

GRASSROOT INNOVATION FRAMEWORK

2020-2025

**Information Technology, Electronics
& Communications Department
Government of Telangana**

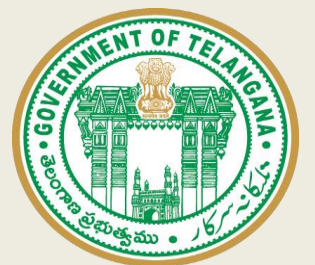


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INTRODUCTION

Innovation has been a clear priority for the youngest state of India, Telangana. We became the first state to institutionalize the position of Chief Innovation Officer in the country, stemming from the Innovation Framework 2016. Although, we believe in no distinction between Innovations, of rural or urban origin, research led or traditional wisdom led, but a clear need for focus in maturing the ecosystem of Grassroot Innovations was felt over the last two years. Through the work of Telangana State Innovation Cell and other organizations working in the domain of Grassroot Innovation, it has come to our understanding that the individual efforts of the people of Telangana in solving their and their immediate surroundings problem is quite high.

The diversity of the state of Telangana and myriad of opportunities to contribute to the economic and social welfare of its populace, convinces of the critical role of Grassroot Innovation in the next spurt of growth, inclusive development, and multiple clusters of economic prosperity.

The Grassroot Innovation Framework, which has been envisaged for a period of 5 years, 2020-2025, aims at bridging the existing gaps, to further nurture the existing Grassroot Innovation ecosystem into becoming a robust one.

Salient features of the Grassroot Innovation Framework of Telangana:

1. The Framework aims at creating institutions, systems, procedures, narrative that would own the Grassroot Innovation Ecosystem after a limited intervention by the state government. These institutions, systems, procedures, narrative should be evenly spread across the geography, and spaced evenly across the value chain of Grassroot Innovation with a special focus on being inclusive and a justified representation of the demography, uniqueness, and strengths of the state.
2. Grassroot Innovation Framework (GIF) will aim at addressing the existing gaps in the Grassroot Innovation Ecosystem at the grassroots level to boost its nurturing.
3. The actionable items in GIF will be taken with a timeline in vision. The actions and results achieved will be reviewed on an ongoing basis to understand the achievements and future course of actions.
4. The GIF has been written for a timeframe of 5 years (2020-2025), upon which the existing conditions, opportunities, and problems would define the GIF 2.0.
5. The GIF will be published in Telugu and English with FAQs. There would also be a cue card version of GIF available for the citizens given the nature of beneficiaries.
6. Grassroot Innovation Framework will not be limited to physical products, infrastructure but would also include ideas and unique systems which effectively deals with issues at grassroots level.
7. This Framework is also a prioritizing body for resource allocation. Set of norms which is the measure of the set of values.

1. Definition

Grassroot Innovation is a term that has gained recent popularity in India and other developing nations. While the term “Grassroot Innovation” can be understood by alloying the meaning of the word “Grassroot” and “Innovation” together; its ambit can hardly be contained in the definition. But for the sake of clarity, we would define “Innovation”, “Grassroot” and “Grassroot Innovation” to make the initial contours of this framework.

Innovation: An idea/product which is unprecedented/novel manifested through its usage of either one or multiple of the undermentioned:

- a) Method
- b) Material
- c) Application
- d) Business System

Grassroot: Grassroot is a collective term to represent the economically marginalized, bottom most pyramid of the society. For clarification, this economically marginalized section of society is not to be taken as marginalized in other capitals like skill, intellectual, and ethical. This is a collective mass of people who could be termed as “Last Mile” “The last beneficiary”, “Antyodaya”.

Grassroot Innovation: Grassroot Innovation by simple amalgamation of the definition of its parts becomes: Innovation with direct implication for the people at Grassroots.

Now, there are four ways in which the implication could unfold practically. Thus, there could be four ways of Grassroot Innovation.

- a) By Grassroot Innovators
- b) For Grassroot Innovators
- c) With Grassroot Innovators
- d) At Grassroot Innovators

The Grassroot Innovation Framework would primarily deal with Grassroot Innovation as done by Grassroot Innovators. So, for all comprehension purpose in this framework, “Grassroot Innovation” is to be understood as “Grassroot Innovation as done by Grassroot Innovators”.

The Value Chain of a Grassroot Innovation

The first stage of the value chain of Grassroot Innovation is reaching out to the rural citizenry with the idea of innovation and creativity through workshops, Sodha Yatras, sensitization events. The aim of this step is to communicate to the rural citizenry the need, importance, and opportunities in the domain of Grassroot Innovation.

The second stage of the value chain of Grassroot Innovation is to scout for existing Grassroot Innovators and facilitate the creation of new Grassroot Innovators. This is done by conducting state-wide innovation challenges, and exhibitions to provide the opportunity for rural citizens

to identify problems, innovate to solve them, and then exhibit to their fellow citizens and the wider ecosystem. This stage would produce innovators who would have identified problems and have developed a rudimentary solution in the form of an idea or a prototype.

The third stage of the Grassroot Innovation is aimed at helping these identified innovators to develop their prototype further for the proof of concept. As an outcome, there would be innovators who would have developed a high-class working prototype to solve a pertinent grassroots problem. These innovators would then need academic training, skilling, and exposure visits to expand their horizons and look forward to becoming an entrepreneur from being an innovator. At this stage, some of the grassroots innovators need access to small grants to create few working prototypes which are market-ready. Upon the success of these prototypes, innovators look to expand their reach, and scale-up their operations for deeper market penetration.

Thus, in the fourth stage of Grassroot Innovation, Scale-up Fund are needed to help grow grassroots innovations into Micro and Small-Scale Industries, which can then take their rightful place in the MSME Parks and relevant industrial spaces.

The fifth stage is of monitoring the health of these MSMEs, conducting relevant trainings, transition programs, mentorship to keep them abreast of the norms and regulations of the state and the centre.



After having defined the term and the ideal lifecycle, the framework would aim to draw the roadmap that the state would employ to promote, support, and regulate it over the course of next 5 years.

2. Promotion of Grassroot Innovation

Grassroot Innovation has seen a great amount of traction in the state of Telangana. The Intinta Innovator Exhibition, Village Innovation Challenge, Maker Faire 2019, various international and national exhibitions witnessed hundreds of grassroot innovators displaying their innovation in the past. This goes on to demonstrate the latent potential Grassroot Innovation has in the state of Telangana, and the large number of existing innovations. While we have created a strategy to institutionally support the already identified, exhibited grassroot innovators; the work to promote Grassroot Innovation has to go on aggressively through all existing communication channels and to every possible section of society.

2.1. Identification of Nodal Agency: Telangana State Innovation Cell has been leading the efforts in the state of Telangana for the promotion of Grassroot Innovation. In order to create a clarity around the future course of Grassroot Innovation in the state for all the involved stakeholders, we would officially appoint Telangana State Innovation Cell as the nodal agency in the state for Grassroot Innovation. The Telangana State Innovation Cell will lead the implementation of Grassroot Innovation Framework 2020-2025, revision, continuous engagement with stakeholders for grievance redressal, and work systematically towards formulation of future Grassroot Innovation Policies.

The above-mentioned work shall be done under a Grassroot Innovation sub-committee of a larger committee to be formed for the Promotion of Social Innovation and Grassroot Innovation: “Committee for Promotion of Social and Grassroot Innovation (CPSGI)”. This sub-committee shall be formed by Telangana State Innovation Cell and shall include experts from the domain of Grassroot Innovation and its allied fields. There should also be a provision to include Grassroot Innovators themselves as part of this sub-committee of CPSGI.

2.2. Promotion of Grassroot Innovation through Media and Journalism: The “Intinta Innovator Campaign” of Telangana State Innovation Cell was launched by the Hon’ble IT Minister Mr K T Rama Rao in the year 2018. Ever since then, the campaign true to its reference aimed to promote innovation in every household. This was done through social media posts, promotion of activities happening in the field of grassroot innovation, decentralized activities, meet-ups. In the next five years, Telangana State Innovation Cell shall create fresh momentum for Intinta Innovator Campaign.

- a. Telangana State Innovation Cell shall adopt “Diffusion of Innovation”, “Positive Deviance”, and other tested scientific models of communication to take innovation to every household.
- b. Technology shall be leveraged to create a data-centred approach to reach out to the people of Telangana under the Intinta Innovator Campaign 2020-2025.
- c. Quarterly Media briefings and newsletter in vernacular language by Telangana State Innovation Cell on the health of Grassroot Innovation in the state. This would set the tone for larger public participation and the accountability of the driving force of innovation in the state.
- d. A dedicated magazine for Grassroot Innovation shall be developed with the help from the stakeholders in the Grassroot Innovation Ecosystem. This magazine would aim to

establish a monthly touchpoint between the TSIC, Grassroot Innovation Ecosystem, and the grassroots innovators.

- e. The government also plans to declare one of the years between 2020-2025 as the “Year for Grassroot Innovation”. The “Year for Grassroot Innovation” would be a year of both showcasing the work that has happened in the state in the field of Grassroot Innovation, and to promote more and more collaboration, partnerships, events, involvement of institutions that share similar vision for Grassroot Innovation in the state. The themed celebration of the “Year for Grassroot Innovation” will provide grassroots innovation fresh and its rightful impetus.
- f. We plan to create a campaign for the people of Telangana for an inclusive identity correlation with Grassroot Innovators. The campaign would be aimed to centre stage an image of Grassroot Innovator that is relatable, identifiable, and deeply rooted in the culture. So that every citizen of Telangana identifies themselves as a Grassroot Innovator.

2.3. Promotion of Grassroot Innovation through Proactive Documentation: The information availability pertaining to grassroots innovations by the people of Telangana, problems faced by the citizens of Telangana has been an issue. With proactive documentation of both the existing innovations and the innovations as they come on a real-time basis will be of paramount importance to us. Thus, following actions would be taken:

- a. Development of a Problem-Bank portal by the state. This Problem-Bank portal is aimed to be a catalogue populated by the masses of the state and the country of the day-to-day problems faced by them whose reliable solutions they are still in search of. This Problem-Bank will act as a catalyst and fodder for the innovative minds existing at the grassroots level in the state. Suitable steps should be taken to ensure the reach, ease of access, and use of this portal by the innovators.
- b. A Grassroot Innovation Documentation Application (GIDA) will be created to accomplish real-time documentation of Grassroot Innovations. It has been identified that during village visits, scientific expeditions, officer’s visits; people come across myriads of innovations and institutional wisdom in villages, but the lack of any easy and reliable methodology to capture them forces the system to miss out on them. An intuitive, easy-to-use interface will be the priority of the application.
- c. The repository of innovations created through GIDA would be further enhanced by the addition of the existing grassroots innovations available with the innovation ecosystem of Telangana. The information will be primarily available in vernacular language.
- d. The government would also take up the task of creating a vernacular source of information on the various DIY technologies, instructions on machine and technology handling that are available on the internet for the easy usage by the grassroots innovators.
- e. The grassroots innovations of Telangana will be synced with the national database of Honey Bee Network and National Innovation Foundation.

2.4. Promotion of Grassroot Innovation through Exhibitions, Hackathons, Outreach, and Promotional Events: Exhibitions, Hackathons, and various outreach events are a tangible way to promote grassroot innovation. We plan to undertake following actions as part of it:

- a. Every year Telangana State Innovation Cell in collaboration with District Administrations and suitable partners would organize exhibition of Innovations by Grassroot Innovators on Independence Day under the name Intinta Innovator Exhibition. This exhibition would form the first level of exhibition available to the innovators of Telangana. All exhibited innovators would also be provided with appropriate recognition and awards. Scouted Innovators of Intinta Innovator Exhibition and other innovators would further be given multiple state level platforms for exhibition. There would also be a state-level award for Grassroot Innovation given to a select few on recommendation from a competent jury. The scouted innovators would be hand-held to apply for various national-level and international level awards and exhibitions.
- b. Active promotion of rural exploration by various independent, private organizations would be done to find new grassroot innovators.
- c. Creation of an integrated calendar of events, hackathons, outreaches, exhibitions for the grassroot innovators as conducted by the innovation ecosystem of Telangana. The calendar would be followed up by a comprehensive outreach strategy by the innovation ecosystem of Telangana for the Grassroot Innovators. This comprehensive strategy will be available in the public domain and would be renewed on a yearly basis.
- d. To encourage local solutions for local problems and implanting a problem-solving attitude among the citizens of Telangana, the government plans to scale-up the Village Innovation Challenges across the state in the next 5 years in a phased manner.
- e. We will conduct motivational speeches, community talks, sustainably and year-round at the grassroot level, where the speakers too are grassroot innovators. This will be a scaled-up version of the Innovator Speaker series.

2.5. Promotion of Grassroot Innovation through Academia: Schools, Colleges, and Universities form the breeding grounds of grassroot innovations. Thus, with a special focus following action shall be taken under it:

- a. To facilitate the creation of student grassroot innovators in Telangana, it is critical that we provide the right stimulus, infrastructure for the students in the school itself. Thus, we aim to create model schools for innovation in each district of Telangana. The ATL government schools shall be actively considered to be upgraded into Model Innovation School. These schools will be the outpost of Telangana's innovation ecosystem in the education department. These schools shall have state-of-the-art labs, machineries, infrastructure to facilitate the innovation spirit among the students. These schools shall also be focussed upon as the breeding ground for the next generation of Innovators. There will be hackathons, ideathons, training, and mentorship programs to accomplish the objectives.
- b. To set up a pioneering educational institute for grassroot innovators to provide an ecosystem of innovation to young prodigious innovators or student innovators from

Telangana, India, and the world. This institute shall endeavour to establish innovation as a career for students and shall cater to the ever-changing need and approach to innovation. This institute shall aim to provide for an alternative model of learning for the student grassroots innovators. This educational institute shall also aspire to attract national and global student talent interested in pursuing the path of innovation as a career. This institute will be a breeding ground for experimentative and practical learning, training. The institute will be an independent entity and shall strive to be financially independent within 5 years of its operation. The initial capital investment shall be done by the government, with active pursuit for alternative and sustainable funding in the long run. We envision that the next generation of grassroots innovators will come out of this Innovation Institute.

- c. Setting-up Innovation and Entrepreneurship Development Cells (IEDC) in 200 rural colleges of Telangana over the next 5 years.
- d. Inclusion of the success stories of grassroots innovators in the non-detail textbooks of early academic stages. This shall endeavour to create local grassroots innovators as role models for young students.
- e. A special program shall be conceived to conduct regular visits of grassroots innovators, village intellectuals in schools to promote transfer of institutional wisdom and grassroots innovations.
- f. Government schools will be encouraged to hire local artists to paint walls of schools with appropriate paintings highlighting grassroots innovations, local heritage, and tradition.

2.6. Promotion of Grassroot Innovation among working professionals: Various working professionals have potential to innovate and lack the awareness about opportunities available for them in the state. To solve this problem, the state aims to taken following initiatives:

- a. Putting up promotional videos, materials of grassroots innovations at crowded hotspots like metros, popular workplaces, co-working spaces, IT Parks, major local bus stops. This will attract the focus of the commuting local passengers and make them aware about the various grassroots innovations of Telangana.
- b. The government shall set-up a dedicated display stall at one of the popular metro stations of Hyderabad Metro Rail Limited. This space shall act as a popular stop for daily commuters where passengers can interact with grassroots innovators and understand their innovations.

2.7 Promotion of Grassroot Innovation in the Government: Government stands as an important pillar where there needs to be a greater awareness about grassroots innovations. For which, following steps shall be taken:

- a. It will be one of the additional responsibilities of the Chief Innovation Officer, Government of Telangana to write letters of recommendations to various government department heads and district administrations from time to time, highlighting innovative grassroots innovations from Telangana. The letter shall be periodic and shall act to encourage government bodies to actively consider deployment of relevant

grassroot innovations to solve any of the existing pertinent problems of the concerned administration/department.

- b. The successful model of Government Mentor Program shall be expanded to 20 more government departments in the next five years. An active model of engagement with the district administrations shall also be developed as part of Government Mentor Program which would be known as the District Mentor Program.

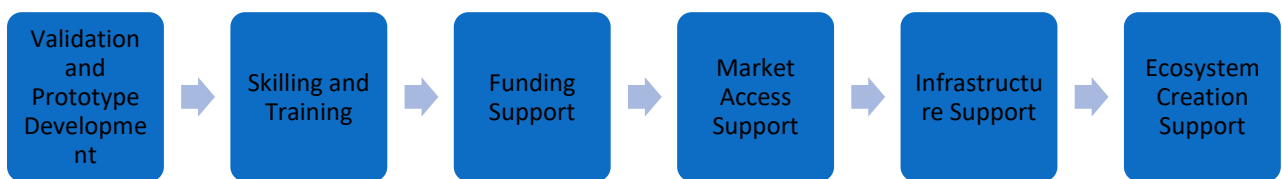
2.8. Promotion of Grassroot Innovation among elderlies and housewives: Elderlies and Housewives of Telangana have historically not been part of any movement in the domain of Innovation. But we aim to take following steps to take them under the folds of grassroot innovation:

- a. A dedicated campaign shall be led by TSIC categorically focussing on elderlies of Telangana. The campaign shall aim to run a series on the elderly grassroot innovators of Telangana, their achievement, exhibitions, community sessions, awards and recognitions.
- b. A similar campaign shall also be run for housewives who are also innovators. The campaign shall aim to run a social media series on the housewife grassroot innovators of Telangana, their achievements, exhibitions, community sessions, awards and recognitions.
- c. A mascot shall be unveiled by TSIC to create a close correlation between elders of Telangana, Grassroot Innovation, heritage, tradition, and modernity.
- d. A dedicated study shall be conducted to find opportunities, gaps, and potential strategy for the broader participation of elderlies and housewives in Telangana.

3. Supporting Grassroot Innovation

Over the last more than two years, the focus of the state of Telangana has been primarily to promote grassroots innovation; but for the next five years the state of Telangana's single most important goal is to support Grassroot Innovations. This support shall be speared across the value chain and stages of a grassroots innovation. The ultimate goal of the support interventions of the government would be to create a seamless, orderly, tested and trusted mechanism to get innovators to become entrepreneurs, MSMEs.

The support intervention planned in the Grassroot Innovation Framework is spanned across 6 verticals: Validation and Prototype Development, Skilling and Training, Funding Support, Market Access Support, Infrastructure Support, and Ecosystem Creation Support.



3.1. Validation and Prototype Development

- a. Creation of Network for Promotion of Grassroot Innovation (NPGI). We aim to create a network of labs, workshops, prototyping centres by identifying already existing infrastructure in the districts in various technical and science colleges, universities, research centres. NPGI would mainly serve the grassroots innovators who will not be able to avail the services of T-Works, or who would want to innovate in their own districts because of varied reasons.
- b. A selective program to be run by T-Works to take the most promising Grassroot Innovators of Telangana and provide dedicated prototype development support, active mentorship, monetary incentive to create market-ready prototypes.

3.2. Skilling and Training Support

- a. To give a wide exposure to the Grassroot Innovators who already have a strong prototype coming out from the interventions proposed out of 3.1. We aim to send around 20 Grassroot Innovators to various institutes, exposure visits, training programs which would help them extend their horizon and equip them with the necessary academic skills and exposure to become successful entrepreneurs. The exposure visits, trainings, academic programs will be aimed at innovators with a world-class prototype, and who aim to enterprise their solutions.
- b. TSIC would conduct District Innovators Meet up series to conduct regular training programs on IP, Marketing Techniques, Communication techniques etc in various major districts of Telangana.

3.3. Funding Support

- a. **Setting-up a dedicated Grassroot Innovation Fund (GIF).** Grassroot Innovators with working prototypes need small funds to develop a few numbers of the prototypes, and

some working capital to supply the first few orders. Grassroot Innovation Fund has been dedicated to accomplishing that. The fund would be divided into 3 components: a) for small grants directly to innovators b) “entrepreneur + innovator” model c) small working capital loans.

Funding support model under Grassroot Innovation Fund

Direct Funding to the Grassroot Innovators: Under this model, small grants will be provided to grassroot innovators. A large number of small grants shall be distributed. The aim under this model would be to encourage grassroot innovators to invest in prototype development, and make first few sales of their products.

Funding seasoned entrepreneurs to collaborate with Grassroot Innovators: A recurring problem identified with Grassroot Innovators has been the skill gap, the lack of financial understanding of the market, and the non-realization of the potential or the horizon for the Innovation. To increase the success rate of Grassroot Innovators, we would provide grants to seasoned entrepreneurs who could then choose the Grassroot Innovators that they want to collaborate with. The collaboration would bring the best entrepreneurial brain to try their hands in making the Grassroot Innovations reach its potential. The financial liability will be with the entrepreneurs and the terms of engagement would be between the innovator and the entrepreneur with the governing mechanism having complete visibility on the terms of the engagement.

Small working capital loans: To provide large numbers of untied small working capital loans to Grassroot innovators looking to create few products for the purpose of selling it to market.

- b. Government shall step in to reduce the burden of operation cost (internet, skill manpower training, software, patenting) faced by Grassroot Innovators while scaling-up on a reimbursement basis, up to 50% or ₹2 lakh yearly whichever is lower for a period of 5 years.
- c. Dedicated Scale-up fund to help grassroot enterprises mature into MSMEs. This fund would be in the form of working capital loans. Once a grassroot innovation has been market validated after few sales, few potential innovations would look to scale-up aggressively to capture a larger market share in the state and beyond. Thus, we aim to deploy Dedicated Scale-up Fund to provide easy working capital loans to such innovators.

Market Access Support

- a. District Procurement Fund for procurement of Grassroot Innovation Products by District Administration and the state government. This fund is aimed at procuring relevant grassroot innovations from the grassroot innovators by the district administration or the state government. We aim to have a nodal fund for which district collectors can apply to procure local innovations relevant to their districts. Various line departments of the state government can also apply for this fund if their aim is to procure grassroot innovations for deployment at the state level.

Infrastructure Support

- a. Setting up and operationalisation of Mini T-Works across Telangana. These Mini T Works will be in line with the Vision and Mission of T Works, Hyderabad. These Mini T Works will provide the necessary infrastructure to grassroots innovators, makers to build hardware prototypes, and provide product mentorship, necessary hardware skills. In the value-chain of Grassroot Innovation Ecosystem, once the innovators have been scouted, they need support with the prototype development. These prototyping centres need to be locally relevant and geographically feasible centres to cover the entire geography of Telangana.
- b. A dedicated space will be allotted in the Kakatiya Mega Textile Park at Warangal to house grassroots innovators coming in the field of textiles. The park will actively house the rural innovators of Telangana of the textile sector, and they would get continued support in the park.
- c. Dedicated spaces for the Grassroot Innovators will be allotted in various MSE Parks which are upcoming in the state of Telangana. With large number of MSE Parks, the grassroots innovators would have the option of choice, and can choose to be in a competitive and feasible space.

Ecosystem Creation Support

- a. The Government of Telangana will promote creation of Farmer Producer Organization (FPO) like organizations for Grassroot Innovators with an aim to create an empowered and resilient group of innovators who could use the combined force of cooperation to take a global and industrial scale outlook towards their innovation.
- b. TSIC shall create an engagement model in consultation with the stakeholders to create a regular platform for interaction among Grassroot Innovators and participation from experts.
- c. MSMEs generated from grassroots innovations will be handheld to create a robust ecosystem for themselves where they can have an export outlook, maturing from grassroots to MSME to export focussed MSMEs.

4. Regulating Grassroot Innovations

- a. A dedicated IP guideline to promote patenting of Grassroot Innovation from the state of Telangana.
- b. Creation of an ethical charter for the sharing, credit system, acknowledgement of Grassroot Innovations to be developed by the state.
- c. Creating awareness about the protection of the legitimate rights of the Grassroot Innovators during the process of tech transfer, patenting, selling of enterprise to be taken.
- d. Periodic evaluation of all the types of exclusion: Spatial, sectoral, skills, social (marginalized communities), seasonal or temporal, structural governance issues. Active interventions will be planned at regular intervals from the outcomes of the periodic evaluations of various types of exclusions to see if grassroots innovations could assuage them.
