card)

2 Incremental Innovation

Enhancement of current product or process
(higher performance system, private labeled credit card)

3 Orthogonal Innovation

Combination of existing innovations for use in a completely new way (iPod, debit card, Better Place)

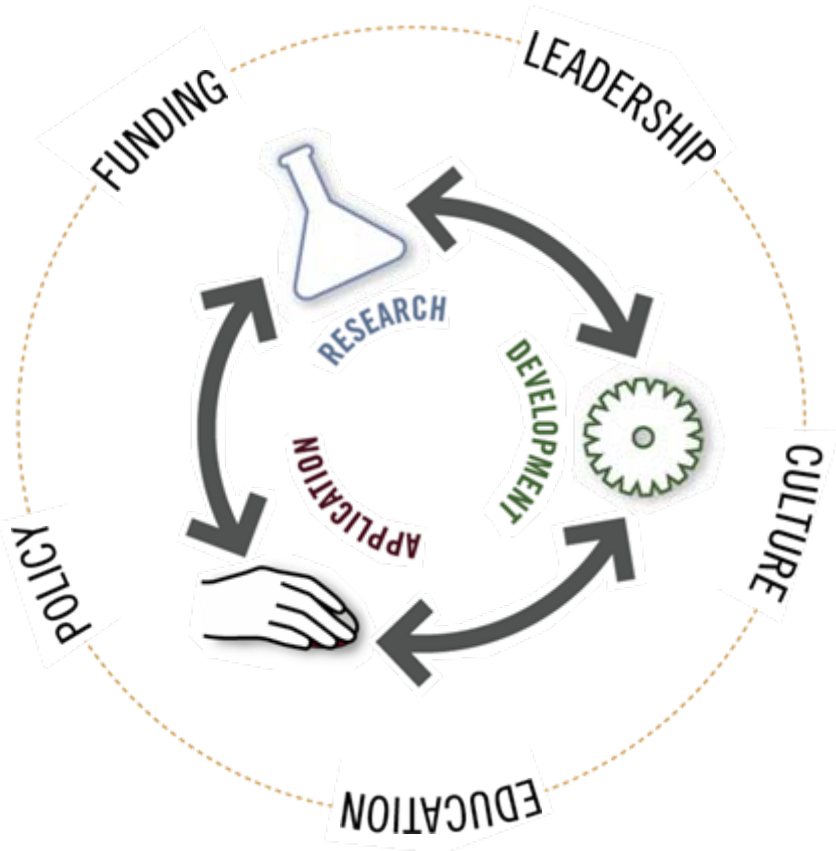
1 & 3 can be “disruptive” creating new markets and industries

2 is necessary, just not sufficient

Only incremental innovation is “customer” driven

All are “need” driven

Ecosystem For Sustainable Innovation



Core Values = Capacity for Change

Questioning

Curiosity, self-assessment, non-judgmental, free flowing

Risk

Vulnerability, attitude toward failure, fail early, learn from failure

Openness

To imagine, new data, sharing, surprise, change

Patience

Tenacity, patient capital

Trust

In oneself, in others, safety net (bankruptcy, healthcare, education)

Values need to be in balance.

A Very Different World

- Globalization - *and* not *vs*
- Accelerated pace
- Internet/Web amplifies good and bad
- Decades of decline in national ecosystem followed by financial crisis
 - Scarcity in research community
 - Entrepreneurial/VC ecosystem is broken -- risk aversion, limited options for liquidity
 - Sustainable growth (vs looking for next bubble) comes from focusing on building and creating not just manipulating money
 - Can we reset our values and definitions of success - imagine the impact if people thought in terms of long-term prosperity instead of short-term greed

New Drivers of Innovation

- Past: Productivity (IT), Medicine
- Future: Energy/Environment, Healthcare, Education, TBD (to be discovered)...
 - Complex, interdisciplinary problems
 - Computing and communications play a role in all of these areas
- New models of government, business, academia, non-profit “collaboration”
 - Research funding and collaboration
 - Lab gap
 - Balancing interests of large and small business and general public

Moving Beyond Silos

- Silos everywhere hinder our ability to address the interdisciplinary problems we face
 - Communities of the ecosystem
 - Fields of science
 - Science, technology and the arts
 - Baby boomers and Gen X, Y.....
 - Political parties, ideologies
 - Federal, state and local governments
 - Geographic and/or cultural divides
- Need deep experts, “T people”, double Ts and connectors

Leadership in Difficult Times

- Threats should be turned into challenges which inspire involvement - not fear and helplessness
- Challenges such as energy dependence/climate change, healthcare, security should all be turned into opportunities for innovation that can drive the economy
- Leaders need to be inspirational, collaborative, inclusive, open to input from experts, willing to self-assess and adapt
- Especially important in hard economic times - be smart about where to cut and where investment is critical
- Not everyone wants to, or can be, a leader of other people, but each of us is our own leader - responsible for our path



**We each have a role to play!
Courage, commitment,
collaboration, core values.....**

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