On Building an Inclusive Innovation Ecosystem

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21 November 2012

Cape Town
THE GLOBAL SCOURGE OF LAND MINES LEFT THOUSANDS LIMBLESS, AND THEN TWO GIFTED INDIANS DEVELOPED

The $28 Foot

BY TIM MCGIRK
INCLUSIVE INNOVATION

Leads to the ‘inclusion’ of the ‘excluded’

Exclusion could be due to

Disability,
Poverty,
Distance,
Migration ............
INNOVATION DICTIONARY & NEW VOCABULORY!

Inclusive Innovation
Frugal Innovation
Gandhian Innovation
Reverse Innovation
MLM
Inclusive Innovation

Getting More (performance)

For Less (cost)

For More (people)

MLM
Innovation’s Holy Grail - MLM

C.K. Prahalad
R.A. Mashelkar

Harvard Business Review - July, August 2010
WHY INCLUSIVE INNOVATION?

Nations
Inclusive economic growth
Eliminate social disharmony
Key to achieving MDGs

Enterprises
The next billion market
Income Disparity in China

Gini index of income inequality in China

Rural-urban disparities in annual per capita disposable income
World Bank- Inclusive Innovation Summit China
Indian Challenge:
Both Incomes & Income Inequality Rising!
Indian Inclusive Innovation Fund

• $ 1 bn in phases

• Support enterprises developing innovative solution for BOP customers

• ‘For-profit' entity with a focus on social investment
The Big Challenge!

‘Access Equality Despite Income Inequality’
Income Inequality 1000:1?

Access Equality 1:1!
The Challenge

Wealth for All- A Dream!

Health for All- Can be a reality!

If we provide affordable access
How Affordable?

- Hepatitis B vaccine - 40 times cheaper...
- Cataract Eye Surgery – 100 times cheaper...
- Open Heart Surgery - 20 times cheaper...
- Artificial Foot - 300 times cheaper...

No dreams- It has been done!
Inclusive Innovation is achieved through:

- Technological Innovation
- Business Process Innovation
- Workflow Innovation
- Delivery System Innovation
- Research Process Innovation
- Grassroots Innovation
“Inclusive Innovation is any innovation that leads to affordable access of quality goods and services creating livelihood opportunities for the excluded population, primarily at the base of the pyramid and on a long term sustainable basis with a significant outreach.”
The Key Players in a National Inclusive Innovation Ecosystem:

• Government
• Research Community
• Private Sector
• NGOs & Foundations
• IFIs and Global Partners
Government:

- Policy on mandating institutions to drive the inclusive innovation agenda
- Incentivizing public and private sector to partner in R&D leading to inclusive innovations
- Public procurement, guaranteed off-takes, price subsidy for inclusive innovation products and services
- Targeted funding for inclusive innovation
- Fiscal incentives for inclusive innovation
- National Inclusive Innovation Councils – but Funded and Empowered
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Grand Challenges

- Setting ambitious targets to tackle national problems by inviting competitive bids from across the nation & globally

- Delivering game changing solutions!
10000 pamphlets sent across the country

1 July 2000

* Nano-technology applications from drug delivery to solar photovoltaics
* LCD with two orders of magnitude faster switching times than silicon
* Multifunctional PC within Rs. 10,000 using emerging technology
* Bio-based carbohydrates as feed stock for chemical industry
* Clinically validated herbal based therapeutics for TB and AIDS
* Indeed any of your dream ideas that can make all the difference

**Multifunctional PC within Rs. 10,000**
$35 Tablet

23 July 2010
Open Source Drug Discovery (OSDD)
Launch – Sept ’08; Now more than 4500 users from 130 countries

Open Source Drug Discovery
furthering the understanding of the TB bacterium through crowd sourcing

Over 50 partner institutions

Innovative Model to Perform Innovation Led Science
Academic & Research Community - Key Players

- Drive Science for Inclusive Society

- Inclusive Innovation to be integrated as a core of the educational and research experience

- Stanford, MIT- already doing it! Why not India?!
Student Competition BOP
Grand Challenges

Why are 90% of the world’s products and services designed for 10% of the world’s population?
20 Million premature babies born every year
450 of them die each hour

$2000 Cost of one traditional hospital incubator
embrace

$25 Incubator

No electricity, no moving parts, portable and safe
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National Inclusive Innovation Ecosystem: Role of Private Sector

Paradigm shifts in thinking!

Not just Doing Well AND Doing Good

But Doing Well BY Doing Good
Strategic Shifts for Inclusive Innovation Business

FROM

- Technologically sophisticated performance rich products with many features
- Remove features to reduce costs
- Premium Price-High Margins
- Technology Push, Product – Out Approach
- Current Markets- Old Money
- Use developed world products to transform emerging markets

TO

- Frugal, functional but high quality products
- Reinvent the product from ground up
- Affordable Price- High Volumes
- Customer Centric, Market Based Approach
- New Markets- New Money
- Build new global growth platforms based on emerging markets
“If we do not come up with innovations in poor countries and take them global, new competitors from the developing world – The Mindray, Suzlon & Goldwind- will. That is a bracing prospect.”

- Jeffrey Immelt
CEO, GE
For decades, GE has sold modified Western products to emerging markets. Now, to preempt the emerging giants, it’s trying the reverse.

How GE Is Disrupting Itself

by Jeffrey R. Immelt, Vijay Govindarajan, and Chris Trimble
The world turned upside down
A special report on innovation in emerging markets | April 17th 2010
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A network of nine of the world’s leading applied-research agencies

Committed to creating Global Good

- Science to Solve
- Technology to Transform
- Innovation to Impact
Nine countries, five continents

GRA member organisations

1 Battelle – USA
2 CSIR – India
3 CSIR – South Africa
4 CSIRO – Australia
5 Danish Technological Institute – Denmark
6 Fraunhofer – Germany
7 SIRIM – Malaysia
8 TNO – The Netherlands
9 VTT – Finland
GRA Inclusive Innovation Project
Green & Low-Cost Wireless Communication Network for Africa

- Connecting rural Africans to the rest of the world
- Enabling participation in the 21st century digital economy
- Creating access to digital services such as eHealth, eEducation and eGovernment
- Facilitating the development of a transparent, inclusive and democratic society
GRA Inclusive Innovation Project
Green & Low-Cost Wireless Communication Network for Africa

- **Fraunhofer** (Germany) - terrestrial wireless infrastructure to bring this satellite connectivity into the wide area
- **Fraunhofer** (Portugal) - applications for targeted deployment
- **CSIR SA** - wireless mesh concepts, in particular community mesh and wireless backhaul
- **CSIRO** - efficient satellite-based infrastructure to reach rural areas
- **VTT** – integration of network management
- **Macha Works** - supporting local deployment, training staff, testing and evaluation
GRA Inclusive Innovation Project
Smart Sustainable Energy

- Integration
  - Social, Technical and Ecosystem Innovation to deliver smart minigrid renewable energy to the rural poor

- Project in development
  - GRA members
    - CSIRO – Australia
    - CSIR – South Africa
    - TNO – The Netherlands
  - Local Partners
    - University of Fort Hare
    - Champion – Eastern Cape Provincial Government
Vietnam Inclusive Innovation Project with World Bank Funding

- GRA as a knowledge Partner
- Developing Inclusive Technologies
- Upgrading, Scaling up, and Commercialization of Inclusive Technologies
- Capacity Building and Global Knowledge Transfer
Anjani Mashelkar
Inclusive Innovation Award

‘Inclusive Innovation for resource poor old’
Winner- Anjani Mashelkar Inclusive Innovation Award

A single, intelligent, integrated, pre-screening ophthalmology device that

• Is Non-invasive and takes 5 mts for all tests
• Does not require dilation
• Is Portable & affordable
• Can be operated by a minimally trained technician even in the absence of an ophthalmologist in a rural environment

Detects

• 5 major ailments of the eye automatically (cataract, diabetic retina, glaucoma tools, cornea issues, accurate refractive index measurements) and provides a consolidated pre-screening report.

Has integrated

• Telemedicine and Data centre capability to connect the entire eye care ecosystem and offer comprehensive eye care
“I want to take this to the USA……” - Hillary Clinton
Thank You