



KISAN MITR

**A POSITIVE MOVEMENT TO GARNER
SCIENTIFIC COMMUNITY AND
TECHNOLOGISTS TO SUPPORT FARMER
INCOME – AN ATTEMPT TO MAKE THEM
SELF-RELIANT (ATMANIRBHAR)**

The KISAN MITR platform intends to tap the energies of the startup ecosystem in India to solve and address some of the key social development challenges in the agricultural sector. This platform aims to facilitate the discovery of key challenges in agriculture which startups can attempt to solve, and will facilitate the trials and adoption of the solutions provided by startups to the farmers.

KISAN MITR

A POSITIVE MOVEMENT TO GARNER SCIENTIFIC COMMUNITY AND TECHNOLOGISTS TO SUPPORT FARMER INCOME – AN ATTEMPT TO MAKE THEM SELF-RELIANT (ATMANIRBHAR)

1. Background:

The COVID pandemic brought to fore the challenges related to India's reliance on imports, particularly in the healthcare sector, where reagents and testing kits had to be imported at very short notice to address the management of the pandemic in the country. This experience has made the Government of India (GoI) prioritize the initiatives dealing with import substitution and aiming for self-reliance in all sectors of importance to our country. Agriculture is one such sector that needs special focus in our country since a majority of our population depends on agriculture for their livelihood. Further, due to the pandemic, the migration of workers from urban areas to their native villages also has created challenges in ensuring an effective and sustainable livelihood for them in the villages.

Added to the above developments, it is observed that as of date, the usage of scientific methods in agriculture by leveraging technology in farming and agricultural activities in our country is very minimal. Though there is accurate and scientific information about various agricultural inputs such as weather, water, moisture, pests, soil, etc., in multiple government department databases across the country, it is observed that this information is not yet reaching the farmers effectively. The above situation strengthens the case for effective science and technology-based interventions in the agriculture sector to increase the farmers' income sustainably.

The Office of the Principal Scientific Adviser (PSA) to the Government of India has taken the lead to address these challenges in the agriculture sector by creation of a digital platform - KISAN MITR, which will bring together all the key and important stakeholders from diverse fields (Central and State Government departments dealing with agriculture, Govt. R&D Institutions, Indian Academia, Industry, Startups and Incubators, Non-profit organizations, FPOs and other entities) to help the farmers of India.

The KISAN MITR platform intends to tap the energies of the startup ecosystem in India to solve and address some of the key social development challenges in the agricultural sector. This platform aims to facilitate the discovery of key challenges in agriculture which startups can attempt to solve, and will facilitate the trials and adoption of the solutions provided by startups to the farmers.

The initiative to support the Indian Farmers has been aptly named 'KisanMitr', which translates to 'Friends of Farmers' in English, due to the voluntary involvement of many stakeholders from diverse fields of expertise contributing to this unique endeavour. Non-profit bodies such as NASSCOM Foundation, National Institute of Agriculture Marketing under Ministry of Agriculture, Indian Institute of Management, Bangalore (IIM, Bangalore) provided support by outreach and organizing presentations of the innovators/technologists. Indian Farmers Fertilizers Cooperative (IFFCO) funded Television episodes for these technologies of Doordarshan, an Indian National Television channel under a program known as 'DD Kisan'.

The Cabinet Secretariat, UMANG team under Ministry of Electronics and Information Technology (MeitY) offered movement from digital platform to their one-stop app for all the agriculture technologies. The government offered to host a complete platform on CSIR 4PI Government of India's own Super Computing Infrastructure. Indian private sector Information technologies organization, Tech Mahindra offered pro bono services to develop the *Atmanirbhar* App for farmer inputs as well as developing the non-farm platform separately. A founder of a start-up offered her services as a Project Manager. Indian Centre for Social Transformation (Indian CST), A Bangalore-based Public Charitable Trust (Regd.) developed the digital platform. Chevening alumnus from Future Group, Reliance Retail, Big Basket offered to be the aggregators for purchases from the Mountain States.

Several other industries and incubator members came together to be the demand group. From the supply of agriculture technologies, a National Repository of about 1000 technologies was built. There was to be a section known as International Engagement, this was facilitated by the Confederation of Indian Industries (CII). Flipkart's technical team offered to evaluate the digital platform as a third party.

To provide broad directions to the competent team of developers, creative thinkers, and project management team to develop and harness the contributions from multiple stakeholders, including the digital scope of work, the architecture of the platform, an advisory committee comprising of eminent subject matter experts was formed by the Office of PSA, GoI. The advisory committee consists of a farming expert, an ex-Indian Centre for Agriculture Research Executive, Chief Technologist Officer (retired from WIPRO), and a faculty from Indian Institute of Management, Kozhikode (co-author of this paper) who would steer the project and bring out the respective rich network to collaborate on the project.

Digital platforms and apps developed were to be for the citizens and without any costs to the farmers. The platform had to be unique and could not duplicate existing digital platforms (including apps) hence a comparative study of the digital platforms of Agriculture Ministries, Ministry of Rural Development, and NABARD was undertaken. The Digital platform was the primary phase of the movement, however, engagement of demand and supply technologists for all the phases was also to be undertaken. Overall, for the start-up ecosystem, structured inputs were to be provided for which again partners joined in pro bono and took sessions on Commercialisation, Patent filing, IPR, Structured innovations, etc.

The KISAN MITR digital platform and the mobile application to be developed (named *Atma Nirbhar Krishik* or self-reliant farmer) is planned to be provided to the citizens without any costs. Further, the platform is intended to be unique such that it does not duplicate information from existing digital platforms including mobile apps. A comparative study of the digital platforms of Agriculture Ministries, Ministry of Rural Development, and NABARD was undertaken to ensure no duplication. During the initial stages of the creation of this platform, many partners voluntarily contributed on a pro bono basis in structuring the inputs to the start-ups involved in this initiative - by providing them inputs on the commercialization of offerings, patent filing, IPR, and methods of undertaking structured innovations among others.

2. Objective of the Movement, Friends of the Farmers (Kisanmitr)

To provide solutions keeping in mind inclusivity (agriculture is becoming feminine and has a huge percentage of small farm holding) and to focus on the farmer's balance sheet, making her self-reliant and last but not the least encouraging youth/startups by sustaining their operations and scaling up.

3. Methodology:

The entire movement of 'friends of the farmers' was supported through a robust digital backbone/platform. The ethos behind this is to focus on developing a centralized single point for a National repository of agriculture technologies, including animal husbandry (produce & technologies), nutrition, and regenerative farming as key focus areas and finally providing real-time information that will be useful to the farmers. It was also to act as a centralized information provider on any hackathon/challenge that any of the demand group members would like to throw on the scientific community. It will be developed as far as possible with voluntary resources (minimum funding) and will be free for all, through personalized logins. During the execution phase, on a low price point, e-commerce may be thought of to make the platform sustainable. However, this would be for those who are receiving their funds through the platform for the sale of technology. The cost of usage of the digital platform will not be borne by the farmers at any point in time. The idea is to engage all Scientific research and Technology Institutes, National Incubators, and their startups, MSME, as well as the private sector, start-up communities to offer their technologies at a low cost and high-quality basis. Last but not the least, in terms of digital platforms for all 4 phases (except the 4th phase) ideally repurposing the existing open-source platforms is preferred than having to develop one from scratch.

Hence the methodology, of converting the movement of **friends of the farmers** into action was through four primary phases that are envisaged:

- **Technologies Information Exchange**

An engaging exchange between Agriculture technologies & Scientific Research and Industry members/Incubators/Farmer Producer Organizations (FPO) /Women Self Help Group (SHG) that are interested in the technologies. This would include competition/hackathons/challenges for the scientific community from Industry/Foundations/CSR organizations. This section would include chat platforms, dashboards, MIS, feedback (quality) a Rating System, and e-commerce with a payment gateway. Basically, to develop a National Repository of Scientific Research, Technologies, ICT, and AI-based user-friendly platforms keeping Industry, Incubators, Venture Capitalists and Government as enablers and connecting to the farmers as end-users.

The technology could be in the idea stage for addressing specific problem statements obtained from specific farmers from certain geographies i.e. Lab work - R&D stage in the lab (TRL 3), R&D stage in the lab (TRL 4 to 9 – the valley of death), Prototype and field trials stage, Commercialization stage, access to investor network stage, acceleration stage, linkages to Government or NABARD for procurement, ensuring training and deployment, sustainable monitoring and feedback for improvement to flow back to the S&T start-up or lab on an ongoing basis (detailed below). These would be followed by the demand side as per their mission and processes. NABARD or PSA's office will not interfere in the Demand side group members and their processes however can organize roadshows, webinars (in addition to the one being organized by NASSCOM Foundation). The facilitation expected from the demand side is to move the supply of technologies to its next level (either support with commercialization, funding, access to market/training) to finally provide access to quality and low-cost technologies to the farmers. Industry, Incubators, Government, NABARD to support technologies and solutions through evaluation for low cost, high-quality, bankable, scalable projects. Funding for relevant R&D, facilitate commercialization, accelerating of startups, provide government channels for purchases of effective agricultural solutions developed by the scientific fraternity, connect the start-up to the industry for technology transfer if the founders wish to develop and transfer technology and not engage further. Deployment through existing industry or government partnerships, ensure training and monitoring as per respective mandates

Range of Envisaged Science & Technologies – light equipment, scientific solutions, and deep technologies that could be hired by FPOs from start-ups based on services rendered:

- a) Soil & Water Conservation (Irrigation channels, rivers, ponds, check dams, water harvesting, water filtration landscapes)
- b) Farm ecosystem machinery services (large equipment for FPOs) services or on hire
- c) Organic inputs, seed production, weather, app-based inputs (some of these may be evaluated to be used in phase 4 by ISRO and NABARD)
- d) Energy-related - Solar or wind mini-grids
- e) Logistics or supply chain applications or technologies
- f) Cold storages
- g) Processing related technologies
- h) Mandi dashboards, real-time feedback on the price, goods availability, demand, cultivation scheduling and planning, price forecast with mandi logistic and supply chain management
- i) Drones on hire with services, data collection analysis through training of BDO and FPOs – could include drones for seed plantation, real-time tracking, work assignment, digital payments and virtual approvals, mobile GPS.
- j) Technologies for credit linkages, buybacks, branding, and marketing
- k) SEED related scientific research output
- l) Farm practices related methodologies and output

Stages of Science and Technology solutions envisaged:

- a) Idea stage
- b) Lab work - R&D stage in the lab (TRL 3)
- c) R&D stage in the lab (TRL 4 to 9)

- d) Prototype and field trials stage
- e) Commercialization stage
- f) Access to Investor network stage
- g) Acceleration stage
- h) Linkages to Government or NABARD for procurement
- i) Ensuring Training and Deployment
- j) Sustainable monitoring and feedback and rating for improving the technologies

Supply-side: Institutes and Incubators that have been reached out and shared data:

- a) All Indian Institute of Technologies (IITs)
- b) All ICAR institutes through ADG, ICAR
- c) All IISERs
- d) All CSIR institutes
- e) Reputed Agriculture Universities (Punjab, Tamil Nadu) – more could be added if anyone has suggestions.
- f) State Government farm practices (ZBNF – to participate in National challenges, Sikkim organic farming, etc.)
- g) Rice Institutes

Demand-side:

Accelerators, Agri Innovators, Agri Incubators, Industry, Foundations, Large FPO communities that can fund ongoing research (pre-commercialization), support commercialization, accelerate the startups, deploy the technologies and scientific research on the ground through FPOs, conduct training and manage sustainable agriculture practices through science and technology support. The confirmed list of members is as follows. Several other FPOs have not been captured however NASSCOM Foundation through the presentation series will be sharing the final engaged demand members. The following are those that have been onboarded through detailed discussions. These organizations from the demand side are engaging with the supply side through the technology presentations and will be part of the digital platform.

Organizations onboarded are mentioned in Annexure 1.0. Besides,

We have collected information on technologies from various private and public research institutes, incubated startups. These include the Indian Institute of Technology (IITs), Indian Institutes of Science Education and Research (IISERs), Council of Scientific & Industrial Research (CSIRs), and Indian Council of Agriculture Research (ICARs) and their respective incubated start-ups. Also, we have collected information from the Micro Small and Medium Enterprises (MSMEs). This data is uploaded to the system from the back end. We have also commenced presentations in partnership with the NASSCOM Foundation (every Saturday of the week) for the demand group members to evaluate the technologies. The recordings of these presentations in the format of a webinar will be uploaded against the technology presented. The information gathered includes the name and coordinates of the FPOs that provided the problem statement to the technologists, the details of the technology and what aspect of the problem statement it addresses, details of similar technologies in the market, Unique Selling Proposition (USP) of the technology, at which stage is the technology (this information is sought so that the technology can be placed in alphabetical order in the digital platform in this phase under segregated sections of R&D, prototype and e-commerce for marketable technologies).

On the demand side in addition to the members listed in the annexure, we have also added 400 Nabard District Development Managers in the demand side and all their Incubators along with 60 demand

Industry and Incubator members including TAFE, ITC, Coromandel, Tata chemicals, Rallis, Nagarjuna, etc (the detailed list is provided as an annexure).

National Institute of Agriculture Markets (NIAM) supported Kisanmitr (friends of the farmer) for 3 separate interventions i.e. for sale of agriculture technologies to farmers, for sale of farm produce of Nutrition Agriculture to mid-day meals operators, and to the metro elite and non-farm e-commerce along with the facility of quality check and onboarding on the platform of small farmers and off-farm weavers). The second component of the discussion is for NIAM to undertake webinars parallelly to NASSCOM Foundation for those technologies that they think will immediately help migrants and undertake those webinars with 20,000 of their FPOs, members, and companies and help them onboard on Kisanmitr digital platform for records and future engagements through chatting platform, deep engagement and for tracking the final impact of evaluation of technologies. Login was provided to the 20,000 members through API integration.

Doordarshan Kisan has commenced televising agricultural technologies to increase visibility and adoption of modern farming techniques and technologies.

Through the Panchayat Raj, all Gram Panchayats will be trained on the digital platform and the various apps. The women and child Anganwadi-related food purchasing units will also be onboarded in the Himalayan Bazaar.

1. Livestock

All-inclusive of Livestock breeding, products, and technologies. It will include e-commerce, knowledge management, and dashboards.

This includes products and technologies of private and incubated startups These are consolidated along with e-Pashuhaat / e-pashu bazaar portal launched by the then Ministry of Agriculture and Farmers Welfare, Government of India, now called the Ministry of Fisheries, Animal Husbandry and Dairying, Department of Animal Husbandry, Dairying and Fisheries (DADF) to boost dairy productivity in India by organizing the livestock market so that there is a consolidated repository of products and technologies of private and public startups and MSMEs. Dashboards and MIS is being tested out. User Interface and front end are being reworked based on inputs provided so far. E-Pashuhaat / E-pashu bazaar was developed by the same digital platform developers and hence repurposing the same made sense to include livestock technologies.

2. Scientific Research

All ICAR and CSIR scientific research output and challenges are part of this section so that it is segregated and clear for everyone to engage more sharply.

To ensure the platform takes off, the engagement is planned meticulously. The engagement is being undertaken through different segments of demand i.e. a Foundation, Industry, Farmer Producer Organizations. Their requirements are being met through screening and internal evaluation of the technologies and are provided to them for purchase on the digital platform.

3. Himalayan Bazaar

One of the authors of the paper had worked extensively in the Mountain States of India. Nutrition agriculture includes cultivation, forest produce, grass root innovators (e.g. honey, nutrient candies, and so on), aromatic plants, medicinal local plants, local crops, unique and highly nutritious. This section is not for the elite to sell their products, but for the local village level produce, as supply to those who need nutrition agricultural produce. On the demand side, it would include local Mid-day Meal implementation partners (Akshaya Patra, State Government Schemes), women, and child SHGs so that they could let malnourished children consume the village level high-nutrition crops through Government or Foundation

sponsors. The grid of demand and supply was mapped through the FPOs and by reaching out to the State Governments for real, on-the-ground upload of data and products, as well as local demand data.

A competent team of agriculturists, e-commerce chains, through a group of Chevening alumni, have come together to discuss a model of using their respective local collection centers to collect information of micro farmers with high nutrition cultivation produce in the Mountain States and remote areas. The Chevening alumni included a Chief Technology Officer of Reliance Retail, Supply Chain head of Big basket, Future Group (for onboarding micro farmers and GI tagging, quality check inputs to be uploaded on the platform, etc.), Akshaya Patra network of India, and a Rotarian (for the demand of mid-day meals program). These would generate the demand for the local produce of the Mountain States and Tribal areas supplying Nutrition Agriculture through FPOs. Once it was made available and hosted on the Indian CST platform the demand side i.e. Akshaya Patra, Rotary mid-day meals, Child SHGs, Ministry of child and women welfare Angawadi procurement teams can purchase using the payment gateway of pay.gov. IKEA Foundation, ICICI Foundation, Akshaya Patra, and Rotary for malnourishment programs are being onboarded.

Farmer Producers Organizations have been onboarded, thanks to the Agriculture Ministry, undernourished children, and women across the rest of the country would be served through demand aggregators.

4. Self-Reliant Farmer – Atmanirbhar APP for farmers

In India, there are several databases relevant to farmers with data on the quality of soil, weather, moisture, water tables, air pollution (through sensors if not readily available). Most of the data are housed in multiple national and international databases. This data could be very relevant to the farmers, however, it is found in multiple databases.

Top-down approach:

The data required for the farmers need to be determined with the help of NABARD. The same has to be sourced from different national and international databases. An application needs to be developed using Artificial Intelligence to source the data, mine the data, analyze the data, convert it into vernacular language and provide it as inputs to the end-user i.e. farmer. Further modeling of few decisions based on permutation and combination of the data should also be provided to the farmers for them to determine the cropping pattern and to take necessary decisions on farming practices. This modeling needs to be undertaken through consultative processes with agriculture experts of NABARD and its FPOs.

- Listed down the environmental inputs to be provided to a typical farmer (tentative list provided above). It can be made sharper with inputs from NABARD.
- Mapped it with databases - National (ISRO - the majority of the parameters will be covered), GKVK, ICAR, and International - USDA/FAO (Discussion is on in terms of what they plan to launch through Land PKS application and its usage for our project – since ISRO and MNCFC have developed an equally good app we may not be particular about using the USDA-FAO app.
- Decision to be taken collectively by the advisory committee)
- To validate it with NABARD, Aajeevika Bureau through their FPOs to do a reality check on whether these inputs would be useful.
- Approached the database owners for accessing the databases and understanding the structure of these databases or tools/applications.

- Parallel activity for the digital partners of IT- ISRO team along with INDIAN CST to prepare the exact workflow, digital scope of work, and development efforts for preparing the data structure architecture, accessing key fields from differently formatted databases, extracting the required data, using AI platform to analyze and provide inputs in a format that is acceptable to farmers and conversion to regional language for their BASIC phone.
- Modeling the inputs received for geographies and providing solutions to them with the help of consultations with NABARD FPOs/Agriculture experts, providing that as an output in vernacular language.
- ISRO has as a satellite database and a list of databases have been prepared.
- Launching the final solution on the Indian CST platform and provide services through UMANG.
- Preparing similar models for other countries for Indian CST to sell, through Foundations or Government as an application and digital platform. In India, the farmers shall get this data without costs.

(Refer to Annexure 2.0 for Mapping of farming inputs to databases)

A list of databases and data relevant to each of the databases has been developed. The APIs for the databases mentioned below have commenced. Tech Mahindra is developing the app along with a startup founder taking into account all the databases. The app will be known as “AtmanirbharKrishi” (Self Reliant Farmer) and will include the inputs as provided below.

The engagement in this section would be through pilot testing of the accuracy of data through Hindustan Unilever or NABARD to check on whether advisory inputs and framework of possible decisions on cropping based on the inputs are possible to be provided.

6. Agri-Fin Tech phase:

This phase will provide details of Agri-Fin tech that will be useful to both Farmers managing their accounting and financial statements, helping them understand in simple terms their ledger and books of accounts and how to keep the records as well as technologies that will help any network of Non-Banking Finance Corporations (NBFCs) to monitor FPO financial progress. Startups have several financial technology products that can be showcased here

7. Off-Farm Platform – Creative Handloom/Textiles

This would be a separate platform on off-farm. Tech Mahindra is developing the platform as a CSR activity. Technologies related to Textile and Creative Manufacturing - including leather, carpets, gems, and jewellery will be brought into the repository. Technologies would be largely from RUTAG of PSA's office, Access Livelihood – Hyderabad, Access Group – Delhi, Development Alternatives, UNDP, ECO Tussar, Pradaan, Resham Sutra on the supply side and the demand side those that would be onboarded are Aditya Birla Group - Rajasthan Spinning.

Mills, IkaiAsai- Aditya Birla Group, Tanishq, Carat Lane - Titan, Taneira, Tata exports, Hi Design, Farida Group. Discussions at a later point of time with the Ministry of Textiles.

Horizontal axis:

While the vertical phases are provided above, the horizontal sections would include Knowledge Management (KM), e-Commerce (through E-NAAM), Rating System, Agriculture technologies, Livestock

technologies, and Scientific research Feedback and Dashboards/MIS for each of the phases (wherever applicable).

International Engagement will also be a Horizontal axis that will include start-up collaboration through GITA (CII's portal) as well as all enquiries to replicate the platform internationally.

Knowledge Management:

Monitoring of the impact will not only be through the platform but also through case studies to be written by Dr. Sapna Poti from the Office of the PSA and Prof Simy from IIM Kozhikode. The idea is to motivate all concerned positively rather than through monitoring.

Promotion and Training on the usage of Agriculture Technologies:

In the future, evaluation of the agriculture technologies could be undertaken through the ATMA network under the Ministry of Agriculture. NRL and Nabard would also be contacted to take the technologies on the ground.

Once the platform is onboarded on UMANG we will commence the training of agriculture technologies through the ITI network and e-Chaupal. For the ITI network, we have tied up with a consultant (previously with the Ministry of Labour) to support this initiative.

Annexure 1.0 – Demand Side

S.No.	Name of the Person	Organization	Title
1	Mr. Venkadri	Tata Chemicals	Head R&D
2	Mr. Ramanthan	Rallis	CTO
3	Mr. Raghuandan	MCRC, Murugappa Group	CEO
4	Mr. NagarajaPrakasam	Acumen Fund	Advisor
5	Ms. Mukta Sharma	NSRCEL, IIM-B	Incubation Manager
6	Mr. Srinivas Ramanujam	Villgro	CEO
7	Mr. Abhishek Srivastava	NABARD	FPOs and Government interface
8	Mr. Rajesh Ranjan	NABVENTURES	CEO/Venture Capitalist
9	Mr. Venkatesh Panchapagesan	NSRCEL, IIM-B	Chairperson, NSRCEL
10	Mr. Vijay Nadiminti	a-IDEA	COO
11	Mr. Vipul Patel	CIIE, IIM-A	VP-Investments
12	Ami Patel	Industree Crafts Foundation	Project Lead (Design & Market)
13	Simy Joy	IIM K	Research
14	Mr. Ramanjaneyulu GV	CSA	Executive Director
15	K C Devansenapathi IAS	IAS, Raipur, Chattisgarh	Additional Chief Electoral Officer
16	Neelam Chhiber	Co-founder and Managing Trustee	Industree
17	Ms.PoojaKukreja	Marico India - Chairman's office	Manager
18	Mr. Raghunandan K – CEO – MCRC	EID Parry	President
19	Krishna Kumar G	ITC	VP Crop Operations & Sustainability
20	Mr. Chandra Mohan	TAFE	President, CFO
21	Aswathaman Vijayan	ITC	Manager sustainability
22	Lakshman SJ	EID Parry	AVP&Head-R&D and CaneExtension
23	Kalpana S Regulagedda	Former JD, ICAR-NAARM	Lakshman SJ-SUG-PUG-EID
24	Sri Ram Bhagavatula		
25	Sivakumar P	MABIF (Madhurai)	CEO
26	Dr. K. Srinivas	a-IDEA, ICAR-NAARM	CEO, a-IDEA
27	Prof.Trilochan Sastry	IIM-B, Social Alpha Board	Prof. in Decision Sciences, Centre for Public Policy
28	Prof. Shambhu Prasad	IRMA	Professor- IRMA Coordinator, I Seed

29	Rajneesh Kumar	Pusa Krishi Incubator	COO, Pusa Krishi Incubator
30	Dr.NeeruBhooshan	Pusa Krishi Incubator	CEO, Pusa Krishi Incubator
31	Navrun	Industree	
32	Hemendra Mathur	Bharat Fund	Venture Capitalist
33	Rajendran Ramasami	Rasi seeds, Cotton	Managing Director
34	Suresh Babu	Rasi seeds, Cotton	National Manager
35	Prabhaka Rao	Nuziveedu seeds, Cotton & Field crops	Managing Director
36	Venkat rao K		Sr.Vice President
37	Vamshidhar	Kaveri Seeds	Director Sales
38	Yogesh chandra	Tulasi seeds	Managing Director
39	Dharma Charan	Veda Seeds	Managing Director
40	Raju Barwale	Mahyco seeds(Cotton, Field crops and Vegetables)	Managing Director
41	Gurpreet Bhattal	PHI Seeds (Maize seeds)	Sales Director
42	Mukesh Mittal	Tierra Agrotech, Cotton, Field crops	CEO
43	Ram Jangeed	Ajeet Seeds(Cotton)	Vice president
44	Prof. Sridhar Vishwanath	IRMA	Asst. Prof. Strategy and Policy, Chair Iseed& MDP
45	Ms Gayathri Vasudevan	Labour net	Founder and MD
46	Mr Ram	Rangde India	NBFC-P2P Lending
47	Vipin Kumar	National Innovation Foundation-India, Gandhinagar	Director and Chief Innovation Officer
48	Kshama Patil	Department, GoK	Deputy Director, Horticulture
49	Siddharth	Portfolio & Innovation	Social Alpha
50	Mahesh Yagnaraman	Acumen Fund	MD, India
51	Nagarajan M	IAS, Govt. of Gujarat	Director, Higher Education, Go Gujarat
52	Siddharth Chaturvedi	World Bank	Consultant

Annexure 3.0 – Comparison of tech platforms offered by other Ministries and bodies.

- **Ministry of Agriculture and Farmers Welfare**
 1. **KisanRath**
 - ❖ Connect farmers and traders with transporters.
 - ❖ List of leading transport aggregators and individual transporters.
 - ❖ Wide range of transport vehicles available on required date and place.
 - ❖ Does not yet allow filtering trucks based on cost.
 2. **e-NAM**
 - ❖ Trading portal with a network of existing *mandis*.
 - ❖ Traders can do remote bidding.
 - ❖ Farmers get info about arrivals and prices.
 - ❖ Facilitates on-ground weightment, quality checks, and eNWR.

- **CSIR**
 1. **Kisan Sabha**
 - ❖ Eliminate the need for middlemen by connecting farmers to supply-chain and freight transportation management systems.
 - ❖ Single stop for all 6 entities related to agriculture:
 1. Farmers who need a better price for their crops.
 2. Mandi Dealers who want to connect to more farmers.
 3. Transporters who invariably go empty from the mandis.
 4. Mandi Board Members.
 5. Service Providers.
 6. Consumers.
 - ❖ Includes many features such as Freight estimation, Toll calculation, Mandi price updates, Multi-sided marketplace, and Transportation requests.

- **NABARD**
 1. **eShakti**
 - ❖ Digital Bookkeeping app for Self Help Groups.
 - ❖ Improves quality of data, which is shared among members and banks.
 - ❖ Improves transparency of transactions.
 - ❖ Tracks credit history of members which helps in securing loans.
 - ❖ Converges SHG with other government programs.

- **Ministry of Rural Development**
 1. **Gram Samvaad**
 - ❖ Information dissemination - Citizens at the Gram Panchayat level get access to information on various Rural Development programs.
 - ❖ Transparency & Accountability - Access to information on grants to local bodies and 7 programs of the Ministry of Rural Development.
 2. **Mission Antyodaya**
 - ❖ Only for officials of MoRD for field data collection at the village level for data related to infrastructure and economic activities.
 - ❖ Information is used for ranking Gram Panchayats and monitoring progress in villages.
 3. **GeoRurban**
 - ❖ Monitor physical progress of the works under SPMRM.
 - ❖ Users can upload Geo-tag enabled images of the physical status of the works being executed on the ground in the clusters.