

**International ITEC Training Programme on**  
**“Agri-Tech Startups for Enhancing the Agri Value Chain in Indonesian Country”**  
**(Two-week Programme)**

**Rationale and justification for the ITEC programme at MANAGE, Hyderabad**

Startups in Agriculture play an instrumental role by solving age-old problems in Agriculture to increase any country's economic growth. Adaptation of innovative technologies by farmers is key to the success of the Agri Startups. Indian Agri Startups are playing a pivotal role not only in India but also in other emerging economies across the world by their presence across the world.

India, the third-largest startup ecosystem in the world, after the US and China both in terms of the number of Incubators and number of startups (1,18,260 DPIIT-recognized startups), is home to numerous pioneering Agri-startups.

Besides sharing India's experiences and competence through the ITEC programmes, the Work of startups in the sector application of various advanced technologies and in the Indian Agri startup ecosystem, how the same models can be implemented and utilized in the context of other emerging economies will be explored during the process. Cross-border linkages will be explored with the Indonesian Country.

**Aims and Learning Objectives of the program**

- To know the Indian Startup Ecosystem and Agri Startup Ecosystem
- To understand various technologies adapted by the startups
- To experience the various offerings by Indian startups through experiential learning
- To develop a gap analysis for technology adaptation in the home country
- Developing startup ideas for the Agri ecosystem of Indonesian Country
- To develop a Cross border implementation plan for the Indian startup Technologies

## **Tentative Programme Schedule**

### **Day – 1: Agri Startup Ecosystem – MANAGE Experiences**

MANAGE - Centre for Innovation and Agripreneurship is one of the leading Agribusiness Incubators in India and is a Knowledge Partner & Centre of Excellence under the Innovation and Agri entrepreneurship initiative under RKVY-RAFTAAR (Rashtriya Krishi Vikas Yojana-Remunerative Approaches for Agriculture and Allied Sector Rejuvenation), MoA & FW. MANAGE-CIA has trained 754 startups and incubated 383 startups from various focus areas of the Agri & Allied Sectors. A total of 158 startups have been funded so far with a grant in aid of ₹ 15.83 Crores under RKVY-RAFTAAR. As a knowledge partner under RKVY-RAFTAAR, MANAGE-CIA has the responsibility of handholding four RKVY-RAFTAAR Agribusiness Incubators (R-ABI). This session MANAGE and MANAGE-CIA activities will be discussed.

| <b>Time</b>   | <b>Session Details</b>   |
|---------------|--|
| 9.30 – 10:00  | Registration   |
| 10.00 – 11:15 | Introduction to the program  |
| 11.15 – 11:45 | Tea Break  |
| 11.30 – 13:00 | MANAGE-Centre for Innovation and Agripreneurship – Experiences   |
| 13:00 – 14:00 | Lunch  |
| 14:00 – 15:30 | Indian Startup Ecosystem - Agri Startup Ecosystem in India   |
| 15:30 – 16:00 | Tea Break  |
| 16:00 – 17:30 | National Policy for Supporting Incubation Ecosystem – A Case of RKVY-RAFTAAR from MA&GW, Government of India |

### **Day – 2: Agricultural Value Chain – Role of Startups**

The agricultural value chain is the entire process of producing, processing, and distributing agricultural products at the farm level to the plate to the end consumer. It involves a series of interconnected activities that add value to raw agricultural commodities, ensuring they reach consumers in a usable and desirable form. In recent years, various innovations have been introduced across the agricultural value chain to improve efficiency, sustainability, and overall productivity. These innovations leverage technology, data, and new business models to address challenges and create opportunities within the agriculture sector. innovations collectively contribute to the transformation of the agricultural value chain, making it more sustainable, resilient, and responsive to the challenges of a rapidly changing global environment. These Innovations will be discussed along with Experience sharing sessions by the startups in the sector.

| <b>Time</b>   | <b>Session details</b>  |
|---------------|---|
| 09:30 – 10:00 | Recap Session   |
| 10:00 – 11:15 | Agricultural Value Chain in India – Opportunities for Agri Startups                                 |
| 11.15 – 11:45 | Tea Break   |
| 11:45 – 13:00 | Technological innovations in Agricultural Supply chain – Experiences from MANAGE Incubated Startups |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 15:30 | Experience sharing session by Agri supply chain startup   |

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|---------------|--|
| 15:30 – 16:00 | Tea Break  |
| 16:00 – 17:30 | Supply Chain management-based Innovations in emerging countries – Discussion |

### **Day – 3: Millet Value Chain – Role of Startups**

Millet, a group of small-seeded grasses grown as cereal crops, has gained attention in recent years due to its nutritional benefits, adaptability to diverse climates, and potential for sustainable agriculture. Startups have played a crucial role in enhancing the millet value chain by introducing innovations and addressing challenges at various stages of production, processing, and distribution. 2023 was the “International Year of Millets” as declared by the United Nations and thrust was given to Millet cultivation and consumption by various activities across the world. Startups in the Millet value chain play a crucial role in processing, market linkages creating multiple value-added products, and taking millets to the plate of the consumer.

| <b>Time</b>   | <b>Session details</b>   |
|---------------|--|
| 09:30 – 10:00 | Recap Session  |
| 10:30 – 11:15 | Value Chain Intervention in Millets                              |
| 11.15 – 11:45 | Tea Break  |
| 11:45 – 13:00 | Value Chain Intervention in Millets – Agri Startup Experiences   |
| 13:00 – 14:00 | Lunch  |
| 14:00 – 17:30 | Visit ICAR-Indian Institute of Millets Research and Nutrihub-TBI |

### **Day - 4: Livestock Value Chain – Opportunities in Livestock**

The livestock value chain has activities and processes involved in the production, processing, and distribution of livestock and livestock products, from the farm to the consumer. The value chain has multiple components including Breeding and Genetics, Livestock Farming, Input Supply, Livestock Trading and Marketing, Transportation, Processing and Slaughtering, Distribution and Wholesaling, Retailing, Consumption, Waste Management, and Research & Development.

#### **Innovations proposed to be discussed:**

- Precision Livestock Farming (PLF)
- Genomic Selection
- Blockchain Technology
- Vertical Integration and Integration of Digital Platforms
- Smart Farming and IoT
- Alternative Protein Sources
- Mobile Technologies

| <b>Time</b>   | <b>Session details</b>  |
|---------------|---|
| 09:30 – 10:00 | Recap session   |
| 10:00 – 11:15 | Technological Interventions in Animal Husbandry – Role of Agri Startups |
| 11.15 – 11:45 | Tea Break   |
| 11:45 – 13:00 | Experience sharing by Agri startup                                      |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 17:30 | Visit to Sid’s farm – Antibiotic free Milk producer                     |

## **Day - 5: Horticulture Value Chain – Opportunities for Startups**

The horticultural value chain refers to the series of interconnected activities involved in the production, processing, distribution, and marketing of horticultural products. Horticulture encompasses the cultivation of fruits, vegetables, nuts, seeds, herbs, sprouts, mushrooms, algae, seaweeds, non-food crops such as flowers and ornamental plants, and products such as honey and maple syrup. The horticultural value chain involves various stages, each contributing to the overall production and delivery of horticultural goods with Input supply, Production, Post-harvest, Processing, Distribution, Wholesale, Retail, Export, and import, Marketing, and promotion, Waste Management, Research, and Development as key components.

### **Innovations proposed to be discussed:**

- Precision Agriculture and Smart Farming
- Vertical Farming and Controlled Environment Agriculture (CEA)
- Hydroponics and Aquaponics
- Biotechnology and Genetic Engineering
- Precision Harvesting
- Blockchain Technology
- Digital Platforms for Market Access
- Post-harvest Technologies
- Biopesticides and Integrated Pest Management (IPM)
- Precision Irrigation
- Urban Farming and Community Gardens
- Circular Economy Practices

| <b>Time</b>   | <b>Session details</b>   |
|---------------|--|
| 09:30 – 10:00 | Recap Session  |
| 10:00 – 11:15 | Innovations in Horticultural Valuation – Opportunities for Startups  |
| 11.15 – 11:45 | Tea Break  |
| 11:45 – 13:00 | Experience sharing session by Agri startup in Horticultural Value Chain  |
| 13:00 – 14:00 | Lunch  |
| 14:00 – 15:30 | Adoption and Implementation of Technology in emerging countries – Opportunities and challenges Discussion among participants |
| 15:30 – 16:00 | Tea Break  |
| 16:00 – 17:30 | Horticultural Value Chain Innovations - Experiences from Participant countries   |

## **Day - 6: Exploration visit to the Startup Ecosystem**

| <b>Time</b>   | <b>Session details</b>  |
|---------------|---|
| 09:30 – 10:00 | Recap Session   |
| 10:00 – 13:00 | Agri-Business Incubation Services by ICRISAT – Visit to ICRISAT |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 17:30 | Hyderabad Ecosystem Exploration visit                           |

### **Day - 7: Aquaculture value Chain – Role of Agri startups**

India has a significant and growing aquaculture industry, playing a crucial role in the country's economy and meeting the increasing demand for seafood. Aquaculture in India encompasses a variety of species, including fish, shrimp, and mollusks. Agri startups can contribute to the development and enhancement of the aquaculture value chain including but not limited to Technology Adoption, Sustainable Practices, Innovation in Breeding and Genetics, Market Linkages and Access, Disease Management Solutions, etc. The success of startups in the aquaculture sector will depend on their ability to understand and address the specific needs and challenges faced by local farmers. Collaborating with government bodies, research institutions, and industry associations can also be crucial for navigating regulatory frameworks and scaling innovative solutions. The session will focus on opportunities for startups in the sector along with experience-sharing sessions by founders of aqua startups.

| <b>Time</b>   | <b>Session details</b>                                      |
|---------------|---|
| 09:30 – 10:00 | Recap Session   |
| 10:00 – 11:15 | Opportunities in Aquaculture Value Chain – Role of Startups |
| 11.15 – 11:45 | Tea Break   |
| 11:45 – 13:00 | Experience sharing session by Aqua-based startup            |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 17:30 | Visit to National Fisheries Development Board               |

### **Day 8: Optimizing the supply chain through Technology**

| <b>Time</b>   | <b>Session details</b>   |
|---------------|--|
| 09:30 – 10:00 | Optimizing the supply chain through Technology   |
| 10:00 – 11:15 | Tea Break  |
| 11.15 – 11:45 | Optimizing the supply chain through Technology - Case study of Fresh farm produce - Indian Startup success stories |
| 13:00 – 14:00 | Lunch  |
| 14:00 – 15:30 | Adoption and Implementation of Technology - Discussion   |
| 15:30 – 16:00 | Tea Break  |
| 16:00 – 17:30 | Adoption and Implementation of Technology - Discussion   |

### **Day 9: Value Addition for enhancing the shelf life**

|               | <b>Session details</b>  |
|---------------|---|
| 09:30 – 10:00 | Value Addition for enhancing the shelf life - the role of technology at farm-level processing |
| 10:00 – 11:15 | Tea Break   |
| 11.15 – 11:45 | Value Addition for enhancing the shelf life - the role of technology for secondary processing |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 15:30 | Case study of Agri startups in Food value chain and value addition                            |
| 15:30 – 16:00 | Tea Break   |

|               |  |
|---------------|--|
| 16:00 – 17:30 | Case study of Agri startups in Food value chain and value addition |
|---------------|--|

### **Day 11: Hyderabad Startup Ecosystem Exploratory visit**

| <b>Time</b>   | <b>Session details</b>                        |
|---------------|---|
| 09:30 – 10:00 | Recap Session                                 |
| 10:00 – 13:00 | Hyderabad Startup Ecosystem Exploratory visit |
| 13:00 – 14:00 | Lunch   |
| 14:00 – 17:30 | Hyderabad Startup Ecosystem Exploratory visit |

### **Day 12: Hyderabad Startup Ecosystem Exploratory visit**

| <b>Time</b>   | <b>Session details</b> |
|---------------|------------------------|
| 09:30 – 10:00 | Recap Session          |
| 10:00 – 11:45 | Visit to L R Naturals  |
| 13:00 – 14:00 | Lunch                  |
| 14:00 – 17:30 | Visit to AgriGhar      |

### **Day 13: Visit to T-Hub - Govt. of Telangana initiative to Nurture Startups**

| <b>Time</b>   | <b>Session details</b>   |
|---------------|--|
| 09:30 – 10:00 | Recap Session  |
| 10:00 – 13:00 | Visit to T-Hub - Govt. of Telangana initiative to Nurture Startups |
| 13:00 – 14:00 | Lunch  |
| 14:00 – 17:30 | Visit to Rural Technology Park - NIRD-PR                           |
| 19:00 – 20:00 | Cultural night followed by Dinner                                  |

### **Day 14: Feedback and Certificate Distribution**

| <b>Time</b>   | <b>Session details</b>                |
|---------------|---------------------------------------|
| 09:30 – 10:00 | Recap Session                         |
| 10:00 – 11:15 | Reflection paper                      |
| 11.15 – 11:45 | Tea Break                             |
| 11:45 – 13:00 | Presentation by Participants          |
| 13:00 – 14:00 | Lunch                                 |
| 14:00 – 15:30 | Presentation by Participants          |
| 15:30 – 16:00 | Tea Break                             |
| 16:00 – 17:30 | Feedback and Certificate Distribution |

### **Expected learning outcomes from the course**

- First-hand experience, Enhanced knowledge, and understanding of participants about the India Agri Startup Ecosystem
- Understanding of the Role of technologies in Agricultural development in India and across the world
- First-hand experience of startups in Agriculture in India - Implementation of technologies
- Readiness for cross-border implementation of technologies from India

### **Eligibility Conditions of the Participants**

1. First-hand experience in Agri-Business/ Agriculture
2. experience in Public/ Private/ Civil Societies in Agriculture and allied sectors
3. Applicants shall possess physical and mental skills and abilities for completing the program.
4. Working knowledge of English is mandatory to understand the training content on sustainable agriculture development.

### **Additional details for uploading on ITEC portal:**

|   |   |
|---|---|
| Educational qualifications of candidates                                | Graduation with Agriculture/Business Management/Agribusiness/Rural Development equivalent degree  |
| Work experience (required) if any                                       | Working experience in the field of agriculture / rural development /technology Management/technology companies /Food Technology for 3 years   |
| Minimum age   | 25 years  |
| Maximum age   | 55 years  |
| Target Group (level of participants, target ministries or depts., etc.) | Junior / Middle-level Officers from the Department of Agriculture, Small and Medium-scale industries, Non-Governmental Organizations, Universities, Agri Startup founders, and other Agri & allied ecosystem partners |
| Number of days of local trips   | 4 (Tentative)   |
| Number of days for outstation trips                                     | 0   |
| Number of nights for outstation trips                                   | 0   |
| Places to be visited  | Hyderabad, Golkonda,  |
| Mode of transport   | AC Bus/ AC Train  |
| Transportation charges (approx.)  | 50,000/- per batch  |
| Accommodation charges, if the hotel is required to be hired             | NA  |
| Entry ticket charges  | 4500 per candidate  |