infoDev, World Bank and
Department of Science and Technology
Government of India
Supported project for

Developing ICT Synergies for Incubating Start-ups

TREC-STEP
Tiruchirappalli Regional Engineering College-
Science and Technology Entrepreneurs Park
India
Welcome you for the Session!

TREC-STEP, India
Tiruchirappalli Regional Engineering College – Science and Technology Entrepreneurs Park. India
- Largest Democracy
- Nation of Nations
- Diversity and Heritage
- Hot Spot of Growth
- Knowledge Based
Potential surplus population in working age group (2020)

Note: Potential surplus is calculated keeping the ratio of working population (age group 15 – 59) to total population constant;
Source: U.S. Census Bureau; BCG Analysis
INDIA: FASTEST, MOST STABLE GDP GROWTH AMONG WORLD’S DEMOCRACIES

Year on year growth rates (%)

(1) 1999 figures, at 1996 prices
Source: EIU; World Bank; CSO India, BCG Analysis
INDIA'S PEOPLE WILL BE OUR ASSETS IN THE FUTURE
Quantity And Quality

PROJECTED WORKFORCE IN 2020

Surplus

Shortfall

People strength

• Productivity / Quality
• Cost
• English language skills

Source: World Competitiveness Yearbook 2001, Britannica yearbook, Literature search; BCG analysis
Value Proposition Extends Beyond Information Technology!

<table>
<thead>
<tr>
<th>Industry</th>
<th>Transaction processing</th>
<th>Design and analysis</th>
<th>Research and development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Tech</td>
<td></td>
<td></td>
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<tr>
<td>Pharma/Healthcare</td>
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<td>Education Services</td>
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<td>Auto/ engineering</td>
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<td>Chemicals</td>
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<td>Financial Services</td>
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From Information Technology to Indian Talent!
The Evolution of Business Incubators in India …

- After sporadic experiments institutionalized in 1985 Department of Science and Technology, with Banks and local governments

- Nature - Technology focused and Structurally attached to educational institutions (Host)

- Capital Support initially with 10 to 5 years operating grants and self supporting after the initial period

- Initial ones broad based STEPs till late 90’s; from late 90’s more focused Technology Business Incubators

- Many Success Stories and many constraints providing rich ground of experience for future growth

- Diversity is a unique feature in terms of Technology focus, Management vision, Institutional Capabilities etc.
Business Incubator, Place and Potential

National Budget: 0.02%

New Venture Creation: 0.23%

Gross Domestic Product: 0.008%
Comparing Incubated Ventures Vs Non-Incubated Ventures

- **Investment per venture**: Non-Incubated Ventures: 1 unit; Incubated Ventures: 5 to 10 times.
- **Outputs**: Non-Incubated Ventures: 1 unit; Incubated Ventures: 5 to 6 times.
- **Jobs**: Non-Incubated Ventures: 1 unit; Incubated Ventures: 3 to 5 times.
Growth Comparison

- Employment Growth: 50% (Outside Incubators), 14% (Inside Incubators)
- Produce Growth: 125% (Outside Incubators), 10% (Inside Incubators)
- Overall Investment Growth: 50% (Outside Incubators), 7.60% (Inside Incubators)
- Mortality: 60% (Outside Incubators), 20% (Inside Incubators)
Business Incubator, the new organization

- The new innovation architecture between academia and industry
- Part of the National Innovation Systems and new breed
- Enhancing Innovation and Quality of life
- More conscious mechanism for promoting ventures
- Professionalization of SMEs for growth
- Rich Mixture of techno commercial formulations
**TREC-STEP in a Nutshell**

- First Business Incubator in India, launched in 1985-86
- Moved to the Present Campus of 50 Acres in 1989
- Fully Operational by 1990 with 15 Nursery Incubators
- Self Supporting Model from 1999 onwards
- Profits for Growth & Model Indian Incubator
I. Promotion of Knowledge based ventures for creation of jobs

- STEP Incubation
- Start up Companies
- Jobs & Quality of life

II. Technology based Innovation through shared Research

- Entrepreneur Led
- Academia Led
- Incubator Led

III. Transfer of Knowledge - Training

- Intellectual Infrastructure
- Equalizer
- Innovation ambience
TREC-STEP Awards

Best Business Incubator Award 2001

Best Innovation Award 2002

Best Entrepreneur Award 2003
156 Ventures Profile

in last 12 years

Industry Profiles

Chem. 13%
ICT 20%
Mech. 62%
Others 5%

Qualification Profiles

Diploma & Others 27%
ME/ MBA/ MS 9%
BE/ BTec 64%

Product Profiles

Export orientd. units 3%
Innovative products 45%
Others 42%
Import substitution 10%

Turnover Profiles (in millions)

Above 20 21%
16 to 20 11%
11 to 15 28%
Less than 5 14%
6 to 10 26%
Profile of Technology Based Ventures

- No. of industries Promoted = 156 ventures
- Employment Generated = 3000 Direct (18000) Micros In-direct
- Initial Investment = Rs. 1.2 bln ++
- Turnover Initial = Rs. 2.0 bln++
- Sales Tax Revenue = Rs. 20 mln p.a. + +
- Income Tax Revenue = Rs. 20 mln p.a. + +
- Project Investment = Rs. 16 mln
Case 1: Harish Rengacharya
1992: Student M Tech (Civil), IIT M – 1993
First Generation Entrepreneur: Risk
Digitizing Docs US Power Systems & London Times
Turnover Rs. 150 million and Bought a company at US
Employs 700 people + 1 Batch of Blind & Street Urchins

Case 1: Ananth Krishnan
1993: Student B.E. Production REC, Trichy – 1995
Professor C.R.K. and Student working on Reclamation
First Generation Entrepreneur: Risk
CAM SHAFT: GE; US, ALSTHOM; France, Chinese Firm
Turn Over Rs. 30 million & Employs 50 people
## Venture Highlights
### The Top 10

<table>
<thead>
<tr>
<th>Name</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harish Rengacharya</td>
<td>Design Digitization</td>
</tr>
<tr>
<td>Ananthakrishnan</td>
<td>Camshaft OEM</td>
</tr>
<tr>
<td>Balakumar</td>
<td>Manufacturing Textile Tools</td>
</tr>
<tr>
<td>Venkatesh</td>
<td>Solar Equipments</td>
</tr>
<tr>
<td>Sivasubramanian</td>
<td>Key Pads for appliances</td>
</tr>
<tr>
<td>SivaBalan</td>
<td>CNC Manufacturing Systems</td>
</tr>
<tr>
<td>Manuel Luckose</td>
<td>Dehydrated Fruit Pulps</td>
</tr>
<tr>
<td>Shanmugavel</td>
<td>Flame Scanner</td>
</tr>
<tr>
<td>Shankarraj</td>
<td>Testing Weldments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Turnover</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>100 million</td>
<td>1200 persons</td>
</tr>
<tr>
<td>2015</td>
<td>30000 million</td>
<td>1,40,000 persons</td>
</tr>
</tbody>
</table>
Innovation new products / processes

Business Incubators, the true Value Proposition

Investment

Return through Taxes to government

BI Investment

After 5 to 7 years

Jobs 300 per min.
TREC-STEP, a Resource Network for Development

- Govt of India, DST & SSI
- Other reputed TBI & Assns.
- UNDP
- SIDBI
- BHEL
- British Council Division
- REC
- DST
- Promoters
- Entrepreneurs
- CII
- DSIR
- EU India
- infoDev
- TANSIDCO
- DSIR
- Entrepreneurs
- Railways
- TANSIDCO
- EU India
   2. Upscale three folds in 3 to 5 years

Revenue Model of TREC-STEP: The Change?

<table>
<thead>
<tr>
<th>Sources</th>
<th>Today</th>
<th>In Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Training</td>
<td>45 %</td>
<td>20 %</td>
</tr>
<tr>
<td>2. Consultancy</td>
<td>15 %</td>
<td>5 %</td>
</tr>
<tr>
<td>3. Development Projects</td>
<td>25 %</td>
<td>20 %</td>
</tr>
<tr>
<td>4. Services to Start-ups: Hardware</td>
<td>15 %</td>
<td>5 %</td>
</tr>
<tr>
<td>5. Services to Start-ups: Soft Support</td>
<td>Nil</td>
<td>50 % ++</td>
</tr>
</tbody>
</table>
Changing Trends

- Reality of Knowledge Based Economy
- Markets going Global and not protected
- Cutting edge shifts from Manufacturing to Design, innovation and new knowledge
  - TREC-STEP Common facilities Blunt
- New Opportunities are surfacing
- TREC-STEP needs Major Re-Tooling in software and hardware
- More remunerative alternatives for entrepreneurship
The Metamorphosis now:

Design Innovation Incubator

Aim

✓ Respond positively to the changing trends in SME Development
✓ Develop more focused facilities for SME Promotion in Hi-Tech areas
✓ Leverage Regional Competency and Resources
✓ More Entrepreneurs, Employment Generation, Livelihood and Sustainability based on Competency.
Challenges facing Entrepreneurs in India

Globalization

Opportunities

Threats

Capabilities

ICT Tools & platforms

Other Support Systems
The infoDev - DST Project...

Project Activity Spectrum:

I. Capability Development Programs

II. Web Incubation Expert Systems / Portal

III. Incubation Facilities: Start-up Support Center

IV. Incubation Programs

V. Networking & Benchmarking

VI. Dissemination and Documentation
Project Agenda of infoDev - DST Support . . .

Business Incubation Eco System
Incubation Portal

Tutor 2 U - Breakeven Simulator

Tutor 2 U - Cashflow Simulator

Tutor 2 U - Investment Appraisal Simulator
Capability Development Programme

- **Business Incubator Managers Training Program at JSSATE-STEP, Noida**
- The Indo-US Workshop on Innovation and Radical Innovation conducted. Indo US Science Forum
- International Training Programme on IT Applications in Manufacturing
- Indo-French Workshop on IP Innovation and Technology Management at University of Pune – STEP.
- PCMM Training Programme conducted by Confederation of Indian Industry, Chennai.
- Faculty Mission to Sutherland Global Services and Wipro Spectramind
Incubator Building: Start-up Support Centre
InfoDev Other Supports

Incubation Fund of India

Start ups’
Early stage funding for 5 Incubators
for IIT, VIT, JSS, IIM & TREC-STEP
About $ 1.25 million
( TRECSTEP $ 2,50,000)

Berlin InfoDev Workshop

TRECSTEP, UKBI, German, Swede Park
Network Development Project
between TRECSTEP, UKBI, ADT & Swede park
Incubators

In-direct

InfoDev Support

iDISC Info Support

Bench marking

Global Forum Delhi Firmed Up
proposal

Knowledge Sharing and venture Facilitation
( EC & DST Euro 3,00,000 – 18 months )
The Incubation Fund of India

- Picks up an Innovative Tech. Bus. Idea
- Works on this for Proof of Concept
- Puts up a Proposal to convince Resource support
- Promotes concept to reality thru’ venturing
- Professionally grows in to Tech Venture creating wealth, jobs and QoL

STEP/TBI INC FUND

STEPs / TBIs
TREC-STEP Business Incubation Eco System
The Future of TREC-STEP

Startups for Global Markets
(Vision - World Class)

- InfoDev Incubation Programs & Support
- EU India Project
- Incubation Fund
- InfoDev Capability Development Programmes

Ministry of Small Scale Industry Support

Government of Tamilnadu
“Science Parks and Business Incubators are the greatest innovation of the 21st Century Industrialization”

- Jiang Zamin, Former Chinese Premier

Thank you, for your patience!

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