Plenary 2: ICT, Innovation and Entrepreneurship

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Where aspirations become reality
Our Focus for this talk

Scope very vast, so will share experience about..

“Effective applications of ICT, Innovation and Entrepreneurship (IIE) – to create an impact on the local and national economy” and

“What are the key ingredients of success?” - lessons learnt
Outline

Recap what STDPCO – an attended “payphone”, a case of IIE - did for me, and for the country

How it lead me to think of NirmaLabs

How NirmaLabs projects are leveraging IIE

Five quick cases

What are “take homes” .. !!
Background

Personal

BS from India, MS, Ph. D EE (CS) from US, 10 yrs work ex in US, returned in 1973, three successful techno ventures, active in CII etc.

More recently (2003) we started NirmaLabs – an unique incubator to help create “knowledge based wealth generation”
May have heard of the first and the second order effect of “technology”

Consider the case of use of electric motor to get water from a well

First Application of electric motor?

- to pull the rope!! - Automate!!

Ponder the Purpose – to pull water --

- think of and invent a pump!! – Innovate!!
We view ICT as an enabling technology,
Innovation as an enabling attitude,
Entrepreneurship as an enabling process..
But it is the application domain which offers an opportunity to create value
Quick Recap of STDPCO

Birth and growth of attended pay phones in India - A Story of Anjaleem (Our company)
Scenario – Product Opportunity

Time 1986 – Direct Dialing being introduced – no mobiles

Billing credibility crisis .. No itemised bills ..

Low teledensity – concept of payphone mooted .. Coin/Card

Low acceptance – High cost
Anjaleem developed an attended call metering system

Used microprocessor – software, database, real-time OS, - to make an early forerunner of to-day’s embedded systems

Major change in adoption !!
Why attended STD PCO was a mega success ..

- Magic of printed receipt
- Large LED display in booth
- Attendant’s presence gave comfort
- Accurate billing won confidence
What Anjaleem help create

STD

ISD

PCO

Attended public telephone call facilities in India – printed bill

Hundreds in city and @ five km on highways

Major impact-changed the face of the nation
From Player to Coach

Why not encourage and facilitate “others” to pursue techno-entrepreneurship?
Techno entrepreneurship – Drivers

- Av. of trained people with entrepreneurial aptitudes
- Globalisation
- Systematic efforts – DST
- Building “Encouraging” ethos
- Initial successes on horizons
- Overall enabling environment
Birth of NirmaLabs

An Incubator to spawn global techno-entrepreneurs
NirmaLabs Difference

Bet on Individuals - not only on their current business plans
- Open to all (across the world)
- Not just facilitate - get involved
  - Practicing Entrepreneurs, not just Professors and students

End-to-end solution
- Grooming, pick idea, form teams, prepare incubation/business plan, evaluation, incubation, start up, growth, share success ..
Selection Criteria and Process

- Engineering, Science or Management Graduates, preferably with 1 to 3 years of experience
- With entrepreneurial instincts and flair for technology businesses
- Tests (IQ, EQ, AQ), interviews etc. – No special preparations
NirmaLabs Approach

Stages from Individual to Enterprise

1. Select
2. Groom Indv.
3. Incubate Project
4. Grow Company

Identify Value Proposition
Develop Value Proposition
Deliver Value & Establish growth

- 25 Weeks
- 6 - 18 Months
- 3 to 5 Years

Cost to Candidate
Selected Proj get Loans,
NirmaLabs get Equity
US $ 2K during grooming
(up to $50K) teams get Sustenance (~$200 each)
Project Specific Mentor, Networking

Possible Exit
Eval. Ind. panel

NirmaLabs
Where aspirations become reality
Status

First batch – 2 incubated projects - Jun 04
RFID solution – 2 team members
Jewelry Manuf. Automation – 3 team members
Expect both to get VC funded

Second batch began June 2005
Biometric identification
Pharmacogenomics

Third batch – Jan 2006
3 People – Health Monitor system

Fourth Batch – July 2006 - 11 people
Leveraging ICT, Innovation and entrepreneurship

Five quick examples
1. RFID

- Technology – RFID
- Work – readers, firmware, application software
- Impact – Libraries, wagon tracking, retail ..
- Growth prospects – Good
- Two companies spun off
2. Jewellery

- Developed RF heating technology
- Use – Initially as heater to melt precious metals – Efficient, clean
- Uses electronics, microprocessors and firmware to achieve the results
- Next application – automate jewellery manufacturing ..
3. Pharmaco-Genomics

Most drugs have varying degree of effectiveness and toxicity

- Cancer – time and cost major issue

- Testing for genomic profile of cancer patients helps determine toxicity risk factors

- Set up as a service – already done 20+ tests..

- Application of ICT and Entrepreneurship
4. Biometric

- Developing a product using other special biometric characteristics
- New technology, algorithms, lots of software, and "guts"
- A year away from coming out
5. Personal Health Monitoring

Simple application of sensors, hardware, packaging and software to help schools, gyms, doctors to integrate and automate monitoring of many health indicating parameters such as BP, BMI, height, weight, etc.

Auto building of individual database for records ..
Lessons !!

Case of STD PCO illustrates how IIE can be leveraged to create second order use of technology to generate “wealth”

NirmaLabs is an extension to leverage IIE to spawn techno-entrepreneurs .. Greater impact
Extrapolating Our Experiences
Looking Back

Deeply satisfied, In 3 Years

- With support from Nirma, DST and committed Anchors/supporters
- Set up a unique incubator
- Model got validated, processes are in place, awareness created
- Likely to create new benchmark
Looking Ahead

- Need to get closer tie-ups with others who can contribute
  Angels, VC’s, Incubators, Resource people, Mentors, Entrepreneurs, “educators”
- Network good intentioned people with voice and influence
- Meet them, whet their interests, bring them to (and closer to) NirmaLabs
What is Needed

- Scaling .. More initiatives
- From Proto to initial customers funding – Angel or pre angel
- Networking to leverage one’s efforts and avoid false starts
- New ethos, successes and no stigma attached to failures
Thank You

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