Innovation

Innovators:
Aakash Mahadevan (16ucc001)
Aditya Agarwal (16ucc008)
Dikshit Maheshwari (16ucc030)
Rohit Samudralwar (16ucc080)
Harsh Upadhyay (16ucs073)
Yash Vekaria (16ucs221) [WK]

17th October, 2019
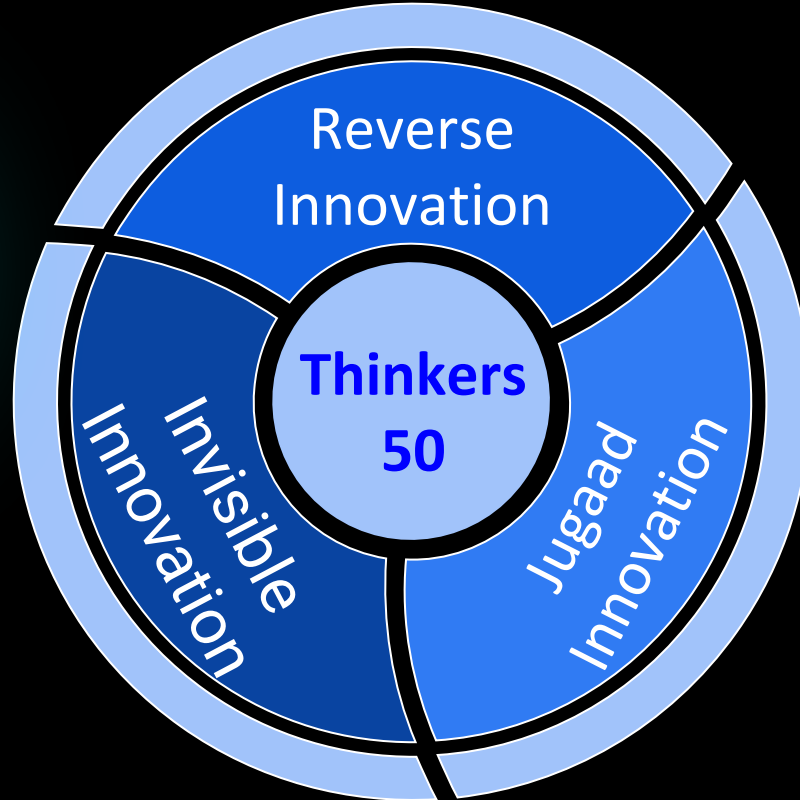
Out-Of-The-Box Thinking coming from Emerging Economies

Vijay Govindarajan

Nirmalya Kumar

Jaideep Prabhu

Reverse Innovation

Thinkers 50

Invisible Innovation

Jugaad Innovation

KOI JUGAAD HAI KYA?

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Traditional Innovation

Shift

Reverse Innovation

- Historic way
- Innovation @ G-nations
- Market = E-nations
- Success = Logical

- Future growth = Growth opportunity for G's
- Innovation @ E-nations
- Market = G-nations
- Success = Counter-intuitive

2 Components of Reverse I: Innovate at Poor ⟹ Take it to rich

Traditional Innovation

Reverse Innovation

Developed World

Undeveloped World

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#NBForum2013 — JYVÄSKYLÄ, FINLAND
Vijay GOVINDARAJAN
REVERSE INNOVATION

I HAVE A CAR.
AND TV. AND X-RAY. AND ALL THE OTHER HEALTH-RELATED MACHINES.

I WANT ONE, TOO.
AND THE HEALTH-RELATED GADGETS, TOO.

X-RAY BUS
USER'S MANUAL
ON
OFF
1 $
INDIA NOT IDIOT.

U.S.
150000 $
3000 $
COST
QUALITY
Number of operated hearts
20000 $
30 $

A LOT MORE VALUE WITH LESS MONEY — BUT NOT LOW QUALITY.

The rich countries' logic... ...doesn't apply to the poor countries logic.

Nordic Business Forum
VALUE FOR MANY!
REDANREDAN.FI

deep innovation

3 examples for *Reverse Innovation*:
Innovative products will also disrupt „old" health care markets

US Market Entree 2010

Local Projectstart 2000
Market Entree 2006

1 GE's mobile Ultrasound

2 Harvard's Lab-on-paper

Project Start 2006

mpass mobile cash

3 ePayment

Egypt
Market Entree 2008

mpass

Lab on paper

EU Market Entree 2012

1 developed and 1st marketed in China

2 developed in USA, POC ongoing in Africa

3 developed in the EU, introduced 1st in Africa

Look at These Facts

Why is Reverse Innovation Successful?

	Population		Total GDP	
	Size	Rank	Size($)	Rank
China	1.3 billion	1	9 trillion	2
India	1.2 billion	2	4 trillion	4
Poor Countries	5.5 billion		30 trillion	

- E-nations: Bulk of Consumption Base (Sol: Innovate)

- GDP: High growth opportunity

- G vs E: Demand Str. ($ 1,000 to spend)

- E-nation (India): Urban v/s Rural Scenario (30:70)

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MAC India ($ 500)
(ECG Equiv.)

ECG Machine ($ 50,000)
(Machine + Printer)

Sold: 150 nation (incl. Rich) - High Growth Oppor.

Road Accidents | Operating Room

Key Factors Driving Innovation in Poor

- Affordability

- Accessibility

- World Class Quality (Ex: NH)
  - Mortality Rate:
    - USA Avg(2%)
    - NH (1.4%)

HEALTH CARE REVOLUTION

☒Aravind Eye Care
- Cataract Surgery
  - $30 ($3,000)

☒N.H. Hospital

- Open Heart Surgery
  - $2,000 ($50,000)

Ex of E's: leapfrogging:
- China (solar/wind energy)

Capturing 70% by Reverse Innovation

- American Corp. positioned to capture? - NO!, Why?
  - American business mindset
  - Eg. Kellogg's (Global Leader in Breakfast Cereal):
    - India - Failure, Why?
- If G don't: Local's --> <u>Transform</u> infrastructure of G's
  - NH's Cardiac Hospital in Cayman Islands
- <u>Customer</u> is Always RIGHT!
- Paradigm Shift: Value Addition
  - Rich (<u>Money</u>) to Poor (<u>Many</u>)

INVISIBLE INNOVATION

Visible Innovation

Invisible Innovation

- **Product** Innovation
- Solution-driven changes
- Consumers can see the benefit.

- **Process** Innovation
- Process simplification
- Consumers can't really see the benefit.

Is India Innovative?

- **Innovation for Business Customers**
  - Made in India, branded elsewhere.
  - 750 R&D centers.
  - Producing global products — GE, Philips.
  - Company name - known; not developer.
  - Patent Quality same in India, USA.

- **Outsourcing Innovation**
  - Indian companies given contract.
  - Major product development - global product.

- **Process Innovation:**
  - Innovating the act/process of Innovation of a product
  - Injection of Intelligence
  - Eg: Innovations in Call Centres
- **Management Innovation:**
  - Innovation in Management and Assembly of Resources
  - Global Delivery Model

Implications of Outsourcing Innovation

1. **Sinking Skill Ladder**: Companies like IBM-> Faced with a tough choice:

- Top Positions: Whom to promote?
    - People from Developed Nations or Developing Nations?
- Facilitating Innovation:
    - Migrate Innovators to Developed World?
    - Or Migrate Innovation to Developing World?

2. Browning of the TMT: TMT-> Top Management Teams.

"If you outsource the drudge work, you'll have to outsource the top level work too. A teacher has to be a student first, an Investment Banker an Analyst first."

Eg: Satya Nadella, Sundar Pichai, Indra Nooyi

3. Mirage of Mighty Labour Pools:

India-> Youngest Growing Population in the World

But, Indian Education System-> Incapable of generating the quality of skilled labour to fuel this Innovation System.
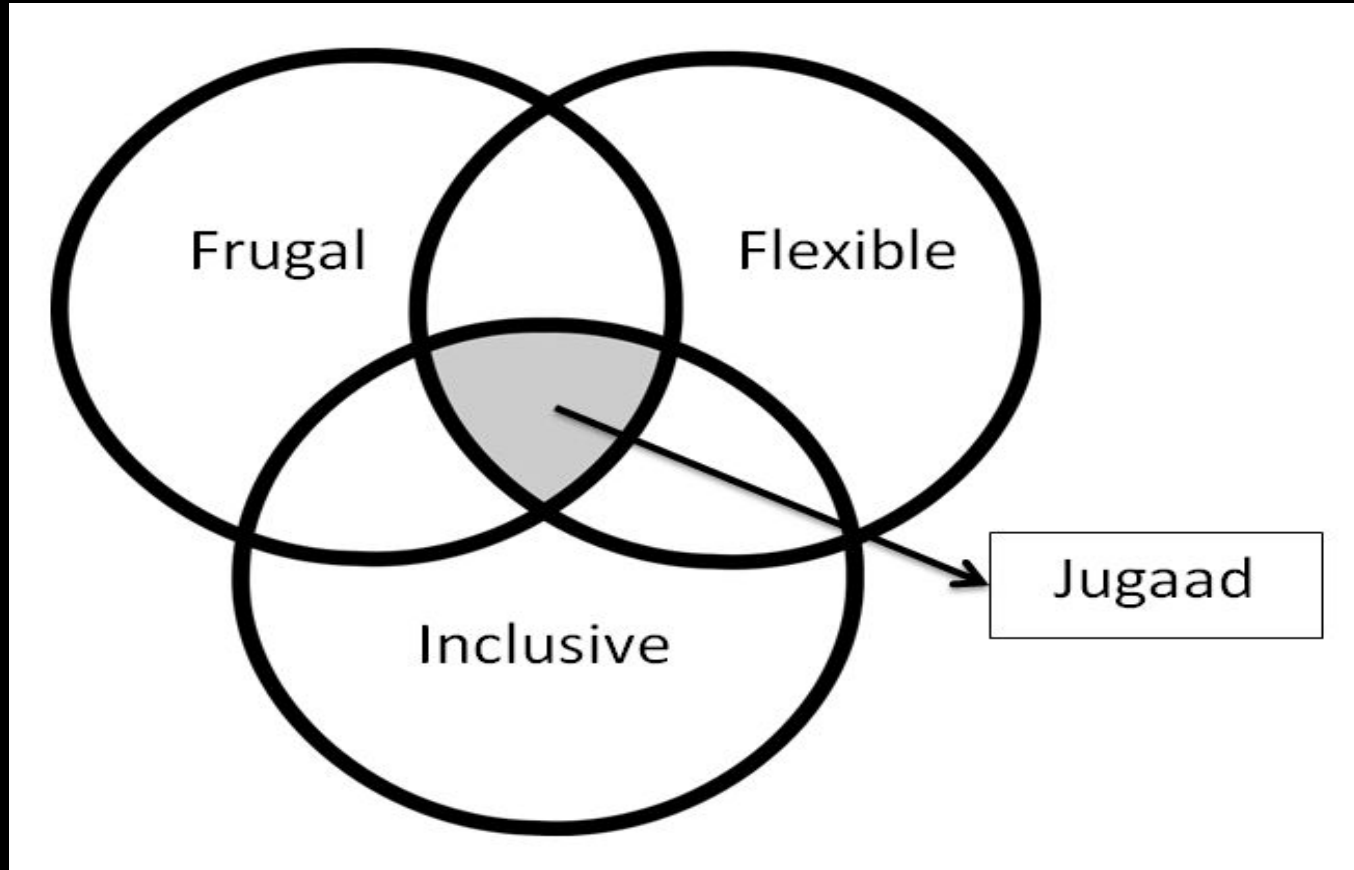
JUGAAD INNOVATION

Unique features of Indian Innovators

Thinking out of the box

Indian Jugaad
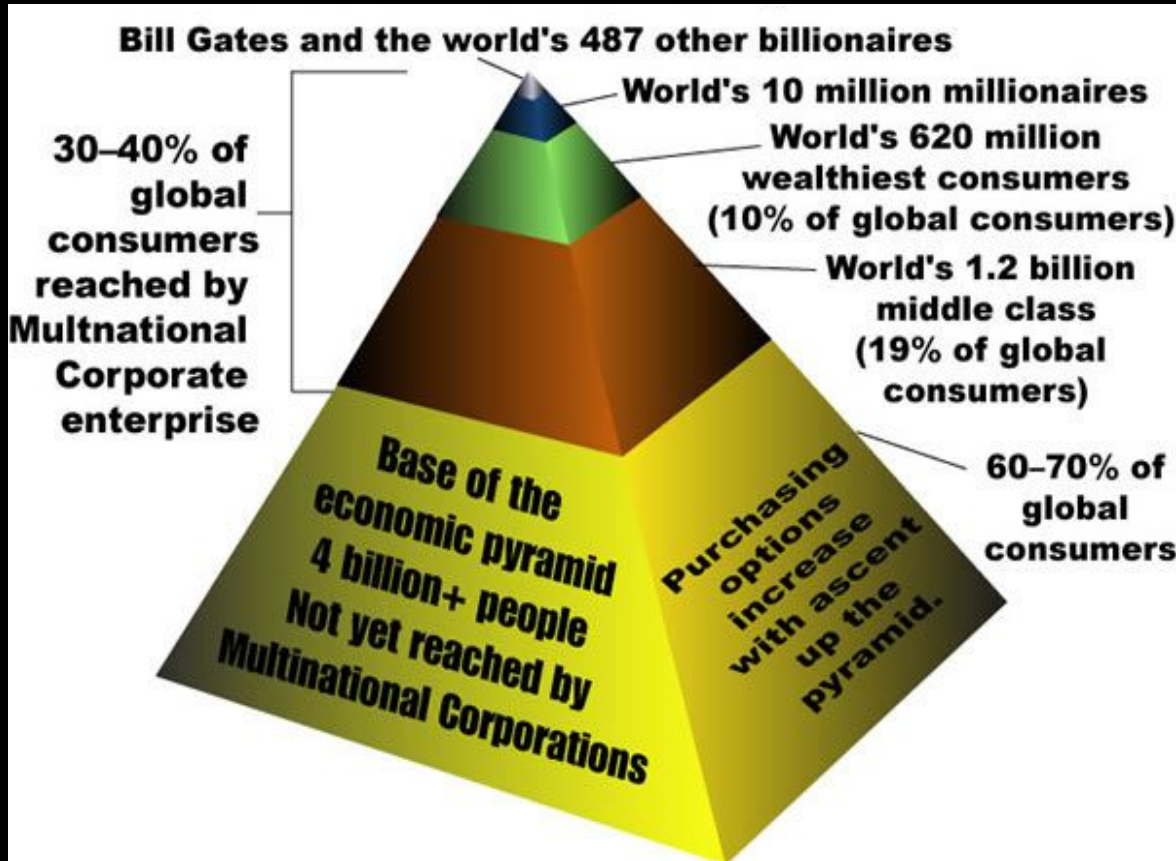(Made of water and clay)

Western Countries

Jugaad Innovation

"The art of overcoming harsh constraints by improvising an effective solution using limited resources."

Why India Need Jugaad?

- Have limited access to healthcare & Education
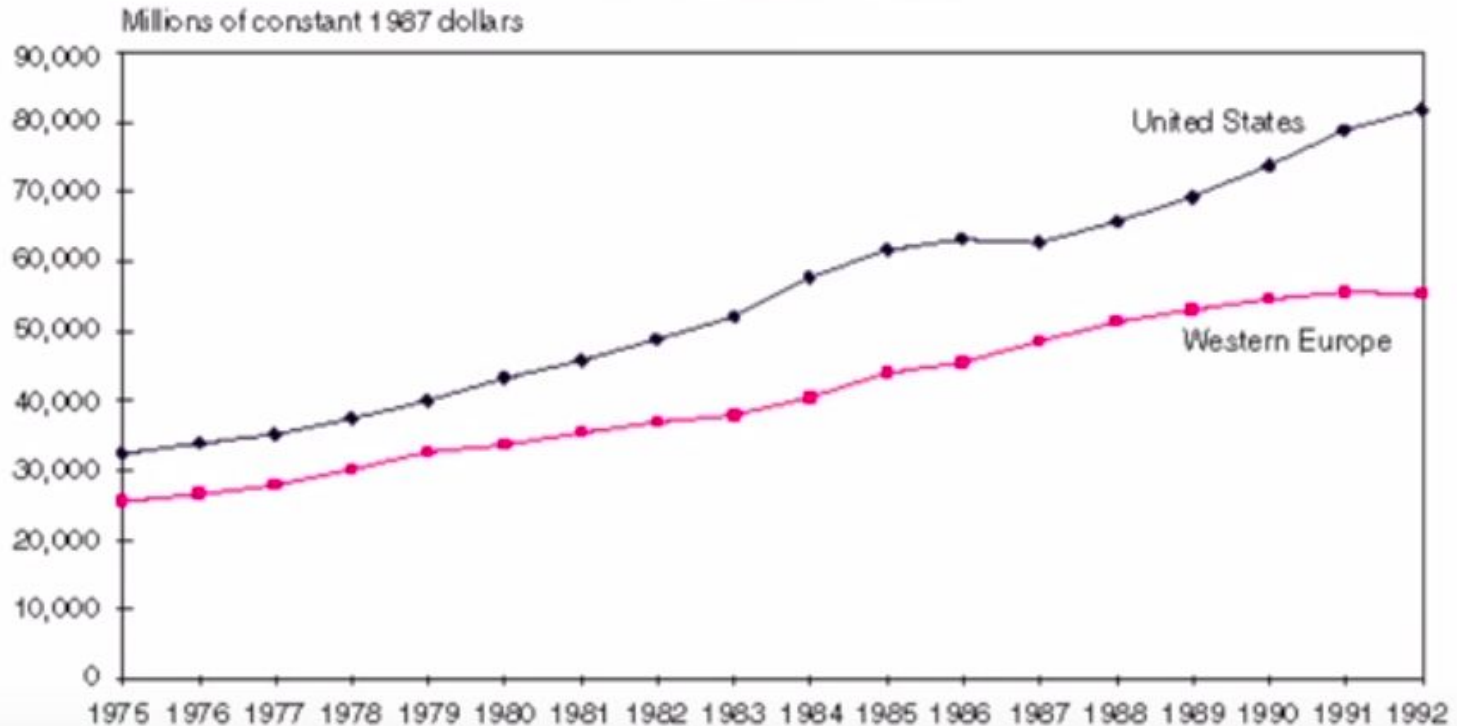- Banking
- Are off the electricity grid

The Global Economic Pyramid

Bill Gates and the world's 487 other billionaires

World's 10 million millionaires

World's 620 million wealthiest consumers (10% of global consumers)

World's 1.2 billion middle class (19% of global consumers)

30–40% of global consumers reached by Multnational Corporate enterprise

Base of the economic pyramid 4 billion+ people Not yet reached by Multinational Corporations

Purchasing options increase with ascent up the pyramid.
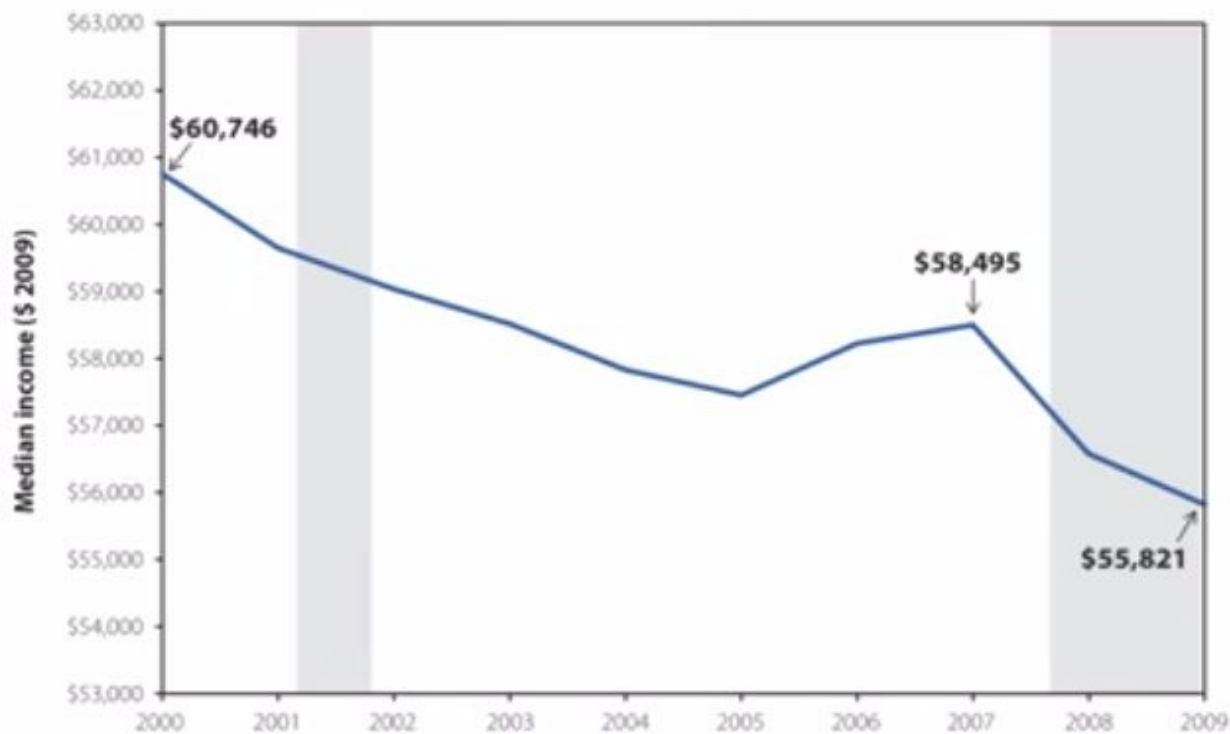
60–70% of global consumers

- 9$/day ~ 4B People
- ½ of the world population

Industrially funded R&D v/s Real median

Figure 10. Industrially funded research and development in Western Europe and the United States

Real median income of working-age households, 2000-09

NOTE: Shaded areas denote recessions.
SOURCE: EPI analysis of U.S. Census Bureau data.

6 Jugaad principles
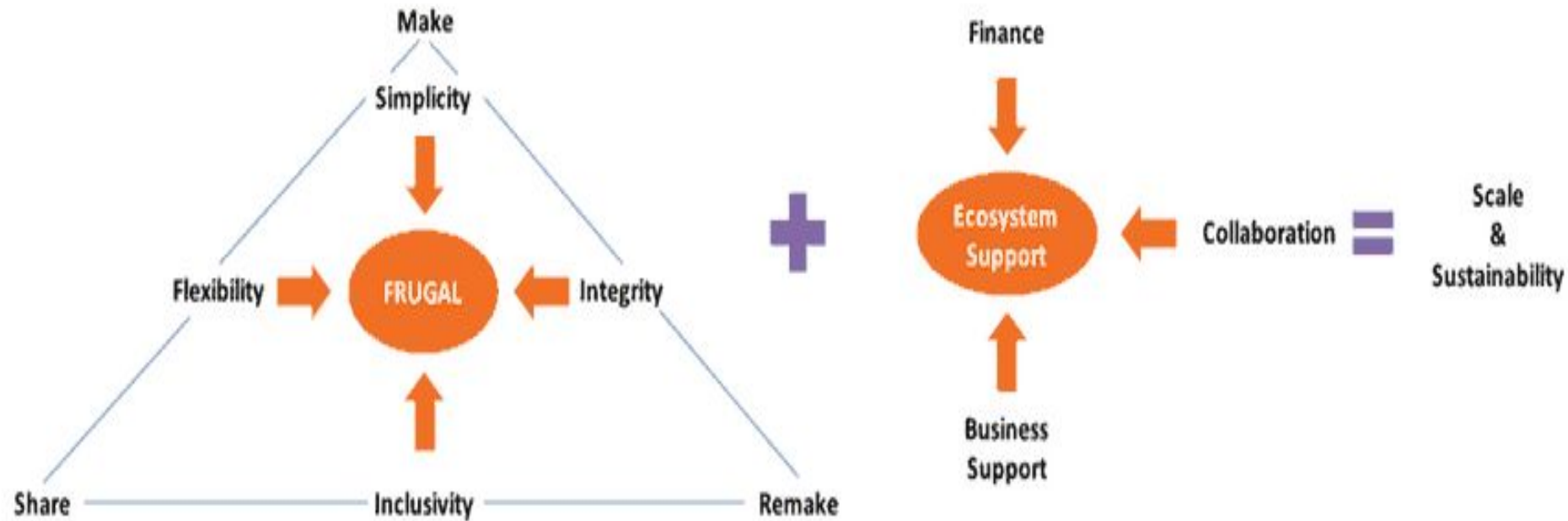
1. Seek opportunity from adversity

2. Do more with less

3. Think and act flexibly

4. Keep it simple

5. Include the margin (of society)

6. Follow your heart

Frugal Sols. Across Emerging Economies

Key Takeaways

- Focus of the next century - E7
- How will the E7 grow
  - R&D centers in Bharat (Invisible Innovation)
  - Building here & selling there (Reverse Innovation)
  - Low cost, quality products (Jugaad Innovation)
- Bharat -> India (Innovate)
- Large working population (Changing demographics)
- Leapfrog innovation (IR 4.0)

References

○ Sites to Visit:

- Ted Talk 1: <u>Reverse Innovation</u> by *Vijay Govindarajan*
  https://www.youtube.com/watch?v=ztna1lt_LZE
- Ted Talk 2: <u>Invisible Innovation</u> by *Nirmalya Kumar*
  https://www.youtube.com/watch?v=zodVSlOuShc
- Ted Talk 3: <u>Jugaad Innovation</u> by *Jaideep Prabhu*
  https://www.youtube.com/watch?v=LNhGbfljtq0

🚫 Sites to Avoid:

Dedication

This presentation is dedicated to:
"WE" - The <u>IT Engineers</u>

Thank You

Parameters	ECG Machine	MAC India
Door to Door Facility?	- No Hospital - Bulky (200 pounds)	- Portable - Weight < coke can
Working & Electricity?	- On Electricity - Unavailable | Unreliable	- On Battery - Easily available
Operational Difficulty?	- Rural: No Doctor - Complex to operate (500 page manual)	Easy to operate (2 buttons - Green|Red)