The second largest population of the world which will soon be the youngest, now aspires and deserves a better quality and security of life.

Engineering can and should provide solutions to societal demands, challenges and aspirations of young India.

Accelerating innovation ecosystem

Viable technology (products, processes)

Creating opportunities

Million Challenges, Billion Minds
Mandate of IMPRINT

**AIM: INCLUSIVE GROWTH AND SELF RELIANCE**

- Translation of knowledge into viable technology
- Identify major engineering challenges
- Domain > Themes > Targets > Topics (with 100 variants)
- Million Challenges for billion minds (crowd sourcing)
- Industry participation is strongly encouraged
- Product/process ready for demonstration/deployment
The Perpetual Triad

SCIENCE
Know-why?
Unravel nature
Curiosity/need
Inspired act
Discovery

ENGINEERING
Know-how?
Product/device
Invention

TECHNOLOGY
Know-what sells?
Multiple copies
Innovation

SOCIETY

IMPRINT

Challenges to Opportunity (job and business)
Academia creates/disseminates KNOWLEDGE

MODERN INNOVATION ECO-SYSTEM

Society CONSUMES and DEMANDS

Research organization pursues INVENTION in S - E - T

Industry produces/provides Innovative solutions as Viable Technology
Ten Technology Domains of IMPRINT

**Living world**

- Healthcare Technology
- Sustainable habitat (urban/rural) design
- Energy Security
- Water and River Systems
- Environment and Climate Change

**Materials world**

- Manufacturing Technology
- Defense and Security
- Nano-Science and Technology
- Advanced Materials
- Computer Science and ICT
Synergy with National Missions

- Rashtriya Avishkar Abhiyan
- Clean India
- Clean Ganga
- SWAYAM
- UNNAT BHARAT ABHIYAN
- Digital India
- Skill India

MAKE IN INDIA
IMPRINT Campaign and Interaction

Rashtrapati Bhavan, 5Nov15
IIT Bombay, 11Feb16
IIT Kanpur, 9Feb16
IIT Kharagpur, 6Feb16
Country-wide Distribution of Project Proposals

- Call for proposal: 29 Jan 16 to 25 Feb 16
- 2612 proposals received
- 10 domains, 84 themes
- 5217 individuals involved
- 198 Institutions (PI or Co-PI)
- 608 Participating Institutions
- Cumulative funding requested = Rs 4773,37.95 L
State-wise Distribution of IMPRINT Proposals

Proposals

- Punjab: 377
- Uttarakhand: 111
- Delhi: 122
- Madhya Pradesh: 132
- Assam: 140
- Odisha: 164
- Tamilnadu: 228
- Uttar Pradesh: 237
- Maharashtra: 260
- Karnataka: 223
- Telangana: 192
- West Bengal: 192
- Others: 260

Others:
State-wise Distribution of Budget/Fund Request

Budget (Rs. Lacs)
## Domain Summary Table

<table>
<thead>
<tr>
<th>Domain (themes)</th>
<th>Proposals</th>
<th>Institutes</th>
<th>Budget (Rs. Lacs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Materials (12)</td>
<td>401</td>
<td>84</td>
<td>73132.44</td>
</tr>
<tr>
<td>Energy (6)</td>
<td>354</td>
<td>70</td>
<td>67086.58</td>
</tr>
<tr>
<td>Environmental Science &amp; Climate Change (12)</td>
<td>174</td>
<td>59</td>
<td>31389.99</td>
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<tr>
<td>Healthcare (8)</td>
<td>475</td>
<td>85</td>
<td>84631.18</td>
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<tr>
<td>Information &amp; Communication Technology (9)</td>
<td>386</td>
<td>83</td>
<td>65326.84</td>
</tr>
<tr>
<td>Manufacturing (12)</td>
<td>173</td>
<td>50</td>
<td>28797.20</td>
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<tr>
<td>Nano-Technology Hardware (6)</td>
<td>110</td>
<td>44</td>
<td>24918.98</td>
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<tr>
<td>Security &amp; Defence (4)</td>
<td>202</td>
<td>46</td>
<td>41000.48</td>
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<tr>
<td>Sustainable Habitat (9)</td>
<td>229</td>
<td>48</td>
<td>40282.73</td>
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<tr>
<td>Water Resources &amp; River Systems (6)</td>
<td>108</td>
<td>39</td>
<td>20771.53</td>
</tr>
<tr>
<td><strong>Ten (10) Domains</strong></td>
<td><strong>2612</strong></td>
<td><strong>608 (198)</strong></td>
<td><strong>477337.95</strong></td>
</tr>
</tbody>
</table>
Evaluation of preliminary proposals

- Clarity of definition and relevance of the scope/objective
- Feasibility of achieving proposed goal/target (viability of technology development)
- Credibility of the investigators (PI and Co-PIs) and participating institutions
- Budget/Roadmap/Deliverables/Milestones/Benchmark (how well defined and how realistic)
- Need/urgency in and relevance to the country
- Overall impression about possibility of success and degree of impact
## Evaluation Strategy of Project Proposals

<table>
<thead>
<tr>
<th></th>
<th>PHASE I</th>
<th>PHASE II</th>
<th>PHASE III</th>
<th>FINAL PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proposal format</strong></td>
<td>Short (5 page)</td>
<td>Short (5 page)</td>
<td>Full proposal</td>
<td>Proposal + Report</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Screening</td>
<td>Peer review</td>
<td>Peer review</td>
<td>Final decision</td>
</tr>
<tr>
<td><strong>Time frame</strong></td>
<td>1 month (Mar’16)</td>
<td>1 month (Apr-May’16)</td>
<td>1 month (Jun’16)</td>
<td>1 week (Jul’16)</td>
</tr>
<tr>
<td><strong>Authority</strong></td>
<td>DEC</td>
<td>DEC-Referees</td>
<td>Peer reviewers</td>
<td>Apex Committee</td>
</tr>
<tr>
<td><strong>Numbers</strong></td>
<td>2612 (100%)</td>
<td>~ 50%</td>
<td>~ 25%</td>
<td>~ 10%</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Completed</td>
<td>To begin</td>
<td>To begin</td>
<td>To begin</td>
</tr>
</tbody>
</table>

- Proposals received: 29Jan16 to 25Feb16
- 1<sup>st</sup> Apex Committee Meeting on 29Feb2016
- 7 member DECs constituted by Apex Committee
- > 400 reviewers identified for Phase II and Phase III
Concluding Remarks

SCIENCE IS UNIVERSAL BUT ENGINEERING SOLUTIONS MUST BE LOCAL

*Prime Minister Modi*

- Way forward: Phase II and Phase III review, and Final Round Project Selection by Apex Committee
- Funding from MHRD and Partner Ministries
- Implementation and Monitoring
- Field trial and pilot scale study
- Technology marketing

Thank you and Namaskar!