

Grand Challenges - Karnataka

Channelizing Innovations for Social Impact

A KBITS-IKP Program

CALL 5, August 30 to October 15, 2017

Introduction

Over the past few years, the startup ecosystem in Karnataka, especially Bengaluru, has blossomed into a force to reckon with. Bengaluru is among the top global cities in terms of attracting talent and capital. This startup ecosystem offers great potential for innovation to solve local issues not only around Bengaluru, but also for Karnataka as a whole.

Grand Challenges - Karnataka is an initiative of the Government of Karnataka, under the newly launched Start-up Policy of the government, to scout for new technologies or innovations that can offer solutions to some of the longstanding issues pertaining to the state of Karnataka. Grand Challenges, Karnataka aims to channelize innovations for social impact, and in the process, support the establishment and growth of start-ups.

Grand Challenges around five well defined priority questions are planned in the first phase. Phase I was launched on August 8, 2016 with the announcement of Call 1 around real-time monitoring of quality of sewage water. The Call 2 was launched on October 1, 2016 catering to the needs of the agriculture sector where the innovators were required to come up with a technology solution for early detection of crop diseases and pest infestation. The Call 3 was launched on Nov 28, 2016 seeking technologies to ensure effective delivery of primary health services through meaningful, transparent and democratic engagement of communities. The Call 4 was launched on April 19, 2017 and sought innovative interventions aimed at tackling Undernutrition and Calorie-Protein-Micronutrient Deficiencies in children, adolescents and adults.

We shortlisted three start-ups for the first phase grant of Rs. 10 lakhs for a period of 6 months under Call 1 and 10 more innovators under Call 2 and Call 3. The selection process for the Call 4 is underway.

The program is supported by the Karnataka Biotechnology and Information Technology Services (KBITS) as the funding agency and IKP Knowledge Park (IKP) as the implementation partner.

Grand Challenge - 5

Bengaluru is the third largest city in India by population and the fifth largest urban conglomerate according to 2011 census and is one of the fastest growing cities in Asia. The population growth rate in the city is one of the highest and it increased from 53 lakhs in 2001 to 87 lakhs in 2011. The vehicle population growth rate has been even higher than the population growth rate. There

is an alarming shift towards private vehicles in Bengaluru with 5 lakh vehicles being added every year leading to the number of 'non-transport' vehicles such as two wheelers and cars in the city crossing 60 lakhs. For such a high load of vehicles, Bengaluru has a road density of 8.2 km per square km, the lowest among the big Indian cities. Some studies which were conducted on traffic speeds in various parts of the cities have found that the average speed on the Outer Ring Road was as low as 4.45 km/hour and 9 to 10 km/hour around the Vidhana Soudha.

Grand Challenges Call 5 focuses on Traffic Congestion in Bengaluru. Innovative projects that have the potential for adaptation will be identified through two phases, the Testing Phase and the Scale-up Phase. The selected proposals will be funded, monitored and nurtured over an eighteen-month period (6 months for the Testing Phase and 12 months for the Scale-up Phase) through this program.

Challenge Statement

According to the IBM Commuter pain index which comprises of variables such as commuting time, time stuck in traffic and so on; Bengaluru was ranked sixth in the world in 2011. Various studies have pegged the economic loss of Bengaluru's traffic gridlock between one to five billion dollars. Many steps have been taken by the government to improve the infrastructure to ease out the traffic situation in Bengaluru.

Big ticket investments in public transport infrastructure like Namma Metro will help in reducing the number of vehicles on the road. These steps have shown improvement in some areas in the city but are inadequate considering the rapid growth in the city's population. There is still scope for improvement by focusing on innovations which can encourage usage of public transport and reduction in private vehicle use. Therefore, it is imperative that innovative solutions enabling reduction at different levels are encouraged to reduce the traffic logjam.

Solutions making non-car modes safer and more attractive reduce car traffic and free up parking leading to availability of roads for public transport. We can reduce the traffic congestion further by creating attractive alternatives to single-occupancy travel and to the use of cars for shorter trips by promoting car-share, bicycling, walking and use of public transport as the foundation on top of which other solutions are based.

Many residents of the city end up using personal cars (single-occupancy) because of lack of

- Last mile connectivity
- Real-time information around public transport
- Flexibility in car-pooling
- Shuttle services connecting unserviceable areas
- Ease of transition from one mode of transport to another

Therefore, efforts are needed to popularize various modes of transport which will serve as alternatives to single-occupancy travel and to the use of cars for shorter trips. As part of the Karnataka Grand Challenges initiative, KBITS aims to propel innovative transport solutions especially in the areas of efficient modes of transport. The solution could include innovative processes, methods, tools, devices, techniques, procedures and service delivery models for popularization of low cost and highly efficient modes of transport.

The challenge therefore seeks **innovative interventions aimed at reducing the Traffic Congestion in Bengaluru City, for prototyping, testing and scaling up in Bengaluru.**

The innovator should take care of the following aspects in each phase.

Phase 1:

Some examples of possible technology interventions which the innovator could target are as follows:

- 1. Last mile connectivity**
- 2. Ease of transition from one mode of transport to the other**
- 3. Efficient parking solutions in public spaces**
- 4. Driving simulators for better training**
- 5. Enforcement of best practice such as adherence to lane discipline through video/image processing**
- 6. Electronic Message Sign giving real-time information about traffic congestions, incidents, roadwork**
- 7. Real-time information regarding public transport**
- 8. Relaying real-time information to traffic police personnel for incident management**

Please note: The above list is not an exhaustive list and innovations outside will also be considered based on the selection criteria. The prototype of the proposed solution should be executed within the timeframe and budget allocated for Phase 1.

Phase 2:

The innovation will be selected to Phase 2, based on

- 1. Define and demonstrate criteria of uptake**
- 2. Uptake of the product/solution**
- 3. User validation through feedback**
- 4. Stability and scalability of the solution through independent revenue model and no government support**

The support provided under the Call will be catalytic to enable the applicant to test and scale up select innovation and/or innovative solutions in the target locations across Karnataka.

Funding

The funding will happen in two stages.

Phase I: In the first stage, if selected, up to **five** innovators will be eligible for testing the proposed solution for funding of up to INR Rs. 10 lakhs for a period of six months. In Phase I, the innovators must test their innovation for acceptability, stability and usage. The period of the pilot and dissemination of the results is part of the six months allocated to Phase I.

Phase II: After six months, the selected candidates in Phase I will undergo one more round of selection out of which **one** of them will be selected for a further funding of up to INR 50 lakhs for a period of 12 months to scale up.

The award agreement will be structured as a **grant-in-aid.**

The program will not only provide funds but also work with the awardees for the duration of their project and beyond to ensure project implementation and bring to the awardees the deep collective experience of mentors, resources and network. Through this KBITS-supported program, IKP, and other partners will help the winning candidates with access to networks and marketing channels to commercialize their innovations.

The support provided under the Call will be catalytic to enable the applicant to prototype and pilot select innovation and/or innovative solutions in the target areas.

Eligibility, Selection Criteria and Application Process

Who can apply?

This Call for Proposals is open to anyone from any discipline in India - from individuals, researchers and faculty in colleges/ universities/government laboratories/ institutions to start-ups, and not for profit organizations.

On selection for Phase II, the awardee is expected to incorporate a start-up registered in the state of Karnataka and defined as a Start-up as per the Start-up Policy, 2015-2020, Govt. of Karnataka.

The Call will be open for applying from August 30, 2017 until 11:59 PM, October 15, 2017 (IST) on the program website www.call5.impact-karnataka.org.

Selection Criteria:

Proposals will be selected based on the following criteria:

- 1. Alignment with the mandate of the Call** – Is the proposed solution fulfilling the parameters listed above.
- 2. Potential impact** – What is the envisaged scale of impact of your innovative solution?
- 3. Feasibility** – Is the proposed solution technologically viable?
- 4. Sustainability** – Has the applicant thought about a business model surrounding the innovation?
- 5. Accessibility** – How easy is for the end consumer to access the solution?
- 6. Novelty** – What is the novel innovation used by the applicant?
- 7. Execution capacity** – How good is the team?

Application Process:

Applicants will register on the program website, fill an online form at www.call5.impact-karnataka.org, and submit a ten-page description of the innovative solution (including diagrams, figures and references) - the working concept, proposal for testing and adaptation, a short-term strategy (for the award duration) and long term direction.

Only online submissions will be accepted. Please do not email us any application.

The online form on the program website www.call5.impact-karnataka.org consists of the following.

Applicant Information

Name:

Email:

Address:

City:

State:

Country:

Phone:

Organization Name:

Specialization:

Website:

Project Title:

You will be able to answer the following questions on the website through text boxes. Do not include answers to these questions in your attachments.

1. Please share a brief description of your proposed solution and explain why is it unique. (1000 characters)
2. Describe any prior work done in this area. (1000 characters)
3. Where and how do you plan to test your solution for Phase I using this funding? (1000 characters)
4. What is the estimated per user cost on a daily or monthly basis? (1000 characters)
5. What is the expected number of users where the solution will become sustainable? How long will it take to achieve the target? (1000 characters)
6. How are you uniquely qualified to implement the proposal? (Mention educational background, work experience, awards (if any) and any other relevant information) (1000 characters)
7. Provide details of your team and resources available to you to pursue this challenge (1000 characters)?

You will be able to upload a project related document. Please explain in sufficient detail the following aspects of innovative solution in the ten-page document (please do not exceed 10 pages, typed in Times New Roman font size 12pt, and restrict your attachment size to 10 Mb, otherwise your application will be disqualified).

1. Proposed solution
2. Prior work in related area (if any, with data)
3. Project plan which includes development and testing plan, and deployment (Phase I – 6 months & Phase II – 12 months)

4. Budget plan for the project and other sources of funding and final costing of the system
5. Human resources involved and potential/identified collaborators in the participating country
6. Business plan (long term)

Team Details

Up to 3 resumes of the team members can be uploaded. If there are more than 3 team members, the resumes can be combined into a single file and uploaded.

Submission

Please submit your application on www.call5.impact-karnataka.org. Only online applications will be accepted.

Terms and Conditions

Awardees will be bound by the terms and conditions of this initiative. In awarding grants to innovators in furtherance of the objectives stated above, the Parties will ensure that:

- (a) The knowledge and information arising out of or in connection with such awards be promptly and broadly disseminated.
- (b) The products, services, processes, technologies, materials, software, data or other innovations arising out of or in connection with such awards be made available and accessible at an affordable price to people most in need within India and the developing world.
- (c) Karnataka government will have a royalty free access to the innovation for manufacturing and use within the state of Karnataka.
- (d) The recipient agrees to submit, periodic reports to IKP and KBITS and along with details of the financial utilization of the grant.
- (e) KBITS reserves the right to reject all or any of the proposals without assigning any reason whatsoever.

For clarifications please email us at impact-karnataka@ikpknowledgepark.com or Call us at +91 81050 79820.