

Scaling Grassroots Innovations: Insights from Pilot Interventions in Indian Villages



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Abstract Grassroots innovation-based entrepreneurs in Indian villages have a deep understanding of local issues and create innovative and affordable solutions to address local challenges. Most grassroots innovators have to develop material resource-restricted solutions within a constricted local context due to scarcity of tools, materials, funding, etc., and access limitations. As a result, entrepreneurs from the grassroots seldom succeed in scaling up, and grassroots discoveries often have limited local application. Moreover, market access is also limited. This study presents learnings from a pilot project that developed interventions to foster grassroots creativity. This paper describes: (i) the framework for the selection of innovations, including factors such as scale of the problem, potential markets, etc.; (ii) examples of gaps that were mapped in order to scale the innovations up after studying the grassroots innovations, interviews with innovators, technical benchmarking, market research, and academic inputs; (iii) the interventions designed to make the chosen innovations either better designed or have a higher fit with the market; and (iv) the results of the interventions, their limitations, and potential future possibilities; and (v) complementary policies and resources that can help grassroots innovations as a sector.

In order to scale up and serve a larger customer base, this article also suggests several future directions for creating and sustaining an ecosystem that can support grassroots ideas and innovations.

Keywords Grassroots innovation · Scaling up · Pilot project framework · Market research · Corporate community collaboration · Grassroots policies · Grassroots ecosystem

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Disclaimer: (i) We did not proceed with any formal commitments with the grassroots innovators for onboarding, but rather with an open and transparent understanding to put in the best efforts. (ii) Suzuki Motor Corporation (hereinafter, Suzuki) bears no responsibility for the views expressed. Authors bear full responsibility for the same.

1 Introduction

1.1 *A Joint Initiative to Solve Unmet Needs*

This paper is based on the work that GRIPP (Grassroots Innovation Pilot Project), an initiative of Suzuki which is a large multinational corporation, did along with GIAN (Gujarat Grassroots Innovation Augmentation Network), a Honey Bee Network (HBN) institution, to deep-dive into seven grassroots innovations from all over India over a period of one year. Over the 35-year journey of HBN, this is perhaps the first such unique partnership between a large MNC, micro innovators, and entrepreneurs developing affordable solutions to the problems faced by common people. In this partnership, industry, academia, and civil society came together to understand the nuances, pain points, and dissemination strategies of major rural and green innovations.

Rural communities have various unmet needs [6, 7], which a partnership between corporations and communities can potentially meet [8]. For creating value for the rural community, GRIPP pursued supporting the existing bottom-up innovative enterprises seeded by grassroots community members [4] and helped go to the next level by leveraging the knowledge, assets, and network of Suzuki. This approach focuses on affordable innovations from the grassroots innovators and emphasizes the willingness of the corporate to listen to and learn from the grassroots innovations, making the engagement robust and unique.

Finding grassroots innovations in a vast country like India was difficult; thus, there was a need to collaborate with social organizations and individuals with deep connections to grassroots innovators, who have built trust with the grassroots innovators and worked with grassroots innovators.

HBN has been a forerunner in the grassroots innovation movement by documenting and promoting them for the past 35 years [5]. Identifying the need to scale some of these innovations, GIAN was established by HBN in 1997 in collaboration with the Gujarat government and with support from SRISTI and IIM Ahmedabad. GIAN was the first organization of its kind with a mission to sustain the spirit of innovation, encourage experimentation, and nurture creativity at the grassroots level [15].

It was felt that lack of resources and institutional support are some challenges grassroots innovators face [13]. The gaps may vary according to the innovation and the context in which they operate [1, 12]. With the understanding of supporting some grassroots innovators, an agreement was formalized between Suzuki and GIAN

following the earlier MoU between Suzuki and IIT Hyderabad. Consequently, a one-year pilot called GRIPP (Grassroots Innovation Pilot Project) to support selected grassroots innovations was launched to link the social and technical capital of a very large MNC with the needs of grassroots innovators.

The scope of this pilot was to source, select, and support grassroots innovations jointly by pooling internal and external knowledge and networks. This paper summarizes the approach, and results of the pilot project, as well as the learnings and recommendations derived from GRIPP, to design a framework for supporting grassroots innovations.

1.2 Sourcing and Shortlisting

GRIPP leveraged GIAN's grassroots innovation network for sourcing grassroots innovation enterprises. GIAN pooled the innovations along with other honeybee network institutions and volunteers [3]. Innovations were sourced from several regions nationwide through the Honey Bee Network database, which has over 10,000 grassroots innovators [11]. The domains sourced for the first year were Agriculture and Sustainability. Most of the innovations were chosen from the Agriculture domain as most grassroots innovators belong to farming families. The last economic survey noted, "65 percent (2021 data) of the country's population lives in rural areas and 47 percent of the population is dependent on agriculture for livelihood." [14]

The most important criteria for shortlisting were social impact and innovativeness. The scoring for social impact was based on the population of the target group, adaptability in other villages, seriousness of the problem, frequency of the problem, and overall impact on profit increase and relevance for villagers in terms of the SDGs. On the other hand, the scoring for innovativeness was given based on the novelty of the technology and the innovator's passion. Based on the above criteria, the GRIPP team identified twenty innovators with some revenue. Moreover, a certain amount of diversity was maintained among innovators. Diversity was evaluated on the following parameters: agricultural conditions, seasonality, social conditions, market infrastructure, and design approach. Such diversity provided a wide range of innovators to conduct our study.

1.3 Selection Criteria for Innovations

Since this is not a typical firm,¹ the team acquired the gist by visiting individual innovators to comprehend their situation and future potential. GRIPP team

¹ Where firms call the grassroots or rural community as the 'bottom of the pyramid' (BOP) as they see the communities only as mere markets (Prahalad, C.K. and Prahalad, C.K., 2005. *The Fortune at the Bottom of the Pyramid*. Wharton School Pub.). BOP implies the poor as consumers whereas Grassroots innovations implies poor as providers of solutions. Further, poor are not the bottom of

conducted multiple interactions, including workshops with innovators, and field visits in multiple regions including Srinagar. A meeting with innovators was also held at IIT Hyderabad with professors to build confidence on both ends. Participatory design requires not just agency but also shared ownership, trust building among all stakeholders, and reflection by various actors involved in the value chain to enhance the co-creation of knowledge [10]. Suzuki management also visited some grassroots innovators along with the team.

The selection of the innovators was made after studying the grassroots innovations, interacting with innovators, technical benchmarking, market research, and obtaining academic and other inputs. In the selection of the innovators, an assessment was made as to who would be the most responsive to project interventions. After extensive deliberations, seven innovators were selected for the pilot project (see Table 1).

As can be seen from the above table, the innovators are spread across India and are operating in diverse domains. This diversity was deliberate to get a good understanding of the interventions in different domains and different geographic regions.

Table 1 Details of the selected innovations/innovators

Innovation	Innovator	Place	Purpose
Groundnut digger	Mr. Sanjay Tilva	Rajkot, Gujarat	Uproots groundnut and piles them in a strip which saves considerable labor, operating time, and cost of operation
Paddy transplanter	Mr. Nishi Biswas	Bhopal, Madhya Pradesh	Machine for paddy transplantation which saves time and effort
Sanedo	Mr. Mansukh Jagani	Rajkot, Gujarat	Mini-tractor alternative to Perform multiple farming operations such as plowing, weeding, spraying, etc.
NeeRain	Mr. Amit Doshi	Ahmedabad, Gujarat	Unique technology using no water loss, double stage filter for rainwater filtering for eventual storage or recharge
Manure Spreading machine	Mr. Samir Gani	Palanpur, Gujarat	Spreads farm yard manure quickly, uniformly, and efficiently over large tracts of farms
Banana fiber making Machine and products	Mr. P M Murugesan	Madurai, Tamil Nadu	Fiber making machine and products with Banana fiber like baskets, lampshades, wall hangings, etc.
Snow remover	Mr. Rafiq Ahanger	Anantnag, J&K	Attachment for Power tiller to remove snow

all pyramids like ethical, empathy or ecological pyramid. They are at the bottom of the economic pyramid.

2 Designing Interventions

To design action-research interventions, in addition to the extensive discussions and inputs from the innovators, crucial information on current sales, accounts, funding status, technological readiness, current partners, and the terms of partnerships were also requested. However, the GRIPP-GIAN team observed that the grassroots innovators were so engrossed in innovating that they did not have all the information available. It was felt that the innovators did not feel that such information was all that important for running a business. Like most innovators, they felt primarily that their innovations would carry them through. The GRIPP team spent considerable one-on-one time with individual innovators to collect the required business-oriented information.

It was interesting to note the several areas of support the innovators identified. Some innovators wanted links with dealers, access to finance, improvements in product design, and an increase in online reach, among several other unexpected things.

The GRIPP team assessed most of the requirements suggested by the innovators to come up with the final list of interventions. For example, (i) For linking with dealers, developing dealership support and technical support strategies is necessary. Creating marketing collaterals like brochures is important. Creating maintenance schedules, warranty systems, service manuals, and a proper supply chain for spare parts are other important things that an innovator requires. Proper human resources for some technical expertise are needed at the dealership locations for effective management and possible maintenance. (ii) For increasing customer reach through online marketing, especially in India where the rural area is vast and fragmented; the challenge is handling marketing, sales, and after-sales service from grassroots innovators mostly located in remote areas [2]. While Mr. Sanjay had sales distributors in several regions of India, most other innovators had sales only in one region. Online platforms can mostly generate queries because actual sales in the farm machinery sector take place through one-to-one interactions and promotion by dealers/distributors, demonstrations, etc. Perhaps this will change with greater online marketing penetration in rural areas.

Such grassroots nature of innovations required us to develop interventions suitable to them for the nine-month acceleration program. After keeping their requirements in mind, evaluating the dependencies that needed to be addressed and the suggestions provided by domain experts, we designed the following interventions:

1. To help in Design improvement, Redesigning and Field-testing.
2. To support in Marketing and Customer engagement.
3. To assist in Building financial strategies.
4. To provide guidance in Management and Legal support.
5. To assist in developing After Sales Service Program, Manual, and Marketing collaterals.

3 Methodology

Building the ecosystem: To achieve the objectives of the innovators, it was necessary to build the ecosystem with the required stakeholders. GRIPP engaged resources at regional, national, and global level by leveraging Suzuki, GIAN, and IIT Hyderabad. This section summarizes the ecosystem GRIPP built and how it used the players in the ecosystem to achieve the objectives of the innovators.

Leveraging the strengths of Suzuki: GRIPP engaged the expertise of the after-sales training team, connections with dealers in India and abroad, advice from engineers, relations with a leading NBFC for product finance and a Japanese agro company for technical advice to help the innovators.

Leveraging the strengths of GIAN: GRIPP leveraged GIAN's network with university professors (for example Mr Singanapalli Balaram, former Prof. NID, Veteran Industrial Designer; Dr Padmini Tolat, Professor of Design, Visva-Bharti University) and domain experts to facilitate the design improvement in the products developed by the innovators. In addition, the team brought together established mentors like Mr. Pradeep Mittal, CEO of GreatFour Systems Inc., a charter member of TiE, and member of Hyderabad Angles to help innovators with business aspects. Although they are not domain experts, the idea was to get mentors with expertise in startups who can advise the innovators on how to develop a business.

Going forward, we have mentioned examples of how we engaged the stakeholders in the ecosystem to develop each of the interventions based on the objectives and requirements of the innovators mentioned above in the table.

3.1 *Design Improvement/Redesigning and Field-Testing*

Paddy Transplanter: GRIPP and GIAN assisted the innovator in getting vital user feedback, such as difficulty in pulling the transplanter in the wet paddy fields, and missed and damaged seedlings during transplantation, which served as the starting point for substantial enhancements to the technical design. Professors from IIT Hyderabad helped with RULA (Rapid Upper Limb Assessment) studies. RULA analysis helped in realizing that the operators may experience discomfort due to the prolonged use of the manual transplanter, resulting in muscle fatigue and strain, especially in the back and shoulders. Simultaneously pulling and rotating the lever was difficult for the operator. Moreover, the height of the handle was fixed, making it ergonomically unsuitable for individuals with different statures. A team from GIAN assisted in the design and development of a new motorized paddy transplanter instead of manual rotation along with modifying the handle length and angle that reduced manual drudgery and improved transplantation efficiency.

The innovator also received insights from Mr Pankaj Dalvi, a marine engineer with expertise in mechanical systems, whom the GRIPP team scouted regarding the design audit and improvement of the transplanter. The insights from Mr Pankaj Dalvi fixed teething issues in the rice transplanter such as replacing the sleeve bearings of the drive shafts with ball bearings to reduce friction which in turn reduced the torque required and increased the contact area between the cam and pins and hard-facing of pins to reduce friction and extend the life of pins.

Field testing and demonstrations were rigorously conducted in several states, namely, Madhya Pradesh, Chhattisgarh, Maharashtra, Telangana, and West Bengal. Involving the users in the real-life testing of the transplanter ensured quick feedback to the development process and triggered the users to actively participate in the product design [9]. This comprehensive strategy ensured that real-world requirements including different geographical conditions were incorporated into the product's evolution.

Banana Fiber-making Machine and Products: GRIPP-GIAN helped in the establishment of a bridge between the innovator and Dr. Padmini Tolat, a renowned design professor at Visva-Bharati University. This collaboration aimed to improve the quality of coloring and how to create a setup to use organic colors so that the sustainability value of the innovator's products stays intact, especially to cater to some of the new clients abroad.

Snow Remover: GRIPP-GIAN provided support by assessing the existing design and conducting market research to improve the prototype. Firstly, in improving the current version by adjusting ground clearance to reduce wear and tear, and secondly, in envisioning and successfully implementing a whole new version to remove the older and thicker snow as well. This assistance included design modifications, functionality improvements, and some novel features.

Sanedo: The innovator received advice from Suzuki engineers with respect to the procurement of parts like the engine, gearbox, differential, and PTO shaft at a price comparable to the existing price. The current USP of the innovation is affordable pricing. Manufacturing these parts from scratch is very expensive and consequently not possible, keeping the price point in mind. Based on this advice, the approach was to use already available parts from the market to optimize the price. GRIPP also explored the use of Suzuki's parts, like the engine from the outboard motor and the differential of the ATV, for the Sanedo project. This exploration was aimed at reducing the cost of production for the innovator while maintaining quality by collaborating with Original Equipment Manufacturers to supply parts at reasonable cost.

3.2 *Marketing Support and Customer Engagement*

Groundnut Digger: Connected the innovator to dealer aggregators from Telangana. Further, we helped organize field demonstrations in Gujarat and connected the innovator with the State Agriculture University in Telangana. The university team, in collaboration with Annapurna Agro Industries and the innovator, conducted more than five field demonstrations across the Telangana state, which allowed for direct interactions with farmers and the collection of valuable feedback.

Moreover, the team encouraged the innovator's collaboration with social networking and region-based e-commerce platforms for farmers to develop efficient social media marketing strategies. These initiatives aimed to increase the innovator's market visibility and encourage effective collaborations.

Banana Fiber Making Machine and Products: GRIPP team introduced the innovator's banana fiber product portfolio at an international dealership conference of Suzuki from the Middle East and African countries. These initiatives were aimed at creating visibility and potential leads for the innovator through introductions to global ventures and simultaneously allowing the dealers to expand their sustainability and rural economy initiatives.

Paddy Transplanter: GRIPP helped the innovator connect with the Ramakrishna Mission Vivekananda Educational and Research Institute in Kolkata, allowing for further demonstrations and feedback for future engagements. Additionally, we played a critical role in building market links for the innovator through relationships with dealership aggregators, which facilitated dealership potential.

Manure Spreading Machine, Sanedo: To create a new distribution channel, GRIPP facilitated a visit by a large agri-business corporation to the innovators' workshop for demonstration. This allowed them to analyze the machine's appropriateness to help their farmer groups increase productivity and reduce drudgery. We also helped in conducting demonstrations and assisted the innovator in marketing and getting crucial customer feedback. In addition, we assisted the innovator of Sanedo in organizing a complimentary after-sales workshop where they could engage with customers to collect inputs regarding the problems faced by customers and incorporation of new features.

NeeRain: GRIPP connected NeeRain with a manufacturing plant in Ahmedabad for installing their devices to conserve rainwater.

In addition, for all the seven innovators, we supported the innovators' participation in a variety of events, such as Startup Conclave, Vibrant Gujarat, and a state-level symposium dedicated to progressive farmers organized by NABARD in Gujarat. These platforms had a broad audience of farmers, government bodies, and universities. Exposition in such events helped highlight the innovators' distinct value proposition, collect feedback, and possibly attract new avenues for growth and collaboration.

3.3 Building Financial Strategies

GRIPP-GIAN created a pitch deck for the innovators of the Groundnut digger and Manure spreading machine that was tailored to effectively communicate their vision, business model, and potential impact to investors. We facilitated introductions of the above-mentioned innovators and Banana fiber-making machine and products to a variety of financial agencies, including various NBFCs and banks, which provided opportunities for the innovators to explore financing options for capital and product finance. We provided guidance and support throughout the application process for equity investments.

Furthermore, GRIPP forged connections with NABARD Gujarat to approve unit costs for Groundnut Digger, Sanedo and Manure spreading machine so that loans can be availed of by customers from banks. GRIPP has also provided aid to increase the production capacity of Manure spreading machine, Sanedo, and Banana fiber making machine.

3.4 Management and Legal Support

GRIPP assisted the innovators of groundnut digger and paddy transplanter to establish their company under start-up registration. In addition, we assisted the innovator of groundnut digger in navigating the patent filing process, including coaching him through the legal and administrative requirements required to safeguard their intellectual property through patent filings.

Manure Spreading Machine: Helped the innovator fulfill certain requirements for testing their machine at the Farm Machinery Testing Centre, which may enable the innovator to obtain government subsidy approved for their customers.

3.5 After-Sales Service Manual/Marketing Collaterals

We arranged a session for all the innovators with the after-sales team of Suzuki to create awareness about the importance of after-sales service. We carefully crafted user manuals for the innovators to accompany their products, guaranteeing that their customers have thorough guidance on how to efficiently use and maintain their products. This manual offers the users clear and concise step-by-step instructions, troubleshooting tips, and other valuable information.

For groundnut digger and paddy transplanter, we worked closely with students and professors from IIT Hyderabad to help create marketing materials like brochures and leaflets. Through this partnership, we were able to tap into their design and communication expertise to develop captivating and informative collaterals that effectively showcased the products of the innovator.

4 Results and Discussions

GRIPP successfully supported the innovators of the two innovations: Paddy Transplanter and Snow Remover in design improvements and new version development by leveraging GIAN engineers and domain expertise of academic institutions and industries. GRIPP established a network with dealership aggregators and visited around 45 dealers across Telangana and Andhra Pradesh states. The innovator of Groundnut digger could establish partnership with Annapurna agro-industries, expanding sales in Telangana and resulting in 10% increase in yearly sales. Marketing collaterals (leaflets, brochures, and manuals) created for Groundnut digger and paddy transplanter using IITH expertise have proven to be effective tools in promoting the innovator's product. For online promotion of Groundnut digger, social media marketing, and specific farmers' networking platforms were tried. However, this did not work out since it was expensive for the innovator. GRIPP and GIAN are exploring ONDC for online marketing. GRIPP introduced the guidelines and helped to create a user manual on preventive maintenance as a part of the after-sales service kit and it was adopted by four of the innovators. GRIPP team was not able to provide a low-cost supply of refurbished parts for Sanedo to reduce the production cost.

GRIPP tried collaborating with multiple partners for financing, but could not quite succeed. For startup finance, some NBFCs were willing to look at loans, but only against work orders at high interest rates. For international financiers, their check size is much larger than the requirements of the start-ups. Some social VCs found these ventures to be highly risky and not investment-ready. In addition, connecting innovators with regional NBFCs for product finance did not work due to high interest rates. Some large NBFCs were hesitant to provide product finance while considering parameters like sales at the country level, annual sales volume, warranties, and distribution partners of the innovators.

GRIPP's limited human resources could only provide logistics support for demonstrating the products in a few states. Due to the limitations of time, alternative high value applications using banana fiber could not be explored. Efforts are yet to be made with other agri-business corporations in India and global ventures, for collaborations with grassroots innovators for: (i) Supply Agri-parts (ii) Technical assistance and (iii) New product and business development ideas.

5 Summary and Recommendations

GRIPP supported 7 innovators across India in different aspects, such as technological advancement, marketing, building financial strategies, legal documentation, and after sales support. However, one year is too short to make progress in all aspects. The results were also dependent on several factors such as the seasonality of crops, trained human resources in the vicinity of the innovators, customers' willingness to share feedback like in the case of Sanedo, we kept a free service workshop to collect the

feedback, etc. The experience of GRIPP can be used to design strategies for creating partnerships between corporations and grassroots innovators.

These collaborations are challenging since grassroots innovators are spread across the country and are assumed to be too risky for financial support. We were successful with the rice transplanter in having multiple stakeholder collaborations whereas more efforts are needed with others. One of the key challenges and opportunities deals with finance. Lack of funding causes many grassroots innovators to struggle to get their innovations to market, particularly on a small scale. They usually lack the skills necessary to raise money, such as the ability to make pitch decks. Some of the major obstacles are the lack of financial planning and the ecosystem's poor support. Innovators also struggle with a lack of affordable finance choices with reasonable interest rates and repayment schedules. Some of the innovators were hesitant to have finance against equity, apprehensive that the financier might take over their company. Other challenges include innovators often being in remote areas limiting their access to (i) Services like outsourcing of design, legal processes, etc., and (ii) Supply of parts. Some innovators are unable to devise a method for linking manufacturing units to an established supply chain for various reasons.

Other challenges include linkage to distribution channels for sales with after-sales service and access to the latest technological developments. Much of the approaches of Grassroots innovators focus on manual operations and not on automation. The mind of the innovator was often reluctant to change the technologies, but one succeeded after a lot of deliberations with the innovators. However, this can be an opportunity for academia, grassroots innovators, civil society, distributors, financiers, etc., to collaborate and overcome the challenges and create further social impact. Based on our results and analysis of challenges, GRIPP recommends the following for various stakeholders to play a role in the ecosystem.

The methodology we employed for sourcing can facilitate the building of partnerships through mutual consultations, fostering trust, and creating awareness of opportunities for grassroots innovators. For the selection committee, we learned that it is necessary to include successful and empathetic innovators from the grassroots in the committee. Mentors can be found aspirational for grassroots innovators, and advice can be most relatable when there are similarities in the journey.

It is important to build an ecosystem to facilitate grassroots entrepreneurs' support programs that may unite all the grassroots ventures in the same domain under a single unit to bridge the gaps. Such an ecosystem will enable them to get better access to resources and pricing by leveraging their volumes to gain advantage like:

- i. Outsourcing agencies/ freelancers' directories for legal, content, branding, and designing for marketing kits (brochures, websites), and after-sales manuals.
- ii. Connection to the supply chain to get local parts at an affordable price.
- iii. Connection to rural marketing platforms and access to rural databases.
- iv. Persuade an association of distributors to provide operations to these individuals for developing the distribution chain. For example, the networks with the dealers secured during the efforts for Groundnut digger, can be engaged for other innovators as well.

- v. Develop capacity-building modules to help with Human resource management (employment and training), improve the after-sales service (try and test out innovative models for a fragmented market).
- vi. Creation of a Human resource bank/community by connecting with Universities, retired professionals, domain experts, and freelancers passionate about grassroots problems for their technology and product design expertise.
- vii. Engage the community of innovators and entrepreneurs to help them address challenges, learn, and inspire from each other.

Testing reports needed for eligibility for government subsidies require testing against Bureau of Indian Standards (BIS). We propose to establish a framework between innovators and government bodies to streamline and expedite the process of updating the BIS database with standards for emerging technologies. Without the expedition of standards creation, testing institutions will struggle to assess the innovations. In addition, the lengthy waiting period for getting the innovations tested makes it necessary to establish more such testing institutions.

A deeper study is required to determine the issues that exist in connecting financiers. There is a shortage of skilled and semi-skilled workers which needs to be addressed. Economic reality is a challenge which often makes the innovator to put their innovations on the back burner which results in loss of time and consequently, some other product in the market takes over. In addition, all the innovators we encountered were males. We need to further understand if there are any social barriers that need to be addressed to encourage more women to be innovators.

The goal of GRIPP is to make the solution reachable and accessible to as many grassroots innovators as possible and possibly to resolve their lack of resources and institutional support. During the pilot, we identified two kinds of personas: (i) entrepreneurs (ii) innovators. Some innovators have turned their innovations into business opportunity, while others are passionate about product innovation and less focused on sales numbers. Becoming an entrepreneur involves becoming resilient to risk. Can we find better models to scale innovations other than scaling up entrepreneurs? We need to think further and deep dive into the following: Is there a lack of capacity-building programs for such local innovations in terms of technology development and market linkages, or is it the lack of awareness programs for the innovators that they have to build capacity, or the intent of the innovators to scale up? While designing the program to bridge the gaps in the ecosystem and the selection of the innovators within the grassroots innovation ecosystem have to be such that they can be supported to gain the maximum chance of success.

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