Frugal Innovation: How to do More (and Better) with Less

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Unique Features of Indian Innovators & Innovations

- Frugal
- Flexible
- Inclusive
Thinking Outside the (Ice) Box

Source: http://www.mitticool.in

Source: http://gizmodo.com
Thinking Outside the (Hot) Box
Jugaad Innovation

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

Gambiarrra or jeitinho in Brazil

Kanju in Africa

Jiejian Chuangxin in China

Do-it-yourself (DIY) in the US

Systeme D in France
How Can You Practice Jugaad?

1. Do More with Less
2. Keep it Simple
3. Think and Act Flexibly
4. Seek Opportunity in Adversity
5. Include the Margin
6. Follow your Heart
Entrepreneurs
Mansukh Bhai and the Mitti Cool Fridge

Miticool – Village Fridge

Innovator: Mansukh Prajapati
Gujarat

It is a fridge made from special clay. It has three chambers, one just for cooling water. It requires no electricity and is a perfect solution for rural areas.
Dr Mohan’s Mobile Diabetes Clinic

Source: http://www.drvmohan.com/

Source: http://www.worlddiabetesfoundation.org/composite-2731.htm
Aravind Eye Hospitals

Founded by Dr. Govindappa Venkataswamy (Dr. V) in 1976

A network of eye hospitals to eradicate cataract related blindness in India

Treated over 35 million patients with over 4 million surgeries

 Majority are very affordable or free

Doctors rotate between free and paid wards

Rate of infection: 4 per 1000 surgeries (lower than international norm of 6 per 1000 surgeries)

Set up Aurolab to make intraocular lenses; produces nearly 1.8 million lenses annually at a price of $2 each
Devi Shetty: Frugal Surgeon
Large Organisations
GE and Affordable Innovation

Designed specifically for India’s rural markets

Portable, light, battery operated, reliable, cheap

Launched in China, and now in the US after having got FDA approval
Mr. Immelt said he expected health-care products developed in India to be exported to the rest of the world. "Some of these models and products have applicability in Europe and the U.S.," he said.

The two companies have had a joint venture to sell health-care products in India since 1990. Wipro GE Healthcare, in which GE holds 51% and Wipro 49%, already accounts for about 85% of GE Healthcare’s sales in India. Added to the venture will be GE’s other Indian health-care units, including GE Healthcare Life Sciences, GE Healthcare Medical Diagnostics and GE Medical Systems India.

Financial terms of what Mr. Immelt called a "simplification" of GE’s Indian health-care portfolio weren’t disclosed.

GE also plans to increase manufacturing of health-care products in India for both the domestic and export markets. Currently, Mr. Immelt said, about 25% of the health-care products the company sells in India are made in India; he intends for that to reach 50% to 75% within five to 10 years, he said.
Siemens: Foetal Heart Monitor
The Nokia 1100

Specifically for emerging markets:

Dustproof keypad and front face

Built-in flashlight

Over 200 million sold since late 2003

World's best selling handset and consumer electronics device
Doing more (and better) with less
Cola Life

Kit Yamoyo
anti-diarrhoea kit

ADK kit proposed contents
- Oral Rehydration Salts (ORS)
- Soap
- Zinc tablets
- Information materials
World’s largest NGO: employs 100,000 people, reaches 126 million people in over 11 countries

Diversified: health, education, finance and social enterprise

Covers 80% of its costs through own revenues

Best practices from business; constantly learning
Frugal Innovation in the West
Design for America and Swipe Sense

To solve problems in health care, education, and energy in the US

Hospital acquired infections: 2 million people

100,000 deaths each year

$2-4 billion dollars in costs to the healthcare industry
Eben Upton and the Raspberry Pi

“Design intended to inspire schoolchildren and adults to program sees overwhelming demand as first versions go on sale”

“Demand for Raspberry Pi, the British £22 computer, crashes website”

Source: The Guardian
Prabhu Subramanian and CoLearnr
Frugal Innovators Disrupt Industries

CellScope
3D Printing: Increasingly Affordable
Simprints: ID to Access Patient Records

simprints

every person counts
“Today’s Do-It-Yourself is tomorrow’s Made in America”
How Can Large Organisations do Frugal Innovation?
The Six Principles of Frugal Innovation

1. Engage & iterate
2. Flex your assets
3. Create sustainable solutions
4. Shape customer behavior
5. Co-create value with “prosumers”
6. Make innovative friends
Large Firms and Frugal Innovation
GE Taps Frugal Innovators Worldwide
GE Taps Frugal Innovators Worldwide
Barclays Accelerator with TechStars

Techstars selects 10 promising global fintech startups

Start-ups are housed in an accelerator for 13 weeks

They are mentored by Barclays Bank personnel

They pitch to Barclays’ strategic investment team

The new ventures stand to gain up to $100,000 investment and $200,000 partner perks
Conclusions
The Challenge for Large Organisations

Learn to do more with less

Learn to be agile

Learn to include excluded groups
The Challenge for Large Organisations

Give employees time and space to experiment

Engage with agile entrepreneurs

Create a jugaad mindset by engaging with emerging markets
The Challenge for Small Organisations

Learn how to scale

Learn how to partner with large organisations
Conclusion

The world needs frugal, flexible, and inclusive innovation

Large and small, developed and developing can learn from each other

Working together we can improve lives everywhere
Thank You!

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