

Kerala Start up Mission

Executive Summary

After focusing and building tourism in the State, Kerala has now single-mindedly focused on one thing: building a startup ecosystem. For years now, there has been migration of people from the State to different parts of the world. Believing that this has resulted in a significant 'brain drain' which, in turn, has affected the knowledge economy of Kerala, the government of Kerala has created the Kerala Startup Policy. It aims to build an entrepreneurial ecosystem in the State.

The Government of Kerala has identified Kerala Startup Mission as the nodal agency (the startup Hub) for these activities. Kerala Startup Mission which started as Technopark Business Incubation Center in Technopark in 2002, T-TBI received the grant from Dept. of Science and Technology in the year 2006 and was recognized as Technopark Technology Business Incubator. Since 2006 T-TBI has been actively promoting the startup and innovation activities in Kerala through various initiatives. In the year 2012 Technopark TBI was recognized as the nodal incubator in the state and in the year 2015 Technopark Technology Business Incubator was rebranded as Kerala Startup Mission. Throughout these years the efforts of Kerala Startup Mission and other technology incubators in the State has resulted in the growth of more than 500 startups. Presently, Kerala houses more than 300 startups.

Unlike any other state in the nation The Kerala Technology Startup Policy clearly brings out the ideal way of creating a startup ecosystem.

Government of Kerala has observed the new spur of youth for startups and has identified youth entrepreneurship development as key focus area for state and has framed the Youth Entrepreneurship Development Programme (YEDP) as outlined in the Startup Policy. The programme caters in developing technology led innovation and entrepreneurship among schools, college students and aspiring entrepreneurs. The programme includes training programme for startup CEOs and also covers international exchange programmes. All the schemes are made available to all the DST approved incubators in the state through the incubation network created by Kerala Startup Mission.

In order to strengthen the roots of the YEDP, KSUM has made strong partnership and linkages with Center for Bits and Atoms, Massachusetts Institute of Technology, USA (setting up fablabs & mini fablabs), Kerala Technological University (For bootcamp activities & mini fablabs), Cochin University of Science & Technology (CUSAT) (TBI support) and IT@School (For Raspberry Pi Programme and Electronics@School). Kerala Startup Mission has successfully implemented the Innovation Entrepreneurship Development Center and has established Bootcamps in 180 colleges in the state, including engineering colleges which are affiliated to Kerala Technological University, polytechnic colleges, arts science and Bschools .

The startup ecosystem is also linked to schools through the Raspberry Pi Distribution Programme and Electronics @ School implemented by Kerala Startup Mission with the support of IT@School. Under this scheme KSUM was able to reach out to more than 30000 students belonging to more than 2500 schools.

Kerala Startup Mission is strongly backed by corporates including Federal bank, Group of Technology Companies (GTech), GE Oil & Gas, Intel Corporation and Vikram Sarabhai Space Center.

Government of Kerala has setup a dedicated space for bringing up multiple sector incubators under one umbrella named as Kerala Technology Innovation Zone (in 13.2 acre land) in Kalamassery, Cochin which is entrusted with Kerala Startup Mission. Presently

KTIZ comprises of BioNest (Biotech incubator), Startup Village, Electronics Incubator and extended incubation facility of Kerala Startup Mission.

In order to overview this strong network of aspiring entrepreneurs, startups , mentors and boot camps Kerala Startup Mission has created an online platform as the single gateway to the Kerala Ecosystem (www.startupmission.kerala.gov.in).

Infrastructure facilities in 3 nodes of the state.

1. Trivandrum – 15000 sqft , KEY Accelerator – 2000 sqft
2. Ernakulum- Kerala Technology Innovation Zone ,13.2 acre campus exclusively for startups
3. Calicut – 5000sqft, Key Accelerator 2500 sqft.

Levels of Entrepreneurship Development in the state.

School – College – Startups

School level Initiative.

1. **Raspberry Pi Programme “Learn to Code Programme (Target Audience – 8th std students)**
 - **Scheme** - “Learn to Code” Raspberry Pi Programme
 - **Target Audience** -8th STD Students at the age of 12
 - **Quantity** – 10000 Raspberry Pi Kits distributed. (next 10000 kits order placed for distribution)
 - **Coding language** – Python
 - **Schools participated** – 2500
 - **Students trained directly** – 30000
 - **Students trained indirectly** – 100000
 - **Faculties trained** – 175
 - **Projects developed** – 100

“(Raspberry Pi is an electronic device which more of like function as a mini computer. <https://www.raspberrypi.org/> wherein students can code and create projects which will enthuse them. The coding will be done in Python Language. Start up Mission have distributed around 10000 Raspberry Pi to 2500 government schools and trained 175 faculties and 30000 students directly. Apart from this around 100000 students are given training indirectly.

This initiative have created a momentum among the school children to test and learn and adopt new technology which has been familiarised by the learn to code programme. Kerala Start up Mission after the initial phase of distribution have conducted a project competition of which 100 projects were submitted by the students across the state of which prize distribution worth Rs 3 Lakh were distributed to the students. This created in depth interest to the students to have a culture of DIY (Do it yourself)

Following the success Kerala Start up Mission have initiated the next phase distribution of Raspi which covers another 10000 kits which will cover approximately another 40000 students. As it is a cyclic process these kits have trained around students up to 1 lakh an year.

2. **Electronic Kits distribution (Target Audience – 9th and 10th std Students)**
 - Scheme – Electronics at School
 - Target Audience – School students from 9th and 10th classes
 - Schools participated – 2500
 - Students trained – 25000

- Faculties trained – 175
- Electronic Kit Components – Sensors, plug and play boards etc.

Kerala Start up mission have distributed 4000 Electronic Kits to students from 8-10 wherein the students can plug and play with these kits, which inspires the students to have more learning in the technology part. These electronic kits are small devices like sensors, plug and play devices etc. These kits are given to the students and they find them very interesting in tinkering as well as coming up with interesting projects.

3. Intel Tech Challenge (Target Audience –12th std)

- Students who have come through Learn to code programme and Electronics at school programme)
- Students participated- 80

KSUM have associated with Intel to do the tech challenge across the school and students from Kerala Have got selection in the national contests and have won the projects.

College Level Initiatives

1. Innovation Entrepreneurship Development Centre (IEDC) (Target Audience – Engineering,polytechnic,arts and science colleges)

- **Scheme** – Innovation Entrepreneurship Development Centre
- **Target Audience** – College students from the age of 18.
- **Programmes Conducted-** **Startupi3, FABXL, Ideathons, Hackathons, Makerthons, Entrepreneurship development awareness programmes etc.**
- **Colleges having IEDC in the state- 180**
- **Students Participated in the events - 50000**
- **Start-ups Incubated - 200**
- **Nodal officers for running IEDC in the colleges– 180**
- **Fund distributed for the IEDC activities – 4 crore.**
- **Projects developed – 100**

These IEDC are small incubators located within the colleges whereby the students having an innovative idea along with their studies can pursue entrepreneurship. Start up Mission have given funds for each IEDC an amount of Rs 2 Lakh. Wherein the students can do entrepreneurial activities which include ideathons, hackathons, business modelling sessions, meet the mentor sessions and so on. To enthuse the youngsters ksum also conduct ideathon wherein the best there ideas will be given cash prizes of which the students can have their initial financial support for their startup journey. Adopted Student Entrepreneurship Policy

Selected Nodal Officer & Students for running the IEDC at respective colleges Developed as an incubator within the college, which help the students to realise their ideas into enterprises along with their carrier Developed 200 start-ups form IEDC and pooled out thousands of ideas.

Startups Level Support

1. MIT Fab Labs (Developing Maker Culture)

A Fabrication Laboratory (FabLab) is a technical prototyping platform for innovation and invention which aims at providing stimulus for local entrepreneurship and serves as a platform for learning and innovation. It is a small scale workshop offering digital fabrication which empowers the users to create smart devices for themselves which can be tailored to local or personal needs. The FabLab also becomes a medium for

connecting to a global community of learners, educators, technologists, researchers and innovators – essentially becoming a self-sustaining global knowledge sharing network.

The FABLAB programme involves setting up state-of-the-art Fabrication laboratories in the state to encourage startups in printed electronics and other such fields. KSM has associated with Centre for Bits and Atoms, MIT Fab Lab Foundation, USA for this. The fablabs being established in Trivandrum and Ernakulam are identical and mainly comprises of the following inventories.

1. Laser Cutter
2. Large Scale CNC Mill: Shopbot
3. 3D printers: Dimension SST 3D printer and Ultimaker 2
4. High Resolution Mini NC Mill: Modela
5. Vinyl Plotter
6. Sand Blaster
7. Electronic Components and Tools
8. Molding and Casting
9. Electronics Test Equipments
10. Computers

<http://fablabkerala.in/>

Kerala Startup Mission have associated with MIT for implementing the same. Now KSUM has trained 16 fab gurus who will be implementing the Minifablabs which are proposed in 20 engineering colleges across the state. A high technology shift to digital fabrication is being moulded by the implementation of mini fablabs. India's biggest fablabs by MIT is located in Trivandrum and Cochin. These mini fablabs will become a sub lab for students to play around to bring in their ideas into prototype along with their studies.

2. International Entrepreneurial Exchange & Training Programme

The International Entrepreneurship Exchange Programme is a combination of programmes aimed at giving the students and young entrepreneurs of the state maximum exposure to the international start up ecosystems and also to foster cooperation between start up ecosystems across the world. 30 startups have been given the opportunity to travel abroad. Spain, USA, China, UAE.

3. Patent Support Scheme

There were 8 startups who get support from th schemes, A reimbursement of 2 lakh for Indian patent and 10 lakh for international patent is giving to the startups. The students as well as startups benefit from the programme this enable the ecosystem to get more patented products and gives a boost in the IP creation.

4. Start up Box Campaign

The startups usually need high end systems for testing their software products Kerala Start up Mission have distributed the Start up Boxes comprising of Apple Mac book, Android devises, Testing Equipment's etc.

5. Technology Innovation Fellowship Programmes

Technology Innovation Fellowship Programmes is a volunteer technology evangelisation programme, where a technology evangelist organises maker workshops, Ideathons, hackathons or other technology evangelising workshops for startups and aspiring entrepreneurs. The fellows will be acting as a nucleus for a selected geographical location, where he can associate with neighbouring Startup Boot Camps, R & D Centres, TBI's and tie up with technology partners like Apple, Microsoft, Mozilla, Google, Intel, MIT FABLABs to run technical workshops as well as entrepreneurship development programmes. There are 25 fellows working for kerala startup mission.

<https://startupmission.kerala.gov.in/fellows>

These fellows are either engineering college pass outs or professionals who take a break and work with the start up ecosystem. There are around 25 fellows on boarded with Kerala Startup Mission. Along with the Fellowship they are free to pursue their dreams and take an additional support of Kerala Startup Mission. Giving back to the community is also an interesting part of the fellowship programme.

6. Management Development Programme at IIM Calicut

The objective of the MDP is to equip the participants about notches behind the transformation of a startup enterprise into a genuine scalable business model. Further, this programme also strive towards addressing some of competency gaps that startup entrepreneurs face during this transformation. The program fees was paid by KSUM and it covered program reading material, food and accommodation, and certificate of participation.60 startups have participated in the same.

- Connecting all the incubators in the state. There are 15 Incubators in the state.
- Startups Incubated/graduated at Kerala Startup Mission- 200
- Startups Incubated currently – 85
- Community Partners – 14

Funding Support

The private funding as well as government funding for the startups in the year 2015-2016 is **Rs 263 crore**.

The funding scenario in Kerala startups has been increasing steadily wherein the private funding into the startups has increased gradually. The year 2015 shown drastic change in the funding compared to 2014. When it was \$9.05 Million institutional funding came in the year 2014 the same increased to \$19.65 Million in the year 2015. In the year 2016 there was steady increase in the fund flow which came to \$15.72 Million from the first 6 months and more funds are pipelined in the year 2016. The change in institutional funding is because of the support rendered by Government in ways of seed funding and equity base funding which helped the startups to go ahead. The flow of funds came from government agencies are 277 crore for the last 3 years to the startups. The funding by government agencies for the coming years are systematically planned. The government can also participate in SEBI approved early stage Venture capital Funds, upto 25% as limited partner. The venture capital fund so created shall invest primarily in startups located in Kerala, basing on its own criteria. More institutional funding's are expected in the coming years. Government Agencies like KSIDC,KFC plays a vital role in funding the startups in the state through their various schemes.