Confederation of Indian Industry

Department of Science & Technology
Government of India

All India Council for
Technical Education

Young Indians
WE CAN WE WILL

8th India Innovation Initiative 2016

– A Report –

India Innovation Initiative

Opportunity to harness innovations for wealth generation and societal benefit

Review and Recommendations

Knowledge Partner AT Kearney

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Preface

The India Innovation Initiative (i3) is a national level competition organized by the Confederation of Indian Industry (CII) in partnership with the Department of Science and Technology (DST) and the All India Council for Technical Education (AICTE) of the Government of India with the principal objectives of promoting grass-root level innovations that address social or industrial challenges. i3 recognizes science and technology-based innovations and intends to develop these into commercially viable and successful projects.

i3 was initiated in 2009 and has gone through 7 editions so far, with typically well over 700 entries. i3 follows a 2-step process to review and reward the best innovations. First an online evaluation and shortlisting, followed by a jury review at a national fair, where winners receive awards in the form of cash prizes, mentoring and incubation support, and funding connects.

To understand further opportunities to evolve the i3 program and help budding innovators, CII and A.T. Kearney conducted an analysis of the commercial progress of past winners. Our analysis revealed that i3 innovators continue to face several problems at various stages of the innovation life-cycle. Overall, they will require more help in accelerating their path to commercialization.

As a result of this analysis, we are recommending several enhancements to the i3 program that can help strengthen i3's contributions across three specific stages: "reach out", "educate" and "connect". With this analysis and the suggested enhancements, we believe i3 can further strengthen its role in harnessing the Indian innovation potential and bridging the gap of innovation and commercialization.

Foreword

Taking the World by Storm: Innovation-led Startups as the Next Engine of National Growth

Dr. B. P SINGH

Head, National Council for Science & Technology Communication,

Department of Science & Technology, Government of India

With the government's active focus on encouraging and enabling innovation-led entrepreneurship through a plethora of initiatives such as Startup India, Standup India and Make In India, and a slew of home-grown unicorn startups gaining world fame and recognition, innovation and entrepreneurship are now being touted as the new official key drivers of economic growth of the nation.

Of the various institutions created to facilitate an enabling environment for the growth of enterprises, The National Council for Science & Technology Communication (NCSTC) has been established with the mandate to communicate and popularize science and technology among citizens. It is committed to creating scientific awareness among various target groups through innovative ideas, adoption of latest technologies to enable informed decision-making.

The National Council for Science & Technology Communication (NCSTC), Department of Science & Technology (DST), Government of India, has been partnering with CII for eight years now on India Innovation Initiative and have together created a large repository of home-grown innovations, ranging from rudimentary to cutting-edge technologies. As we move on this journey together, there is a renewed effort to make this platform more meaning and impactful through forging new partnerships with ecosystem stakeholders and industry as well as deepen existing partnerships.

This report is a valuable exposition of this platform as a way to look back upon our own projects as well as an important consulting document offering insightful analysis and policy recommendations, which I believe, will be of immense worth to both industry and government.

I would like to congratulate the Confederation of Indian Industry and the i3 team for their commendable work into building i3 into one of India's most well-known and well-awaited platforms for advancing innovation and entrepreneurship in both urban and rural areas.

I wish i3 all the success for the future.

Foreword

Prof. Anil Sahasrabudhe
Chairman, All India Council for Technical Education (AICTE)

Innovation, invention and discoveries are the key elements for development of a nation through its economic prosperity and service to the mankind. The All India Council for Technical Education, a statutory body established by an Act of Parliament is closely working to promote innovation, research and development in established and new technologies.

The India Innovation Initiative 2016" (i3) which is being organised jointly by Confederation of Indian Industry (CII); Young Indians; the Department of Science & Technology, Government of India and the All India Council for Technical Education is a national challenge promoted with the principal aim of expanding and strengthening the entrepreneurial ecosystem of the country by fostering a spirit of innovation and entrepreneurship among young citizens who have the ability to think out-of-the-box and the boldness and passion to solve contemporary industry and social challenges.

The Council is looking for policies to encourage students to look for Entrepreneurship, Start-ups, setting up of small Industries etc. to overcome the challenge of unemployment or under employment and has come up with a Start-up Policy for AICTE approved Colleges. The Start-up policy of Council is to develop human resource for the new initiatives of Government of India i.e Make in India, Digital India, Start-up India etc.

More than 80 Lakh students are enrolled in the field of Technical Education in over 10,000 college campuses across India. These students will benefit from the new AICTE Start-up Policy that aims at creating 10 Lakh new jobs through 1 Lakh new student start-ups. This policy creates a revolutionary shift in our academic system by focusing to develop job creators rather than only job seekers.

Such initiative of bringing the innovations, industrialises, Policy makers is a welcome step and will help in developing close synergy amongst the innovators, entrepreneurs and industries.

Foreword

India Innovation Initiative: In Pursuit of Building the World's Youngest and Most Dynamic Startup Nation

Chandrajit Banerjee

Director General, Confederation of Indian Industry

India Innovation Initiative or i3 is one of CII's flagship programmes organised in partnership with the Department of Science & Technology, Government of India and the All India Council for Technical Education and affirms our strong commitment to the task of nation-building through the advancement of innovation and entrepreneurship as the key drivers of our nation's growth and development.

Over the course of its eight-year journey, i3 has become a well-known and well-awaited platform for grassroots innovators coming from diverse occupational and cultural backgrounds. This report is not just an in-depth analysis of this program but also offers some very powerful insights to the current state of the innovation-cum-entrepreneurship ecosystem of the country as well as some policy recommendations, which would prove invaluable to the government. In addition, this edition seeks to present a case for expanding and building-up initiatives such as i3, where all stakeholders stand to gain.

In the present day, it is heartening to see a whole legion of young Indians working on innovations to solve society's challenges and wanting to work for themselves rather than for others, which is evident in a sea-change in society's collective attitude to entrepreneurship. Entrepreneurship is no longer seen as a "path to failure" or "suicidal", in fact, it is now been seen as "the" thing to do for the really ambitious, for the change-makers and failure worn as a badge of honour. Government-led missions such as Startup India and Standup India have created a large momentum for startups.

However, this momentum and euphoria will be short-lived unless supported by active engagement and participation by various stakeholders in the ecosystem. Government has to take the lead in communicating and raising awareness about its various progammes offering incubation and funding support and opening access to the large, but largely unknown, institutional support it is creating. Industry must come forward to not just invest in or mentor high potential ventures but also reach out to existing startups to forge mutually-beneficial partnerships.

At CII we have long been resolute believers and advocates of building large and impactful platforms through the power of collaboration and leveraging upon each others' strengths. I would like to extend sincere gratitude

to the Department of Science & Technology, Government of India and the All India Council for Technical Education for their continued generous support and guidance into making i3 the prestigious platform it is today.

I would like to thank our long-standing partners The Indus Entrepreneurs, Delhi-NCR and the Indian Angel Network for graciously supporting us with their capabilities and networks with each passing year. I extend special thanks to our new partners, Indian National Academy of Engineering, The Startup Board and the Forum for Industry Interaction, Indian Institute of Management, Ahmedabad, for their invaluable contribution in further strengthening this program and enhancing its impact.

I would like to express special gratitude to A T Kearney for their excellent work on the 2016 report and for their timely and insightful analysis of i3 and policy recommendations for the larger entrepreneurship landscape in the country. We are delighted to have all of our partners in a joint-effort to further build this prestigious initiative to advance grassroots innovations and help turn them into successful commercial ventures.

Foreword

Raghu Kailas

National Chairman, Young Indians

Greetings from Young Indians !

I take immense pleasure in writing this message to all of you who have pledged time and support towards this wonderful initiative, the "8th INDIA INNOVATION INITIATIVE 2016". It is indeed an honour that Young Indians has played an important role with **Confederation of Indian Industry (CII**) in making this happen together with the **Department of Science & Technology, Government of India, and the All India Council for Technical Education.**

As the world becomes more competitive & challenging, it is initiatives like these that expands and strengthens the entrepreneurial ecosystem of the country by fostering a spirit of innovation and entrepreneurship among our young citizens. I can say with conviction that such initiatives have been formed at the most appropriate time and with very relevant objectives.

When I did receive the invite sometime back, I was delighted to know that the "India Innovation Initiative" is a platform that connects the most promising innovators to mentors, incubators and investors to help them convert innovations with a potential for high industrial or societal impact into viable commercial ventures. Through this annual nation-wide challenge, they recognize India's most promising innovators and potential entrepreneurs and raise awareness about the latest trends of the year among all stakeholders –angel funds, VCs, business incubators, industry and government.

I wish to congratulate each one of you that are part of this initiative. As Young Indians, we look forward to closely working with CII and other partners to make Innovation a priority for young people who aspire to become an entrepreneur.

Wishing this wonderful initiative the very best.

India Innovation Initiative (i3)

Current format of i3

India Innovation Initiative (i3) is a national-level competition organized by the Confederation of Indian Industry (CII) in partnership with the Department of Science and Technology (DST) and All India Council for Technical Education (AICTE), Government of India. The principal objectives of i3 are

1. To Inspire and promote grass-root level innovators
2. Recognize Science & Technology-based innovations that have been proven with prototypes solving an industrial or social challenge
3. Rewarding innovations that promise viable commercialization in next 2-3 years by providing them mentoring, incubation and investor connect

i3 invites applications for innovative product or technology, beyond the idea stage, that solves an industrial or social challenge in the following fields:

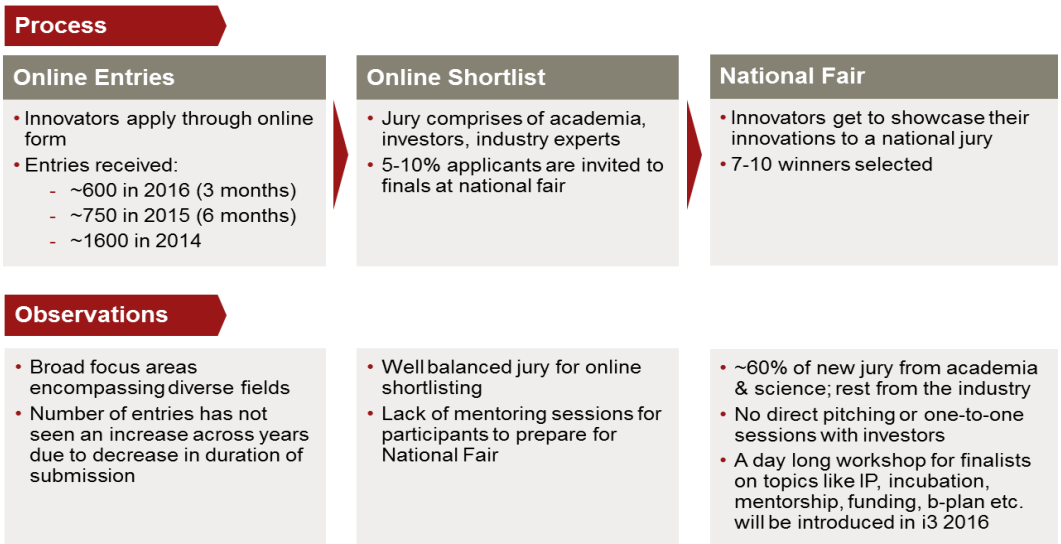
Agriculture	Chemical	Energy	Engineering	Healthcare and Sanitation	Transportation & Logistics
Robotics	Life Sciences	Nanotechnology	Water	IT & ITes	Others

Along with a broad spectrum of fields eligible for i3, individuals and teams from diverse background can participate in this event. To take part in i3, the participants should be:

1. Indian citizens, with age between 18 - 45 years
2. Individuals or teams from academia, government laboratories, non-government R&D institutions and laboratories, incorporated early-stage start-ups and other non-incorporated entities

Set of events in i3

i3 follows a 2-step process to recognize and reward the best innovations based on their commercial viability



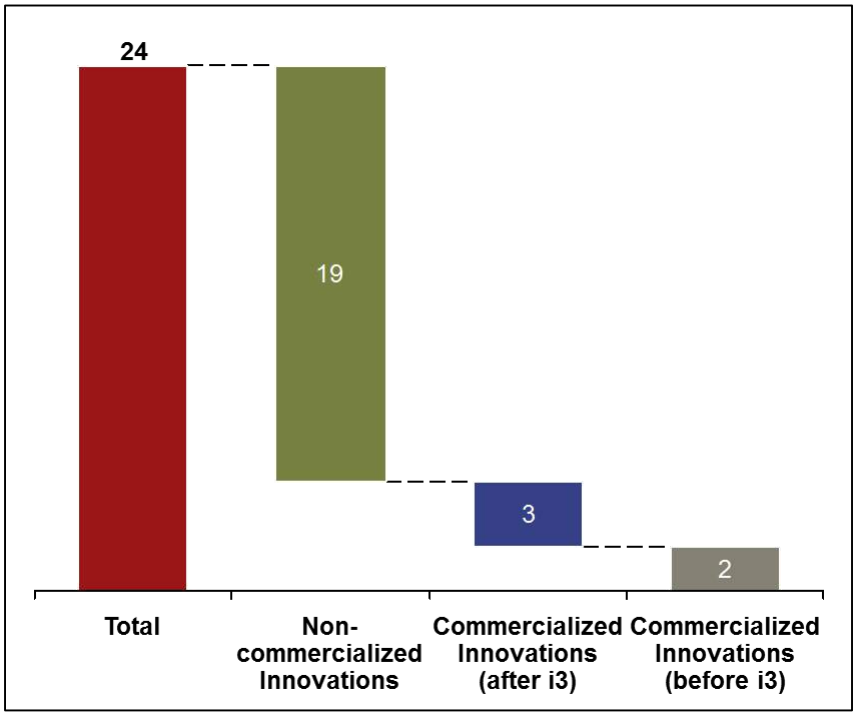
Award Categories

i3 awards 7 to 10 innovators every year under various categories, sponsored by i3 and its partners.

2015	2016
Cash prize (up to INR 50,000), trophy and certificate (6 awards)	Cash prize (up to INR 1 Lakh), trophy and certificate (4 awards)
Mentoring and funding connect from Indian PE and Venture Capital Association (IVCA) (3 awards)	Mentoring support from Young Indians (Yi)
Incubation support from Valluri Technology Accelerators (VTA) (1 award)	1 year mentoring support + 1-year membership from TiE Delhi-NCR + 1 Pass to TiEcon Delhi 2016
	Group mentoring and pitch opportunity to the Investment Committee from India Angel Network (IAN)
	Cash Prize and 3 months' mentorship program from The Startup Board

Table 1: Award categories for winners of i3 National Fair

The Key Challenge



From the 24 past i3 winners who responded to an online survey, only 3 were able to successfully commercialize their innovation.

With this report we aim to answer the questions

- What are roadblocks faced by innovators in their path to commercialization?
- What are some of the structural changes recommended for i3 to improve commercialization of i3 winning innovations?

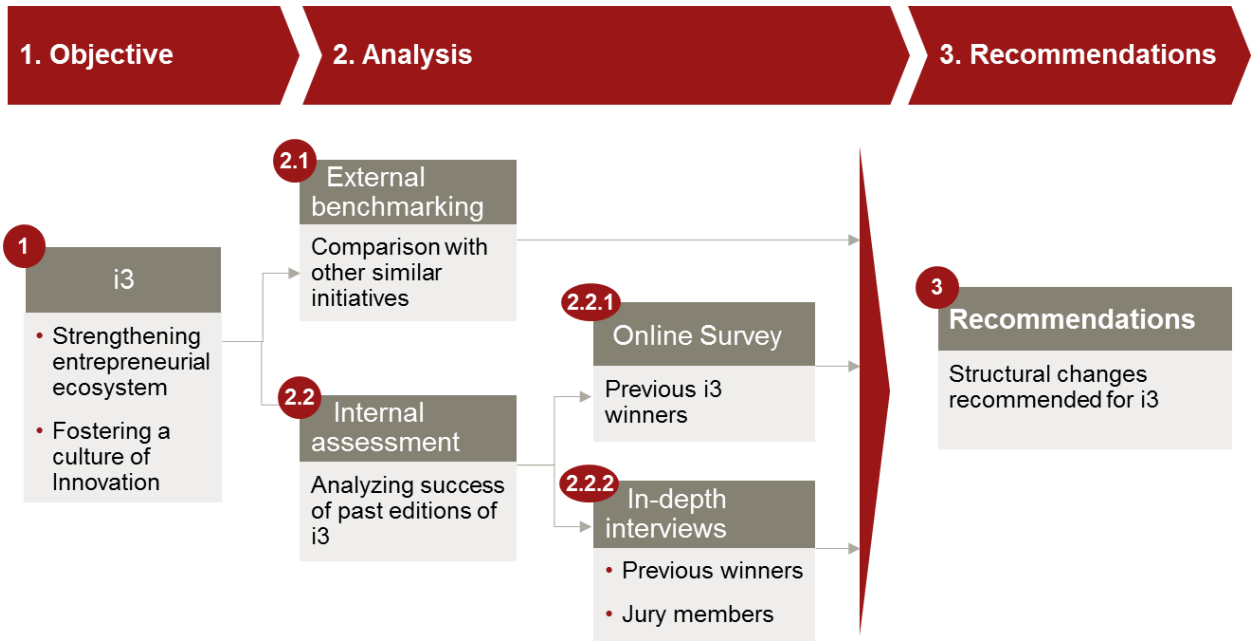
Commercialization level[1] of i3 winners (Based on survey of past winners and finalists)

1. Commercialization = commercial production/sale of the product

Review and analysis of i3

Framework to identify challenges and develop recommendations

With the objective of supporting the winners of i3 in the journey towards commercialization of their innovation, we carried out a review exercise of the i3 initiative. i3 was reviewed from two different aspects. First, by benchmarking it against some of the successful platforms working in similar fields nationally and globally. The details of the benchmarking exercise are given below. We also analyzed the success of i3 over the years by conducting an online survey for past i3 winners and in-depth interviews with jury members and i3 winners.



Benchmarking i3 with similar events

Comparison Parameter	i3	Eureka, IITB	TATA Social Ent. Challenge	Falling Walls (International)	Hult Prize (International)
Objective	• Promote grass-root level innovation and enabling commercialization of high-potential innovations	• Recognize and promote all types of entrepreneurship	• Recognize and reward social entrepreneurship	• Forum for scientists and professionals	• Addressing major social problems through innovation
Scope of Submissions	• Prototype stage • Majority online applications; Also accepts offline submissions	• Idea level also accepted	• Impact proposal submission	• Idea stage	
Registrations	• 700+	• 8500+	• 600+		
Target Audience	College students, research scholars & scientists in private labs, professors, entrepreneurs, professionals and others	• College students, professionals		• Students, young professionals - globally	• College and University teams
Event Promotion/ Media Presence	✓ Newspaper ✓ Websites	• Mass mailing targeting students • Pre-event talks across 40-50 colleges	• Seminars/Round-tables across colleges • Social media campaigns	• Speaker series • Newsletters • Conferences • Flyers	• Major TV news • Major magazines • Professional mailing lists
Top Prize	✓ INR 1 Lakh	• INR 5 Lakh	• INR 2 Lakh each		• USD 1 million
Mentoring/ Workshops before finals		• Online mentoring • 1-day mentor-meet • 1-day B-model workshop		• Regional, national, int'l rounds before conference	• 6-week program • Regional level workshops
B-Plan creation		• MVP webinar and submission	• Impact proposal submission		• Investor-ready company formed
Customized mentor/jury	• Peer-review by Academia/Scientists at online stage	• Assigned as per sector	• Based on sector /maturity	• Academia and Industry-experts	• Theme oriented
Pitching to VCs / incubators	• Chance to present to IAN	• Pitch to angels/ VC • Pitch to incubators	• Incubation, IIMC • Pitch to VCs	• 3-minute pitch to jury and a wide audience	
Networking Opportunities	• Jury presentation • Networking opportunities with investors, mentors etc. • This year's i3 to include 1-day workshop for networking with investors/mentors	• Ceremony held at Entrepreneurship-summit, IITB	• Funding and mentoring connections	• Links academia, entrepreneurs, professionals and investors	

Comparison Parameter	i3	Eureka, IITB	TATA Social Ent. Challenge	Falling Walls (International)	Hult Prize (International)
Post-event mentorship	• To best-30 • Group mentoring • 1-yr support	• Lean Startup Workshop	• 3-week support • Residential 2-day mentorship		• One-year membership
Follow-up & Other Consulting Services		• Legal, finance, HR, digital marketing, IP, scale up	• Workspace • Travel, logistics secretarial		• Continued support and mentorship
Success Stories	• 4-5 success stories in 5 yrs.	• 40 successful start-ups in 18 years	• SAANS • MicroX Labs		• 1 team selected per year

Table 2: Comparison of i3 with 2 national level and 2 international level innovation competitions

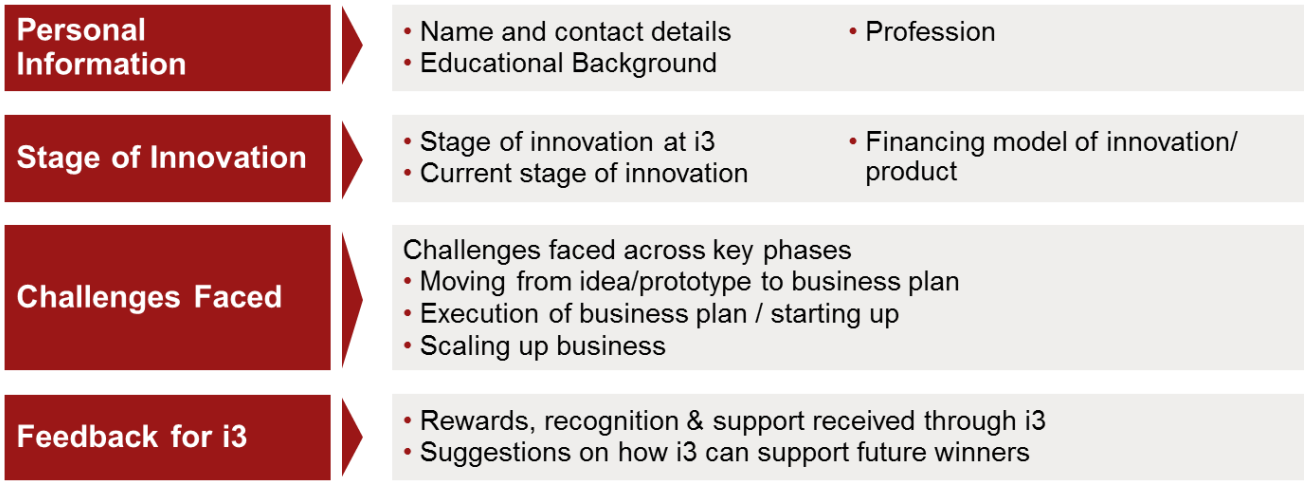
Key Takeaways from Benchmarking

Key takeaways	What could i3 do differently
Mentoring before finals	– Organize mentoring sessions to prepare finalists – Conduct 1-day workshop for B-Plan creation
Pitch to investors	– Opportunity to pitch to angels/ VCs/ incubators/ other investors at the finals
Regional Rounds	– Conduct regional or zonal rounds to promote regional level entries and expand the scope of i3
Event Promotion	– Focus on publicity to attract and encourage innovations – Work on social media profile, mailing lists, existing channels to reach out
Promote Winners: funding and guidance	– Link winners with existing government funded incubators, other investors and provide mentorship for commercial success

Online survey conducted with past i3 winners and finalists

An online survey was floated to the winners of last 5 years and finalists of last 2 years. The aim of the survey was to understand the progress of their innovation after their participation into i3 and also have an understanding about the challenges they have faced during various stages of the innovation. The survey was divided into four major components. The diagram below shows the information captured through the online survey. A total of 24 responses were received for the online survey.

Online survey structure

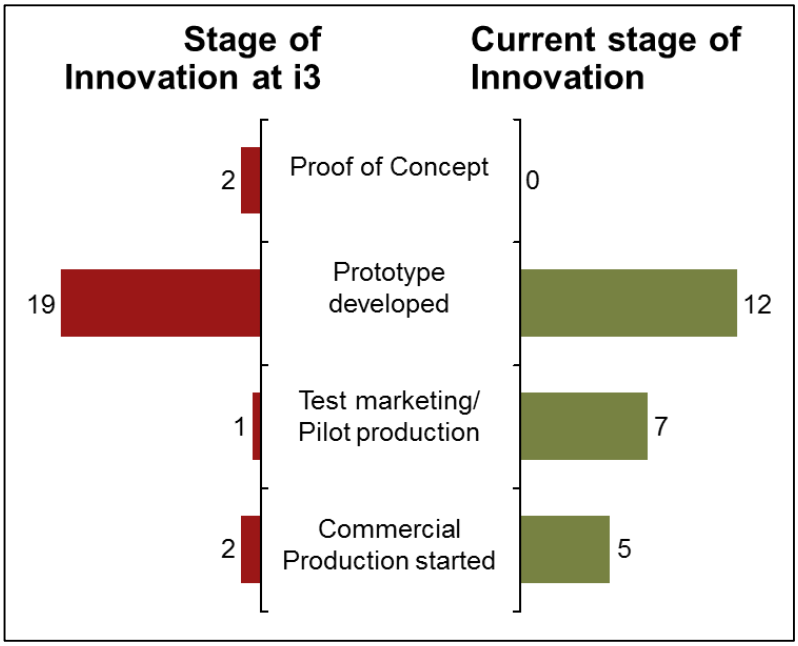


In-depth interviews

Apart from the online survey, interviews were conducted to get a deeper understanding of the innovators journey with their product. In all, eight past i3 winners were interviewed. It is also necessary to get the perspective of the jury members to get insights about i3. For this, four jury members having diverse backgrounds were interviewed to understand their experience with the i3 participants and their innovations.

Insights from survey responses and interviews

Progress of i3 winners

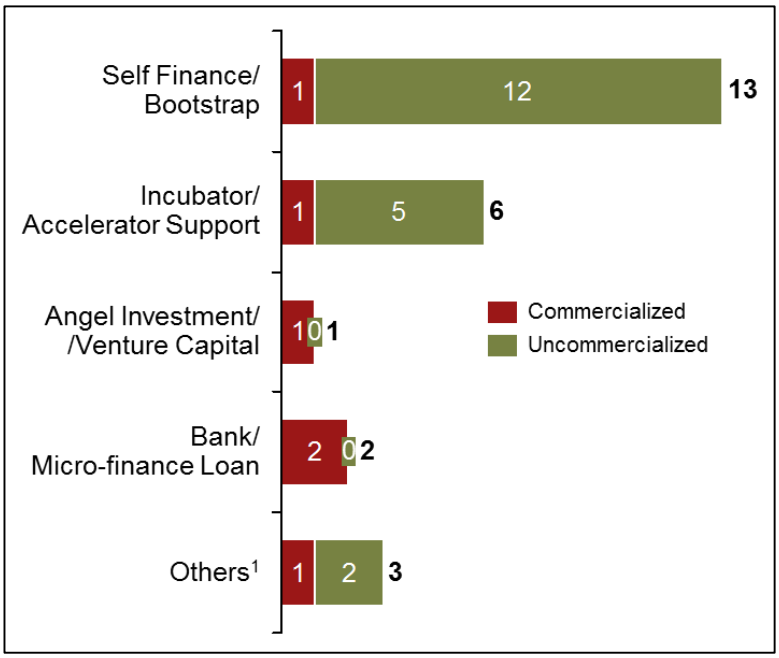


Many of the innovations winning at i3 get stuck in the 'Prototype' or 'Pilot' phase and are unable to move forward towards successful commercialization. From the responses received for the online survey, only 3 innovators were able to launch their product in the market. The major reasons mentioned by innovators for this situation are

- Lack of technical mentorship to develop their product
- Lack of financial support
  - For pilot testing of product in market to analyze commercial viability
  - To increase production capacity and scale up the business
- Absence of industry support in terms of latest technology, production infrastructure, etc.

Funding arrangement of the innovations

Among the survey responses, more than 50% of the winning innovations were still self-funded. Only one of these self-funded innovations was successfully commercialized. This shows the significance of funding support in case of a product based innovation. Early stage funding is very important for innovators who are trying to attempt commercialization of their products. It was also observed that in many cases, the innovators were unaware of the government initiatives and other sources of funding available for the respective field of innovation.

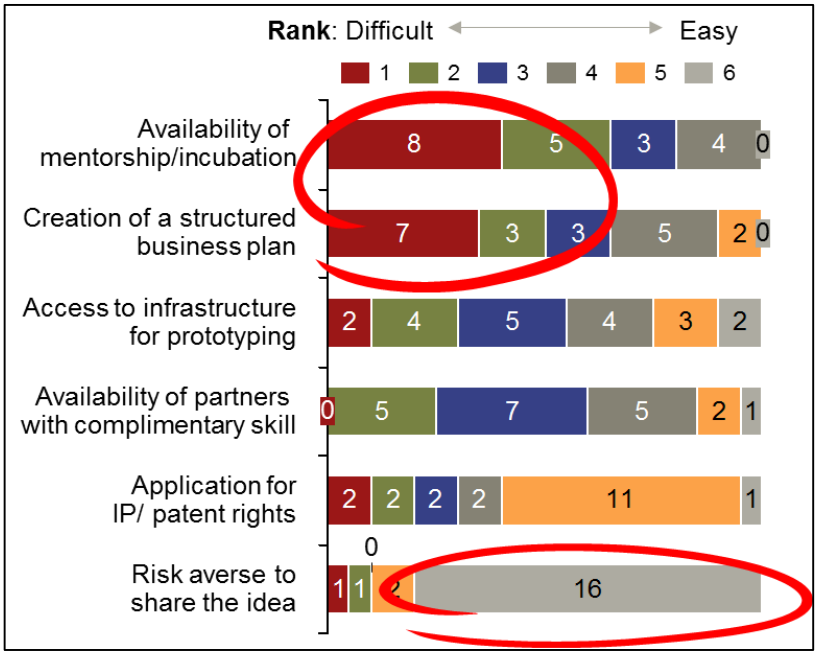


In case of prototype/pilot stage innovations, funding is required to refine the product and initiate small scale production to test the market response. On the other hand, majority of the investors do not show interest in innovations that have not proved themselves with initial market traction. Thus it creates a classic catch-22 situation which is hard to get over for most of the grass-root level product based innovators.

The survey responses and interviews were used to identify key challenges faced by innovators in their effort to commercialize their innovation. The challenges were identified across 3 stages of the innovation journey. Respondents were presented with a set of challenges under each stage and were asked to rank them based on how easy or difficult it was to overcome these challenges. Key insights from the survey responses and interview inputs are presented below

Stage 1: Moving from idea to business plan

In the first stage of the journey of an innovation towards commercialization, the innovator tries to develop the product to a stage where it becomes technically viable to be used to solve a real world problem. Creating a business plan is also a major activity in this stage. The innovator needs to carry out a preliminary analysis of the target market and create a basic b-plan.



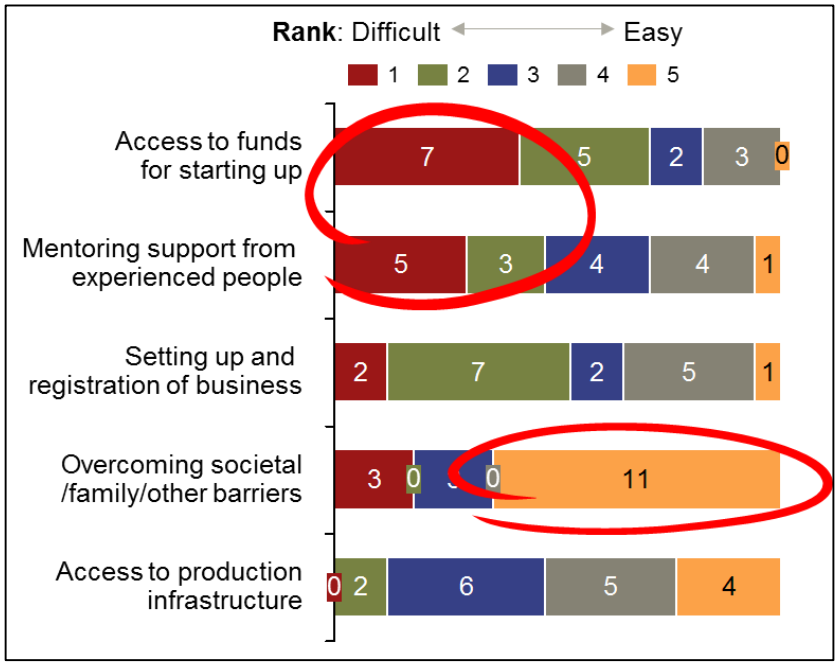
For 80% of the survey respondents, unavailability of mentorship/incubation support was among the top 3 challenges in this stage. Innovators require support form technical experts with similar background to develop and refine their ideas. This challenge is even more daunting for grass-root level innovators who do not have a connect with academia.

Innovators also lack the skills to convert their innovation to a business idea. As most of the innovators have a background in science and technology, it becomes challenging for them to create a structured business plan for their innovation. Without support from a mentor or an incubator, they are unable to devise a compelling business plan that can attract investors.

Another observation from the survey result shows the increased willingness of the new age innovators to share the idea if it helps them to progress further with the innovation.

Stage 2: Executing the business plan and starting a business

As the innovators develop a product out of an idea/prototype and devise a business plan to take it to the market, the next step is to pursue the path of entrepreneurship full-time and start up a business. In this stage, the innovators try set up a business entity and pilot launch their product to test the market traction.



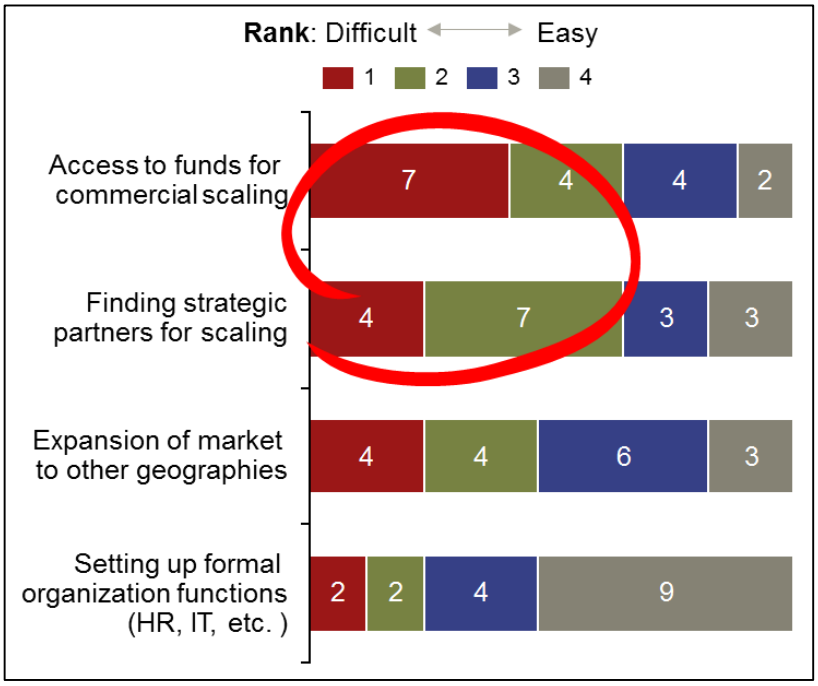
Many of the participants surveyed for this exercise admit to face two major challenges at this stage. First challenge is to secure funds for pilot production of the innovation and test the market response. Investors are not ready to invest at this stage of the company due to the uncertainty of initial success. Thus most of the innovators have to go through this phase stage with either self-funding the product or by raising funds from friends and relatives. Only a select few get the opportunity to join an incubator where some kind of funding is arranged by the incubator organization.

The second challenge is to get advice from an experienced person from similar field. Many of these innovations are B2B in nature and require meeting the right set of people in the industry. Innovators are unaware of the right approach for to be taken for test marketing their product. Support from an expert can help them to overcome this challenge.

On the positive side, innovators feel an encouraging attitude towards starting a business due to the recent efforts made by the government to support startups. Setting up and starting a business in India has become relatively easier than before. Also pursuing start up and entrepreneurship as a career option is now more acceptable among friends, family and society.

Stage 3: Scale up of the business

Once the product has proved its commercial viability in the test market, the next stage is about scaling up the business and fully commercialize the product. This requires setting up a dedicated production facility, expanding the geographical reach, setting up of formal organization functions, etc.



Access to funds for scaling up becomes the biggest challenge at this stage. Product based companies are required to invest heavily in building production facilities and in product improvement iterations. Due to the inherent uncertainity of the startup concept, it becomes difficult for entrepreneurs to raise funds from conventional sources like banks. Government has undertaken various initiatives to promote and fund micro and small scale industries from different fields. But there exists a clear lack of awareness among entrepreneurs about such opportunities.

New businesses in the product innovation space can also have a strategic partnership with industry players and go for a mutually beneficial growth. With the help of an established partner, a new business can expand its geographical reach and also have access to facilities available only in large organizations. In return, the larger player can benefit from the new innovation.

Feedback from i3 jury members

Four of the jury members from past i3 editions were interviewed to understand their view regarding the i3 event. While jury members believe i3 is a great effort to recognize innovations, they pointed to certain areas for potential improvement

1) **Promotion of event**
   - Increase promotional activities to reach all science and technology institutes
   - Improve branding exercise to attract more investors and industry personnel
   - Advertise event over multiple channels (e.g. newspapers, social media, television, radio, etc.)

2) **Pre/Post event guidance**
   - Pre-event: mentor interaction & workshop for progressing on innovation cycle
   - Post-event: 1-day post-event workshop for i3 finalists. Arrange for interaction with mentor/ expert (corresponding to applicant's sector).
   - Create a test-marketing fund for i3, to be shared amongst the winners

3) **Jury Composition**
   - Jury composition at National Fair is skewed towards academia
   - Need to have diverse set of jury with members from industry who can give feedback on commercial viability of innovations

4) **Quality of applications**
   - Many of the past participating projects were at a basic level of prototyping (similar to college projects)
   - Innovators need to have a basic business plan in place to get investors' interest

Recommendations for i3

After analyzing the survey results, winners' interviews, jury interviews and benchmarking results, we have devised a set of recommendations for i3. The recommendations are divided under 3 broad categories:

Reach Out

1) Focus on publicity to attract and encourage innovations

- Use social media platforms like Facebook, YouTube, Twitter etc. and register on websites like dare2compete (competition listing portal) to reach out to a larger audience
- Increase awareness across top 50 colleges by setting up Campus Ambassadors and conducting campus connect events like orientation workshops
- To reach grass-root level innovators, use conventional media (government owned) like T.V. (Doordarshan), radio and postal service
- Engage corporates as sponsors, accounting their contribution as CSR, to gain publicity & funds

2) Promote innovation at local level through 2-tier approach

- Conduct regional rounds in 5 zones across India, which will act as qualifiers to the national round
- Regional rounds encourage more applications and a diverse range of ideas
- Promotion activities can also be modified at regional level to align with local requirements

Educate

1) Provide mentoring support to shortlisted teams before final event

- Link teams to mentors from respective fields for idea refinement and pre-final preparation. Also, provide (online) toolkit/handbook for aspiring entrepreneurs containing broad information about "starting-up"

2) Organize workshops pre/post-final event

- Organize workshops before the day of National Fair for finalists for business-plan creation, IP/Patent norms, Investor pitching and a demo of finals
- Conduct a one-to-one networking session allocating 30 minutes to each finalist with a relevant mentor/investor who can guide finalists about taking their innovation forward

3) Diversify jury:

- Include more industry experts/investors than in previous juries like people who have successfully taken technology to market, investors and industry experts.

Connect

1) Provide assured mentorship/ incubation support and follow up

   - i3 assures membership in incubators for select winner teams. After event, i3 should follow up with incubator partners and winners at regular interval to check on progress. This can help in gaining insights and tweaking upcoming competitions

2) Increase interaction with industry personnel: jury, pitching & speakers

   - Current jury at the National Fair is skewed towards academia. More members from the industry can be invited to provide diverse feedback and opportunities to the finalists
   - Conduct a more elaborate Finals, asking top finalists to pitch in front of a diverse panel of investors and jury
   - Organize talks for the finalists from industry experts, where they also get a chance to interact and discuss about their innovations in detail

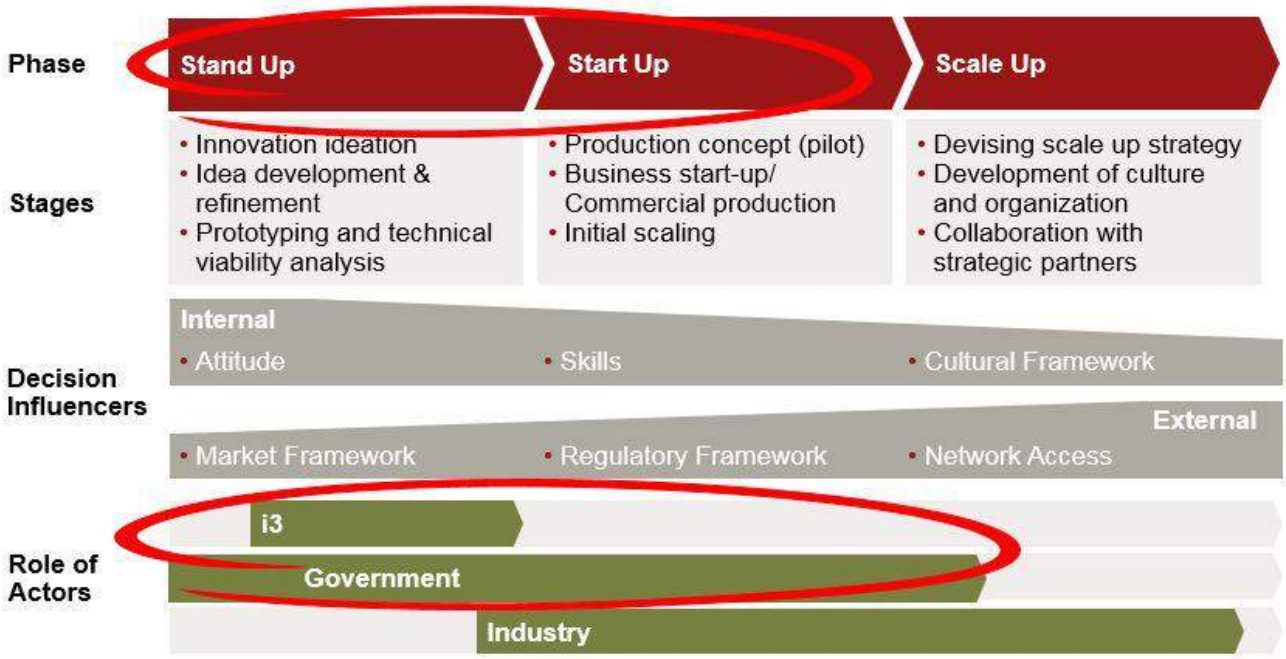
3) Create formal linkages to other existing programs for winners

   - Winners to qualify for networking/competitive events. e.g., Startup conclave and to be connected to funds/incubators like National Innovation Foundation, Honey-bee network, Atal Innovation Mission (Startup India), etc.

Innovation policy review

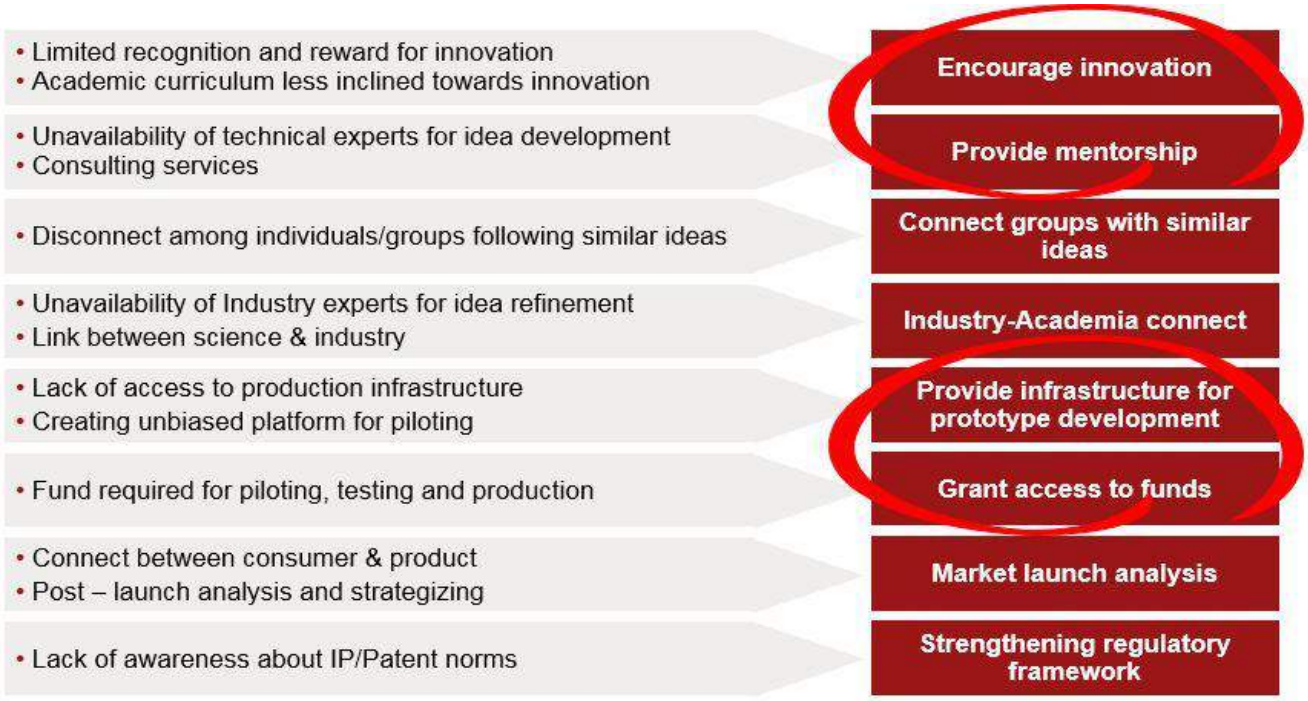
Innovation lifecycle

The innovation cycle follows 3 broad phases- Stand Up, Start Up & Scale Up. In the current context, enabling policy is required at each phase for successful commercialization of business plans by 3 main actors - i3, Government & Industry. Our main focus will be on the recommendations for the Stand Up and Start Up phases since the role of i3 and Government majorly impacts these two phases.



Challenges and broad based solutions

Challenges of the Start Up and Stand Up phase can be summarized in 8 broad areas. A cohesive strategy aimed at minimizing challenges such as limited value recognition, inadequate fund access, and lack of awareness of patent norms among other challenges can create a valuable entrepreneurship ecosystem in the country.



i3 can play a major role in encouraging innovation and providing mentorship. Other government stakeholders can play a major role in providing infrastructure for prototype development and access to funds while i3 can support the leadership initiatives of government stakeholders in these aspects. There is limited ability of i3 to drive other solutions of connecting groups with similar ideas, industry-academia connect, market launch analysis and strengthening regulatory framework.

Policy Recommendations

Focused aim at 4 policy recommendations can drive the startup vision for the country. We have focused on areas relevant to i3 competition where policy intervention is recommended through which higher probability of converting innovations into commercial launches can be achieved.

1) Encourage Innovation and Entrepreneurship

- **Raising awareness in schools:**
    a. Add experiential learning into school curriculum
    b. Offer innovation and entrepreneurship courses in colleges and universities
    c. Continue/expand ongoing Government efforts
    d. Inspiration: *founder4school* program in U.K.
    e. i3/CII can help in designing course structure and connect with local industry experts, business leaders and i3 winners to instruct these courses

- **Creating local drive:**
    a. Revive state innovation councils in state capitals and expand to prominent cities
    b. Organize networking events at regional level; recognize and reward innovations at local level
    c. Inspiration: *Vadodara Innovation Council (City council)*
    d. i3 can sponsor competitions at these councils, e.g., by moving to 2-tier (regional/national) competition

2) Provide Mentorship

- **Creating networking fora:** Develop online forum for connecting aspiring innovators with mentors
    a. Portal can connect innovators even in remote areas of India to knowledge experts
    b. Individuals with knowledge can register as mentor in select fields; aspirants can approach them with their query and get guidance
    c. Innovators with similar interest can also connect and collaborate
    d. Inspiration: Mentorsme.co.uk
    e. i3 can host a pilot launch of this portal on its website and support mentor training

- **Establishing voluntary & local mentor network:** Develop set of non-profit organizations/centers where mentors are recruited full-time for educating grass-root level innovators and entrepreneurs
    a. Individuals willing to contribute a year to this service join as mentors in the program
    b. Each center can also act as a (less formal) incubator
    c. Have AICTE mandate colleges to nominate professors for mentors on need basis
    d. Inspiration: *Teach for India*
    e. i3 can work with centers in regional competitions

3) Grant access to funds

Provide funds for product based innovations at early stage

- **Creating pre-seed fund:** CII along with government and industry partners create a pre-seed fund
    a. Currently idea/prototype stage innovations do not attract investor funding

b. This pre-seed fund can be disbursed for pilot testing and prototype development of promising innovations
c. Would help innovations that are unable to get financial support from investors due to uncertainty of commercial viability
d. Inspiration: MSC Technopreneur Pre-Seed Funding, Malaysia
e. Worthy innovations to be recommended by i3 and also state/local councils
f. Enable spending from Govt. sponsored funds through a robust evaluation and governance mechanism

- **Supporting crowdfunding:** Create crowdfunding platform for grass-root level innovators
    a. Platform can attract micro donations from large pool of individuals
    b. Innovations with potential will be recognized and funded. Reduces burden of funding on government
    c. Inspiration: *Patreon.com, Kickstarter*
    d. i3 can help relevant winners structure crowdfunding value propositions

4) Offer Infrastructure for Prototyping

Support and incentivize innovators through government bodies

- **Leveraging R&D facilities:** Provide access to government research and testing facilities to select innovators
    - India has more than 300 government funded facilities like CSIR, ICRA, DRDO, ISRO etc.
    - Create internship opportunities at these facilities for innovators, e.g., through policy directive
    - Connect innovators with respective Government facilities pursuing research in similar fields
    - Nominations to be sent from universities and competitions like i3

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A.T. Kearney

A.T. Kearney, is a leading global management consulting firm with offices in more than 40 countries. Since 1926, we have been trusted advisors to the world's foremost organizations. A.T. Kearney is a partner-owned firm, committed to helping clients achieve immediate impact and growing advantage on their most mission-critical issues. Our clients are large private and public-sector organizations.

We are 3,700 people strong worldwide, who have broad industry experience and come from leading business schools. We staff client teams with the best skills for each project across A.T. Kearney.

We have a distinctive, collegial culture that transcends organizational and geographical boundaries. It is not just what we do, but how we do it. Our consultants are down-to-earth, approachable and have a passion for doing innovative, great work. We pride ourselves to be collaborative, authentic and forward-thinking.

In India, A.T. Kearney has been serving clients for over 30 years, and we opened offices in New Delhi in 1997 and subsequently Mumbai in 2004. Both offices have grown rapidly and are outstanding examples of the firm's growth story in India. Today, the Indian office has close to 200 consultants.

On the innovation side, A.T. Kearney has been focusing on innovation for more than a decade, and we are committed to helping companies and nations raise their game. We are particularly proud to be, together with CII, knowledge partner of the Global Innovation Index (GII), through our non-profit subsidiary IMP³rove, the European Innovation Management Academy. The IMP³rove Academy is the result of over 10 years of work with the European Commission and offers innovation management support services to both the public and the private sector and has assessed the innovation capabilities of over 5,000 companies.

We are delighted to be a knowledge partner to CII's innovation initiative and the exciting i3 program.

Co-Promoters

Department of Science & Technology
Government of India

(www.dst.gov.in)

Department of Science and Technology (DST), Government of India

The Department of Science and Technology (DST), Government of India was established on the 3rd of May 1971 following the success of Green revolution that signified innovative deployment of scientific methodologies. Over the last forty-three years, DST developed several streams that later established themselves as departments or even ministries with focused goals. Some of these include the Department of Biotechnology (DBT), Department of Scientific and Industrial Research (DSIR), Ministry of Environment & Forests (MoEF), Ministry of New & Renewable Energy (MNRE), Department of Electronics (DoE) and Ministry of Earth Sciences (MoES). The DST serves as a nodal agency connecting the science sector to the Government verticals. The roles played by DST are varied and these evolved with time. DST is accordingly (a) Develops S&T policies, (b) Strengthens human resources and institutional capacities, (c) Enables development & deployment of technologies, (d) Creates opportunities for societal interventions through S & T & (e) Establishes and engages in mechanisms of cooperation, partnerships & alliances. These approaches that reflect its mission ensure a holistic systemic influence, immediate, medium and long term relevance/ gains. It enables cross cutting impacts across sectors to sustain growth/ development and synergies to optimize on time, human, institutional and financial resources.

The DST has consistently enabled transformational changes through appropriate responses and often non-participative roles. DST accordingly played the role of an extra mural research funding agency wherein competitive grants for research was provided to investigators based on technical merit. This system was in vogue for nearly three decades. DST also took cognizance of several changes in approaches around the world, over the years and evolved its own systems adapted to India's needs. This resulted in some directional changes that evolved into proactive functions and participative actions. These are evident in DST's robust facets including proactive identification of gap areas and development of new programs and schemes, evidence based approaches to define gaps / needs balancing competitive and development models, championing for larger resource allocations for science, expansion of stakeholder variety and base, interactions centered on value of stakeholder engagement, internal connectivity of various programs, effective planning and coordination to optimize use and delivery of resources, gain a deeper understanding of local needs and establish a dynamic balance among three basic priorities of an integrated vision to synthesize equity, expansion and excellence in the science sector.

DST ensures a synthesis of the outcome of policies, plans, programmes and projects through appropriate forward and backward linkages. International S&T cooperation with friendly countries had become a national priority and DST was assigned the task. Thus, DST establishes strategically important systems / mechanisms to stimulate and foster excellence and leadership in scientific research and development. These are aligned with India's developmental aspirations and will further help consolidate the niche it has established in several frontiers at the national, regional and global levels.

All India Council for

Technical Education

(www.**aicte**-india.org)

All India Council for Technical Education

The AICTE was constituted in 1945 as an advisory body in all matters relating to technical education. Even though it had no statutory powers, it played a very important role in the development of technical education in the country. It had four regional committees with offices at Chennai, Mumbai, Kanpur and Calcutta. All the new schemes and proposals for starting new institutions/Programs were approved by the corresponding Regional Committee and subsequently vetted by the Council.

Having vested with Statutory powers, AICTE has initiated necessary steps for planning, formulation and maintenance of norms and standards, accreditation, funding of priority areas, monitoring and evaluation of courses/programs in the field of technical education to ensure coordinated and integrated development of technical education in the Country. In order to achieve the planned growth and to nurture quality in technical education system, AICTE has spared no effort to inculcate competitiveness to face the globalization and in generating competence and quality in technically qualified human resources to make it globally acceptable.

Mission

- A true facilitator and an objective regulator
- Transparent governance and accountable approach towards the society.
- Planned and coordinated development of Technical Education in the Country by ensuring world-class standards of Institutions through accreditation.
- Facilitating world-class Technical Education

Vision

“To be a world class organization leading technological and socioeconomic development of the Country by enhancing the global competitiveness of technical manpower and by ensuring high quality technical education to all sections of the society.”

Objectives

- Promotion of Quality in Technical Education.
- Planning and Coordinating Development of Technical Education System.
- Regulations and maintenance of Norms and Standards.

(www.youngindians.net)

Young Indians (YI)

Young Indians (Yi) is an integral part of the Confederation of Indian Industry (CII), a non-government, not-for-profit, industry led and industry managed organisation playing a proactive role in India's development process. Yi was formed in the year 2002 with an objective of creating a platform for young Indians to realize the dream of a developed nation. Yi has around 2350 direct members in 40 chapters, and engages around 10500 students through chaupals, under the brand 'Yuva'. The Yi membership includes young progressive Indians between the age group of 21 & 40 and comprises entrepreneurs, professionals and achievers from different walks of life. "To become the Voice of Young Indians Globally" being the vision of Yi, it provides a platform for young Indians to participate in and contribute by becoming an integral part of the Indian growth story. Yi's work is divided primarily into three groups; "Youth Leadership", "Nation Building" and "Thought Leadership".

Under youth leadership, Yi works effectively for promoting leadership skills for its members through the learning programs and missions to companies of global excellence in India and abroad; the development and engagement of students through its 109 Chaupal platforms that has 10500 students; Yi's regional and national summits on themes related to times and role of youth and its engagement with the governments at the state and national level gives an opportunity for the members to become effective leaders with a vision into the future. Yi recently hosted Jeff Hoffman, serial entrepreneur from the United States across the country and hosted his renowned 'Entrepreneur Bootcamps' for its camps.

Under Nation Building, Yi engages its members under the broad categories of education, environment, healthcare, employability, arts (sports & culture) and rural initiatives contributing positively to its surrounding eco system and the nation. Through its initiatives like Akshara under Education, Yi has impacted more than 15000 students across 57 centers and has successfully managed campaigns like the 'SYightboard Project', providing blackboards to schools across different cities, reaching out to 1070 schools nationally and impacting approximately 2,53,000 children. The Green I Contest done with an objective to engage school children to become socially aware and responsible citizens is one of its flagship programs, with the winner getting a grant of Rs 7.5 lakhs to implement their ideas.

Under "International Engagements", Yi is one of the proud founders of the G20 Young Entrepreneurs' Alliance, a collective of leading entrepreneurially-minded organizations representing G20 countries who seek to promote youth entrepreneurship as a powerful driver of economic renewal, job creation, innovation and social and is one of the founders of the Commonwealth Alliance of Young Entrepreneurs (CAYE- A), a network of young entrepreneurs from the Commonwealth Asia region and the organizations that support them. Yi has worked with Planning Commission, India, in conducting consultation workshops across its chapters for accumulating a youth perspective to be included in the 12th Five Year Plan and with the Ministry of External Affairs, Government of India to facilitate missions of visiting delegations of young entrepreneurs to India from around the world.

With Thirteen years of glorious past and decades ahead that promise nothing short, Yi intends to become a larger movement of young people and promote the attitude of "We Can, We Will"

Confederation of Indian Industry

(www.**cii**.in)

Confederation of Indian Industry (CII)

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has over 8000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 200,000 enterprises from around 240 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

The CII theme for 2016-17, **Building National Competitiveness**, emphasizes Industry's role in partnering Government to accelerate competitiveness across sectors, with sustained global competitiveness as the goal. The focus is on six key enablers: Human Development; Corporate Integrity and Good Citizenship; Ease of Doing Business; Innovation and Technical Capability; Sustainability; and Integration with the World.

With 66 offices, including 9 Centres of Excellence, in India, and 9 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Singapore, UK, and USA, as well as institutional partnerships with 320 counterpart organizations in 106 countries, CII serves as a reference point for Indian industry and the international business community.