STI Capacity Building for Sustainable Urban Development

Alfred Watkins
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Urban STI Challenge

Science
Technology
Innovation

Solve
Transform
Impact

Rapid urbanization, growth of megacities, and rise of peri-urban areas are inexorable trends
Only question is whether these trends are harbingers of disease, crime, political instability, terrorism, resource shortages and civil unrest or opportunities for sustainable development and technological advancement via leapfrogging and retrofitting.
Which Future Will Prevail?: STI Capacity Building Holds the Key

Commission on Science and Technology for Development 2012-2013 Inter-sessional panel
7-9 January 2013
Lima, Peru

Issues Paper on

Science, Technology and Innovation for Sustainable Cities and Peri-Urban Communities

ADVANCE UNEDITED VERSION

Prepared by the UNCTAD Secretariat
Innovation Equation

Velocity of Knowledge +
Velocity of Capital +
Absorptive Capacity +
Rate of Diffusion =

Pace of innovation
There is no choice. The world is moving fast... with our without you.
The World of Innovation is Spiky....

Scientific publications

Talent is everywhere but opportunity is localized. Challenge is to harness global talent to local problems.

Patents

What is our niche or place in the global value chain?

Source: Tim Gulden, UMD, Richard Florida, U of T, Pekka Himanen, HIIT
“No Matter Who You Are, Most of the Smartest People Work for Someone Else”

Joy's Law, attributed to Sun Microsystems co-founder Bill Joy
No Matter How Technologically Sophisticated A Country Is, Most of the Important Things Are Invented Elsewhere

Networks and PPPs needed to discover:

- What is important
- Who are the customers
- What is the problem
- Why customers want it
- How to produce it
- Who else is in the market
- What is the relevant IP
The Classical Startup: Sand Hill Road

Physical Proximity is Critical
Contemporary Example...from T2VC

Global Connections and Linkages Trump Physical Proximity
Connect Globally to Develop Locally
HOW?
GIS 1
July 16-18, 2012
www.innosummit.com

GIS 2
January 12-14, 2014
San Jose, California
Silicon Valley
GIS 2: Possible Topics

- Frugal innovation systems
- Crowd funding/ community investment trusts
- Mobilizing pension and sovereign wealth funds
- The role of public policy in fostering innovation ecosystems
- Urbanization and Innovation
- Harnessing the power of diaspora linkages.
- Leveraging human nature to foster the building of innovation ecosystems.
A New Paradigm of Economic Growth

Plantation

Rain Forest
Lessons of the Rainforest

Trust, relationships and linkages are more important than money, programs, and buildings
The Ecosystem

- Entrepreneurs
- Ideas & Inventions
- Government
- Trade and Industry Organizations
- Education & Workforce Development
- Real Estate & Business Infrastructure
- Money
- Talent
- Coaches & Mentors
- Academia & Research
- Business Support Services
- Access to Global Markets & Supply Chains
- News and Media Outlets
- Culture, Societal Values, Role Models, Rule of Law
But despite modern technology, barriers to effective connections are high

Lack of role models  Lack of trust  Limited management expertise  Limited access to smart capital  Lack of contacts and mentors

People and institutions remain isolated in silos of excellence and this inhibits innovative development.
And real human beings are separated
... by geography, culture, language, social networks, and lack of trust.
Premises of Little Rock Accord

• Rising income and population in emerging markets will lead to unsustainable resource shortages – water, air, food, energy, and health care – if existing consumption patterns remain the same.

• Sustainability requires new approaches to meeting basic needs → greater opportunities for innovation – e.g., scaling up scaling down.

• Finance, especially from pension and sovereign wealth funds, should be mobilized “to profitably deploy existing technologies.”
Broken Circuits

• Journey of a thousand miles begins with a single step – and ends with the last mile
• Technology doesn’t solve problems unless it moves from inventor to beneficiary
• Pilot projects don’t solve problems unless they are scaled up
• Money doesn’t solve problems if it doesn’t scale up successful pilots and move technical solutions to beneficiaries
• Patent holders/inventors/entrepreneurs/foundations can’t solve global problems if they work in one location
Opportunities From Rapid Urbanization and Mega-Cities

New customer needs

New financing models

New technologies

New business models

Brave new world for those with the imagination and agility to seize the opportunity
VISION WITHOUT IMPLEMENTATION IS HALLUCINATION
THANK YOU

Alfred Watkins
Alfred.watkins07@gmail.com

Executive Chairman, Global Innovation Summit
Senior Advisor, Global Technology Deployment Initiative
and
P80 Group Foundation