

# Kerala

*Startup Ecosystem Report*

## 2018



**KERALA**  
FOSTERING  
ENTREPRENEURSHIP

**Inc42**







**Shri Pinarayi Vijayan**  
Honourable Chief Minister of Kerala

## MESSAGE FROM

# The Chief Minister

I am extremely delighted that the state of Kerala is at the forefront of an eminent startup ecosystem. Kerala is the first State in the country to formulate a Startup policy for the development of Technology Startups way back in 2014 — today, it has over 1,500 startups which are developing innovative products and services leveraging on Industry 4.0.

Many aspirant entrepreneurs have exceptional startup ideas with the potential to constructively disrupt any established industry structure. However, to convert these brilliant ideas into products with exponential growth potential, continuous nurturing and support is a prerequisite. Through a host of measures, right from colleges to accelerator spaces, the state provides multiple resources to foster disruptive technology ideas into sustainable business ventures. This ecosystem report will be a guide to all stakeholders in the startup ecosystem to avail of the support extended by the state government to any startups coming to Kerala.

I invite all technology startups across the country to be part of the Vibrant Kerala Startup Ecosystem and get the best support to progress as world-class ventures.

I wish you all a great success.



## Shri. M Sivasankaran IAS

Secretary, Electronics and  
Information Technology

# Foreword.

There is a fierce competition among the countries and regions across the world to take up the leadership role in the wake of Fourth Industrial Revolution. Thanks to democratisation of technology, modern day innovation is not limited to a few pockets but is spreading widely across the globe. As against the previous three industrial revolutions, which were led predominantly by large corporations, agile startups and their conglomerates are reshaping the evolution of the new industrial ecosystem. As conventional principles of erstwhile industrial economy are getting redefined, the startups which strive to develop exponential growth solutions through deep research and applications of cutting edge technology will be the key to success.

Any ecosystem that supports the development of startups through multiple interventions, ranging from infrastructure to business connects, will ensure that opportunities of Industry 4.0 are effectively exploited, thereby ensuring economic growth and prosperity. Keeping this in mind, Kerala, the most developed state in India as per Human Development Index, had taken up creation of startup ecosystem as a priority area in its growth strategy.

Through the establishment of a dedicated agency — Kerala Startup Mission, which is mandated to implement the first ever startup policy in the country by the State Government — Kerala strives to create a vibrant ecosystem of sustainable startups that work on exponential technologies, developing solutions that address the problems of the society at large. It is heartening to note that through multiple interventions, KSUM could curate over 1,500 startups engaged in tech-based products and services development, many of which have been recognised globally for their innovation and growth potential. This ecosystem report summarises the nuances of this new entrepreneurial ecosystem in the state and its growth over the last few years. The report provides a bird's-eye view of various stakeholders, their interplay, and policy interventions that shape the Kerala startup ecosystem.

It might be appropriate here to recollect the journey of Israel in its emergence today as one of the leading startup ecosystems across the world. Israel's model, which followed a ground-up talent-development approach that encourages and fosters local talent, is in direct contrast with the Silicon Valley approach which relies heavily on attracting startups from other geographies. Kerala, known traditionally for the local populace's high level of education, has drawn parallels from this approach and has followed a similar model — of nurturing local talent in an ecosystem that encourages risk taking and entrepreneurship.

In an effort to identify and support technology startups across the state, the government, over the past decade has designed several policies and schemes — creation of innovation and entrepreneurship development centers in over 226 colleges, establishment of high-tech infrastructure through Fab Labs, incubation spaces and accelerators, while ensuring early business connect by providing preferential purchase arrangements with government etc, are some of the interventions that supported this “ground-up model of entrepreneurial ecosystem development”. Over the past six months, Kerala Startup Mission has funded over 100 startups, with more than 50% of the funding awarded to startups in the ‘steady’ revenue stages at the time of investment.

One of our core philosophies is focusing on revenue generation over attracting external investments, and this is done by encouraging startups in our network to address the problems that have blue ocean opportunity. Innovative solutions that address issues of energy, water, environment, health etc, have huge potential. In a very short period of time, many bootstrapped startups from the ecosystem are already making deeper inroads in the market. However, external investments do play a key role in scaling up ventures quicker; and for this precise reason, the ‘Fund of Funds’ being operated by the Kerala Startup Mission has invested (or some other word) in alternative investment funds (AIFs). It has been very encouraging to note that these AIFs were able to invest this amount in homegrown startups from Kerala in less than a year’s time. We are currently in the process of identifying more such AIFs that can assist in producing many more success stories from across the state.

Kerala has traditionally followed a policy of uniform development across the state and this is reflected in the state’s innovation ecosystem as well. Under the banner of Kerala Startup Mission and several of its sector-specific partner organisations, there are presently 1,500+ registered startups, 4 Lakh + square feet of incubation space, 30 + incubators and 200+ innovation cells — all of which are evenly distributed across various districts and cities such as Kochi, Trivandrum and Calicut. Many of these facilities also house advanced labs that focus on sectors such as hardware, biotechnology, electronics and advanced computing, to name a few.

This growing innovation ecosystem has begun attracting seasoned entrepreneurs as well — many of whom have now migrated back to Kerala to set up their startup. This reverse migration has been one of the biggest indicators of the fact that our efforts to promote technical entrepreneurship for socio-economic development of the state through a ground-up approach has begun to yield positive results.

As a state, we will now continue to build on our success and focus on our mission to make a sizable and meaningful contribution to India’s efforts to become a force to be reckoned with, come the fourth industrial revolution. We welcome all partners who can help us on our way to achieve this goal and usher in a new era of innovation in God’s own country.



**MSA Kumar**  
President, TiE Kerala

## Message From TiE Kerala.

The Indus Entrepreneurs (TiE) was founded in 1992 in Silicon Valley by a group of successful entrepreneurs, corporate executives, and senior professionals with roots in the Indus region. The mission of TiE is to foster entrepreneurship through the five pillars of mentoring, networking, education, funding and incubation. With a focus of giving back to the community, TiE's focus is on generating and nurturing the next generation of entrepreneurs. It is our firm conviction that by assisting entrepreneurs, we believe we can empower individuals and create wealth in communities. Today, TiE has 61 chapters from across the world with 2,500+ charter members, 13,000 associate members supporting around 10,000 startups from around the world.

TiE is known for mentoring and networking to help entrepreneurs in their startup growth cycle. Everyday, someone is mentored with the TiE ecosystem and guided towards the right path to achieve great heights. Besides creating wealth, the organisation also works to alleviate poverty and unemployment by fostering entrepreneurship worldwide.

TiE signature programs include: TiE Young Entrepreneurship (TYE), which fosters entrepreneurship and education to high school level students; TiE International Startup Competition (TISC), which aims to nurture college level students and young startups; TiE Women's Forum, which empowers women entrepreneurs throughout their networking, along with organising numerous large-scale conferences such as TiECon and TiE Global Summit.

TiE Kerala was established in 2003 with 10 charter Members as a member of the 61 strong chapters from across the world. Within a span of 15 years, the chapter grew to its present strength of 65 charter members and 700+ members who are CEOs of SMEs/professionals representing industries like IT & ITeS, hospitality/tourism, healthcare and wellness, food processing, agritech, financial services, pharmaceuticals, consultancy, automobiles, manufacturing, retail, human resource development, education, social entrepreneurship, women entrepreneurship, etc. Recipient of TiE Global's Best Chapter Award in 2018 TiE Kerala collaborates with other agencies with same Mission of "fostering entrepreneurship" like Kerala Industrial Development Corporation, Kerala Startup Mission (KSUM), various IT parks in the state, incubators and innovation cells right across Kerala state. We have been closely associated with KSUM in promoting the startup ecosystem in the state with many of its harter members offering voluntary mentoring and strategic support to nurture early-stage entrepreneurs.

We at TiE Kerala are happy to collaborate with KSUM and INC42 in bringing the "Kerala Startup Ecosystem Report 2018" and takes pride in releasing the report during our flagship event TiEcon Kerala 2018 at Kochi on 16/17 Nov.



**Dr. Saji Gopinath**  
CEO Kerala Startup Mission

## Preface.

Kerala, the southern state of India, is commonly referred to as 'God's own country' for its enchantingly beautiful emerald green sliver land, flanked by the Western Ghats on one side and the pristine Arabian Sea on the other, strewn with rivers, lagoons, backwaters and abundant vegetation in between.

Kerala leads the other Indian states in Human Development Index with many development parameters like literacy, e-literacy, healthcare, infant mortality, maternal mortality, birth rate, life expectancy and female literacy which is at par with developed nations. The state has a unique model of economic development that depends largely on agriculture, tourism and SMEs. Kerala has a large share of non-resident Indians who have made their mark in many parts of the globe.

Being the first fully digital state in India, Kerala has a thriving technology ecosystem. Technopark, the largest IT workspace in India housing more than 65,000 professionals and other IT works spaces like Infopark, Cyberpark etc, provides a vibrant ecosystem of over 200,000 IT professionals.

Kerala is at the forefront of an eminent startup ecosystem. Being the first state in the country to formulate a policy for the development of the startup ecosystem way back in 2014, Kerala today has over 1,500 startups developing innovative products and services leveraging on Industry 4.0. To facilitate the accelerated development of startup ecosystem, the government of Kerala has established KSUM as the state nodal agency for the development of technology startups in Kerala. Led directly by the chief minister of Kerala, Pinarayi Vijayan, KSUM is on the mission to convert feasible technology ideas into viable business ventures by providing all-around handholding support to the entrepreneurs.

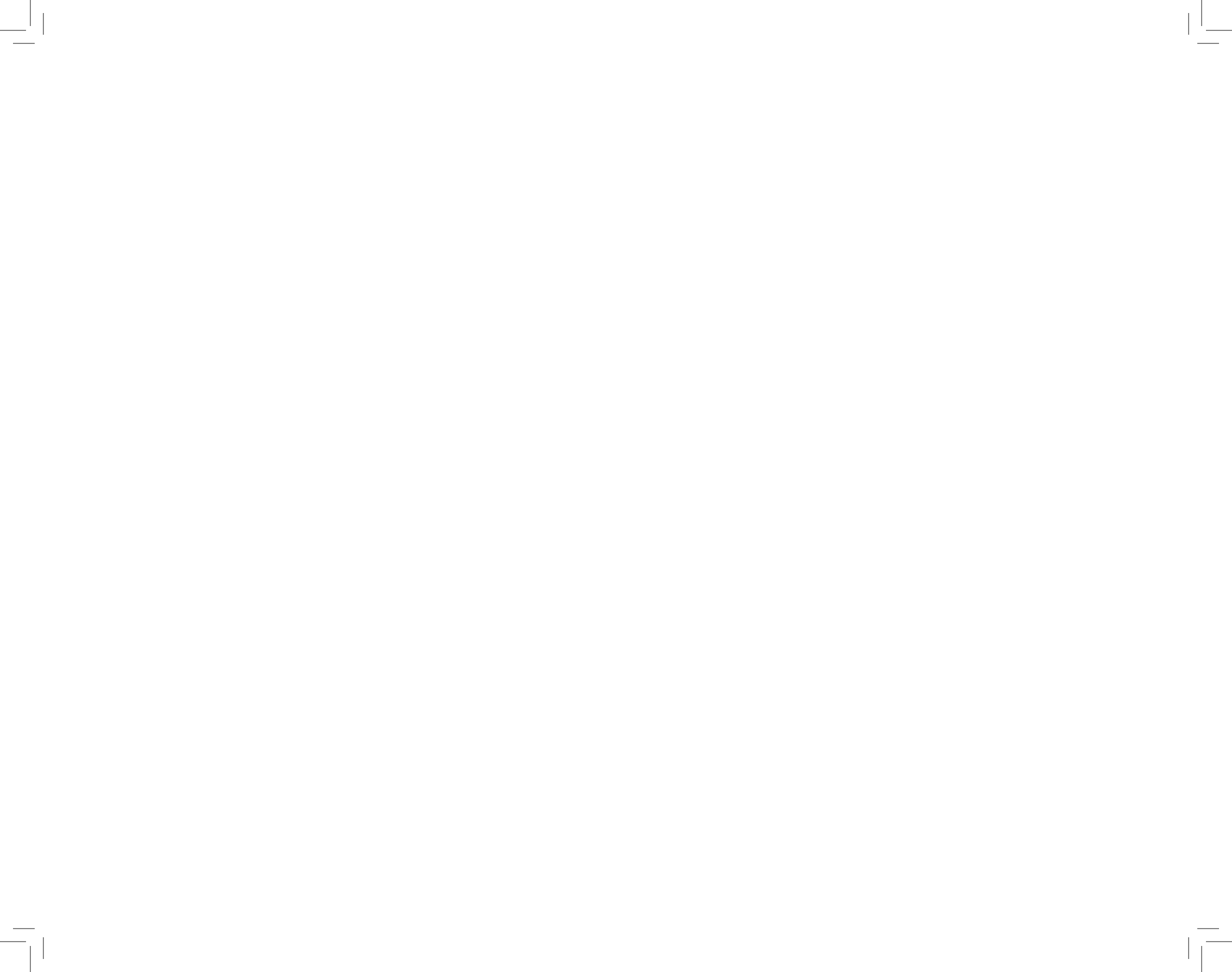
Many aspirant entrepreneurs have excellent startup ideas which have the potential to constructively disrupt any established industry structure. However, to convert these brilliant ideas into products with exponential growth potential, continuous nurturing and support is required. Through a host of measures, right from colleges to accelerator spaces, the state provides multiple resources to foster disruptive technology ideas into sustainable business ventures. We are confident that this edition will be an immense value addition to every stakeholder of the ecosystem.





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# SCOPE OF THE REPORT.

Startups in Kerala are developing solutions in newer and better ways as they experiment with futuristic technologies like never before. Going far beyond the conventional software and IT sectors, entrepreneurs from Kerala are being recognised in both national and international forums as they explore new horizons. In 2016, Kerala Startup Mission charted the growth of Kerala's startup ecosystem for the first time in its Kerala Vibrant Startup Ecosystem Report. Subsequently, startups have become an area of increased focus, as reflected in the new State IT Policy of 2017, and the Kerala Technology Startup Policy of 2014 has been expanded and implemented more comprehensively.

In order to gain a thorough understanding of where the startup ecosystem currently stands and how the way forward can be chalked out, it is essential to appraise the effectiveness of the different startup-related schemes, activities and summits that have been put forth so far by the government of Kerala through the Kerala Startup Mission. The report is to showcase the achievements and impact of KSUM on Kerala Startup Ecosystem through the expertise of *Inc42 Datalabs*.

**The key objectives of this study can be summarised as follows:**

- To **evaluate** the growth of the Kerala startup ecosystem
- To **analyse** the existing state policies/schemes and their effectiveness
- To **study** the existing incubators, incubator categories and the performances of incubated startups
- To **review** the role of the state as a facilitator in the organic growth of Kerala's startup ecosystem
- To **review** infrastructure, exemptions and incentives available to startups, including tax breaks, exemptions/facilitations, and the ability to participate in government tenders

As we approach the end of this decade, Kerala is witnessing a multitude of innovative and entrepreneurial advances that have equipped the startup ecosystem to make the next quantum leap. Apart from a unique model that connects academicians, industries, R&D institutes and startups in a manner unequalled by any other state, Kerala focuses on development from the grassroots by fostering a DIY (do-it-yourself) culture in schools and mentoring through mini-FAB Labs and IEDCs (Innovation and entrepreneurship development cell) in colleges — aimed at enabling young people to develop an entrepreneurial mindset at an early stage, and be ready to take on the challenges of building a new venture.

Kerala has always stood out as one of the most literate and skilled states in India. In no other states have schools, colleges, incubators, government institutes and startups been so efficiently interlinked. This has created an excellent climate for the growth of innovation, investment and entrepreneurship; and it is essential to showcase the advancements being made in order to understand how each stakeholder in the startup ecosystem is affected.

# OVERVIEW.

Kerala, dubbed as 'God's own country', has been counted among the ten natural paradises of the world by National Geographic Traveler for its stunning backwaters. In recent years, apart from its status as a forerunner in Indian ecotourism, Kerala is also coming into its own as a leading startup ecosystem. As the eighth largest economy in India, with a dominant service sector and excellent connectivity by road (4.62km per thousand population as compared to the national average of 2.59km), Kerala's infrastructure is ideal for the development of a thriving business ecosystem. Over the course of a few years, Kerala has built a model that identifies, nurtures and promotes innovation and talent within the state. With over 1,500 startups already in existence, more and more entrepreneurs are flocking to Kerala to start their next venture and make the most of the relatively low cost of operations, skilled manpower and focus on modern technology.

The first step towards fostering the startup ecosystem was taken in April 2006 with the establishment of Technopark Technology Business Incubator, which is approved by DST and has recently been taken over by Kerala Startup Mission. Since 2015, KSUM has been the nodal government agency to promote technology startups in the state. The startup village, an incubation centre based on a PPP model has been set up in Cochin by the Kerala government that works to foster an entrepreneurial spirit among the youth.

Bengaluru, Delhi and Mumbai — which have the top startup ecosystems in India — already have thriving business centres, and required little government effort to foster the growth of startups. By contrast, Kerala's growth as a startup hub has been spearheaded by the state government. From initiatives like Tinkering labs and Young Innovators' Programme in school, the KSUM runs innovation entrepreneurship development centres (IEDC) that have 10,000 aspiring entrepreneurs across 226 technical colleges. Through these, KSUM aims to nurture a new generation of young entrepreneurs who are fully equipped to tackle the challenges our world faces. Since 2015, the pipeline to create young entrepreneurs has been well established, and KSUM is now focusing on building matured startups. The number of startups coming up with viable and scalable products, as well as those working on problem-specific solutions and those tackling societal problems, have increased considerably.

# CURRENT STATISTICS.

The institutional funding which stood at \$9.5 Mn in 2014 was increased to \$19.6 Mn in the year 2015. Since 2016, there was a steady increase in the fund flow that came to \$15.72 Mn from the first six months. The change in institutional funding is because of the support rendered by government by ways of seed funding and equity funding that have encouraged and supported the startups to go ahead. As of 2017, there were 757 tech startups in Kerala with 51% working on software development.

Fast forward to the present day, in 2018 at the end of third quarter, over 1,500 startups are currently operating in Kerala and total funding observed in 2018 (till September) stands at \$38 Mn (disclosed).



**1,500**

Number of Startups In Kerala



**59**

Number of Funded Startups (2017-2018)



**50**

Number of Funding Deals (2017-2018)

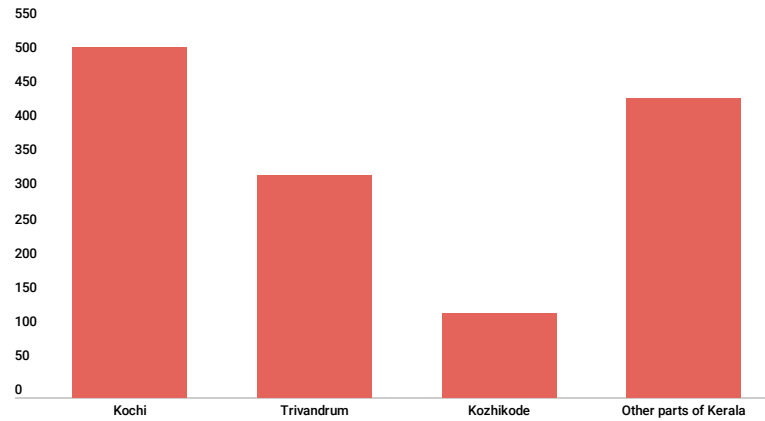


**\$38 Mn**

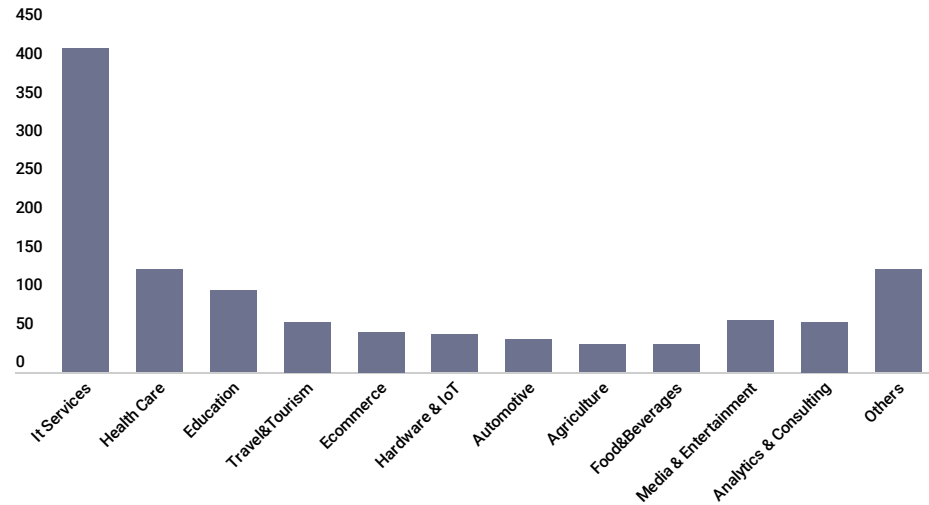
Total Amount of Funding received (2017-2018)

Kerala Startups in  
**FIGURES.**

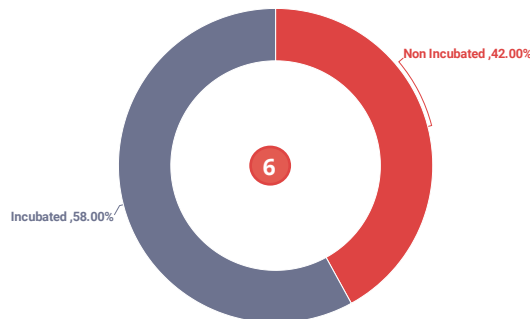
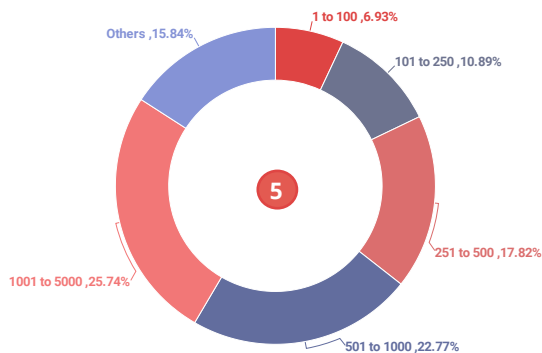
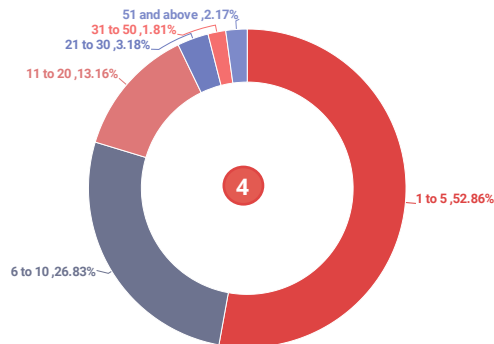
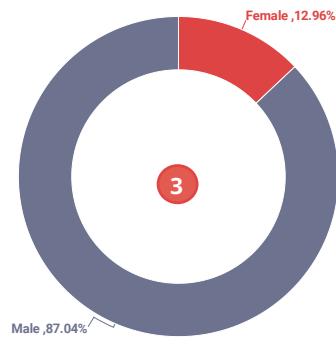
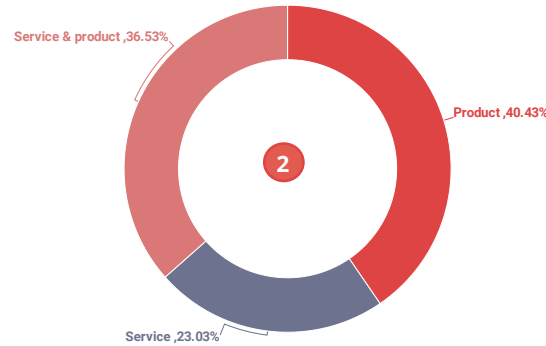
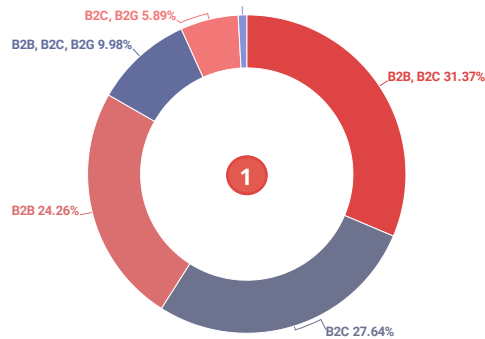
### STARTUP LANDSCAPE OF KERALA



- **37%** startups are based out of Kochi
- **23%** startups are located in Trivandrum



- **35%** startups are providing IT Services
- **11%** startups are working on healthtech
- **9%** startups are providing educational services



## SUMMARY:

- 1 Kerala has an even spread of B2B and B2C startups comprising 28% and 24% respectively
- 2 Majority of startups in Kerala are Product based comprising 40% of all startups
- 3 Of all the founders/co-founders that are working on their own startups in Kerala only 13% are women
- 4 Majority of startups (almost 53%) claim to have less than 5 employees. Only 2% have more than 51 employees
- 5 Surprisingly 26% startups claim to have 1,001-5,000 Sq ft of office area
- 6 Close to 60% are incubated

## Maker Spaces of Kerala

### **Fox Lab Makerspace**

*Location:* Perinthalmanna, Malappuram Dt, Kerala

Fox Lab Makerspace is a non-profit community-based collaborative workspace that brings together technology enthusiasts to work on projects while sharing ideas, knowledge and equipment, it is designed to enable budding entrepreneurs to develop new products and also helps those seeking to develop critical skills in science, technology, engineering, art and math (STEAM). Members are given access to the workspaces and equipment such as electronics workbenches, digital fabrication tools prototyping boards, and can also avail of mentorship and guidance from the experienced community leads. Meetups and workshops are held monthly to impart new skills and provide updates on the latest happening in technology and startups. Memberships are provided for school students, individuals, project groups and college groups, starting at INR 1,000 for three months. Industry professionals can also volunteer to deliver talks and share their expertise.

### **Kabani Tech**

*Location:* Shoranur, Palakkad District, Kerala

Kabani Tech is a makerspace that provides a complete set-up for developing a product through advanced systems and devices into the final version. With a highly qualified team whose members have extensive grassroot-level experience in electronics, mechanics, computers, engineering and robotics, entrepreneurs who join the workspace are given expert guidance at every stage. The facilities provided include a coding area, a prototyping area, a complete set of tools and machines, a library and a lecture hall. Full facilities are provided for testing products, and training courses are conducted regularly.

### **CITTIC, Cusat Makerspace**

*Location:* Cusat, Cochin

CITTIC has been established as a centre for Innovation, Technology Transfer and Industry Collaboration where stakeholders such as entrepreneurs, industry members, academic institutions and government bodies can collaborate. It aims to facilitate the transformation of new product ideas developed by small entrepreneurs into a reality. It focuses on obtaining funding for the new ventures, identifying models for collaboration between industry members and the university, providing business support for small or first-time entrepreneurs and providing a solid base on which technology entrepreneurs can rely and grow.



2,500 schools participated

30,000 students trained directly

1,00,000 students trained indirectly

## Future Sparks

### Learn to Code

*Target Audience - 8th Standard*

Until recently, technology and innovation were deemed as mere by products of the higher education system. The Government of Kerala recognised, however, that this stereotype had to be broken before an entrepreneurial mindset could be cultivated. With the aim of imparting technical knowledge and fostering a DIY spirit, therefore, the Government of Kerala implemented “Learn To Code”, or the Raspberry Pi programme.

The initiative, in collaboration with the UK-based Raspberry Pi Foundation, distributed thousands of credit card-sized single-board computers known as Raspberry Pi (RasPi) to students at government schools, with the intention of enabling them with basic coding skills that would kindle their zeal to innovate. The project office of IT@School under the state’s Department of Information Technology was responsible for providing hands-on training to selected students and faculty at their local and regional centres. KSUM would interact with the students undergoing training via a web platform where students could clear doubts, learn about advanced projects and showcase their work so far.

Upon completion of the training, students would showcase their new abilities in a state-wide exhibition. Students have been extremely responsive to the training and have developed new and innovative solutions to the challenges in their daily lives — in the initial round of the programme, 100 projects were submitted by students across the state and prizes worth INR 3 lakh were handed out to them.

### Electronics@school

*Target Audience — 9th & 10th Standard*

Through the IT@School programme that was implemented in 2002, Kerala has set an excellent example of imparting IT education to young students. As a natural expansion of this programme and in an endeavour to further equip students with the skills necessary to develop new solutions, KSUM and IT@School collaborated to launch Electronics@School, a programme designed to educate the youth about electronics.

The initiative involved setting up electronics corners with hands-on kits across schools, with each kit — known as “Circuit Builder” — divided into six colour-coded bricks that would enable children to learn intuitively. The kits were constructed to align with the Physics curriculum of 9th and 10th standard students, and 1,218 teachers were also given hands-on training in the initial phase.

So far, the Government of Kerala has distributed 4,000 kits to various schools across the state.

2,500 schools participated

25,000 students trained directly

1,218 faculty members trained

## Mini Incubators—Innovation and Entrepreneurship Development

### Centers IEDCs

Startup Bootcamp is an initiative of KSUM that aims to directly involve the student community in the creation of a sustainable startup ecosystem by setting up mini incubators, in the form of bootcamps, in colleges. Each bootcamp, to be run completely by student representatives, shall be under the aegis of the IEDC programme of KSUM and serve as the hub of entrepreneurial activities in the college. The target audience consists mainly of students and faculty members from engineering, polytechnic and arts & science colleges. Apart from providing guidance on the various aspects of enterprise building, these bootcamps also seek to promote the objectives of KSUM and the National Science & Technology Entrepreneurship Development Board (NSTEDB), including programmes related to women and weaker sections of the society. Through these bootcamps, KSUM aims to foster a culture of innovation-driven entrepreneurship through student projects and to equip the new generation with the necessary science & technology know-how so that they may obtain gainful employment.

| Metrics                                 | Statistics |
|---|------------|
| Colleges having IEDC in the state       | 226        |
| Colleges given performance grants       | 55         |
| Student participated in the event       | 50,000     |
| Nodal officers trained for running IEDC | 214        |
| Technology Event                        | 458        |
| Entrepreneurship Event                  | 449        |
| Leadership Event                        | 131        |
| Total number of Events                  | 1321       |
| Project developed                       | 150+       |
| Startups                                | 316        |

## KSUM — Kerala Startup Mission

Science- and technology-driven innovation can be clubbed under a broad category defined as “knowledge-based innovation” — a critical definition for the knowledge economy we live in today. Under technology-driven innovation, IT startups in particular are bringing about waves of innovation across sectors in a manner unprecedented since the dawn of information technology. Equipped with the power of the Internet, advanced hardware and new developments in the form of cloud technologies and the Internet of Things (IoT), innovators in the IT sphere are pulling the market in unexpected directions. Re-engineered business models have indeed witnessed tremendous success. Today, the largest accommodation provider doesn't own a single property, and the largest media company doesn't have a single production facility — models that were unthinkable even two decades ago. Similar disruptions are taking place across healthcare and education, and are likely to revolutionise all industry sectors in the years to come.

Kerala's R&D institutions and agencies are developing cutting-edge technologies that are enabling their research and operations to advance by leaps and bounds. While these developments are critical for triggering innovation-driven entrepreneurship in Kerala, they do not always translate into use by commercial businesses or community enterprises. KSUM, with its focus on Innovation Driven Entrepreneurship, will thus establish a clear stream of activities by which R&D institutions and technical universities shall be connected with entrepreneurs, incubators and the general academia, whereby innovations can be discovered, brought to the forefront, nurtured and developed into readiness for commercialisation. In particular, this system shall endeavour to identify and scale-up the frugal innovations and incremental breakthroughs (commonly referred to as “jugaad” innovations) developed by the general public — especially in rural areas to address pain points in their everyday lives.

Kerala Startup Mission is the nodal agency of Government of Kerala for promoting entrepreneurship in the state and the implementing body for the Kerala Technology Startup Policy that supports the startup ecosystem by means of different components such as infrastructure, incubators and accelerators, human capital development, funding, state support, governance, Public Private Partnership, scaling existing and establishing new incubators and Startup-Boot Up-Scale up model for moving fast from ideas to IPO. KSUM is designed to provide a springboard to budding entrepreneurs who wish to launch themselves into the world of technology-based business careers by developing innovative new products and solutions. The highly innovative and productive environment of KSUM provides entrepreneurs with the right ambience to build up technology ventures at international standards. KSUM is restricted to high tech startups with technology products and innovations within a limited time frame that encourages the entrepreneur to work efficiently and come up with a market viable prototype.

The interventions made by KSUM in Kerala have brought about a cultural change in young minds as well as the government. Young minds who come up with innovative solutions now have the support of various incubators and government schemes that fund them at different intervals. Governments too approach startups to collaborate on developing technology solutions.

Entrepreneurs who are part of the KSUM Incubation System will be supported with various types of funding throughout the incubation process. The funding — which can be in the form of grants, loans or equity investment — will be distributed either directly or through its member incubators, IEDCs or funds in which KSUM has invested. The different types of funding provided at different stages are outlined as follows:

- 1. Seed funding:** Seed funding can be provided to innovative startups up to a maximum of INR 10 lakhs. Selection for seed funding is carried out monthly by a panel of tech/sector experts. Funding will be distributed directly through KSUM as well as through its member incubators and startups. Those who receive funding can use it for product development, testing and trials, test marketing, professional consultancy and manpower hiring.
- 2. Early stage equity funding:** KSUM has partnered with SEBI-accredited venture capital funds to provide early stage startups with funding ranging from INR 25 lakhs to INR 200 lakhs. Startups registered in Kerala or ready to re-register in Kerala, with a technology-based product and at an early stage of product development are eligible for this type of funding.
- 3. Idea/productisation/Scale up grant:** Startups can apply for idea grants at the idea, product and scale-up stages. Startups will be selected at Idea Days organised monthly and Idea Fests for colleges, and can obtain funding of upto INR 2 lakhs. For those at the product prototyping stage, productisation grants are provided upto INR 7 lakhs, providing the startup has not already availed of the idea grant at the idea stage — and for those at the scale-up stage, grants can be provided up to INR 12 lakhs providing the startup has not taken either of the two previous grants.
- 4. Patent Support Scheme:** KSUM supports student entrepreneurs to obtain patents for their products, with funding given in three stages during filing, prosecution and award. Each year, support is given to up to 50 student entrepreneurs, as well as educational assistance of up to INR 3 lakhs per annum to continue post-graduate studies and interest subsidy for up to five years on loans taken for product implementation based on the patent.
- 5. International Entrepreneurial Exchange Programme:** This is a combination of schemes aimed at exposing student entrepreneurs to the world's most mature startup ecosystems, such as Silicon Valley, London, Tokyo or Tel Aviv, and fostering interaction with entrepreneurs and industry stalwarts from around the world. Startups are reimbursed by upto INR 1 lakh per programme.
- 6. R&D Grant:** This is given to hardware startups with a significant R&D component. Up to INR 30 lakhs can be given to each startup, and recommendations for nominees will be made during the quarterly reviews. In order to qualify for the grant, startups need to have a working prototype of their product and be a member of at least one approved incubator in the state. Applicants must submit a clear business plan stating how they plan to use the money — at least 50% of the grant must be spent on hardware, with not more than 20% on marketing expenses. Grants cannot be used for covering manpower costs. Preference is given to startups who have a patent or are scaling up their product.
- 7. Marketing Support:** Startups are given market exposure for their products by giving opportunity to showcase their product in national and international conference, advertisements for promoting their product, social media marketing tool support, product launch support etc.

### ***Other support from the Government of Kerala***

1. **KSIDC Funds:** Kerala State Industrial Development Corporation Ltd. is the industrial and investment promotion agency of the government, focusing on promoting medium and large scale units in Kerala.
1. **KSCSTC:** Kerala State Council for Science, Technology and Environment is an autonomous government body constituted to promote science and technology related activities.
1. **Standard Investment Subsidy:** This is available to startups at 30% of the fixed capital investment up to INR 15 lakhs for companies located in Ernakulam and Thiruvananthapuram districts, and 40% of fixed capital investment up to INR 25 lakhs for companies located elsewhere in Kerala. Industries that qualify for SIS include IT Software Development, It Services, IT Enabled Services (excluding general IT training) and Hardware Manufacture.
2. **Services offered to startups**
  - *Google Cloud Services:* \$3,000 credit for 1 year on all Google Cloud Platform and Firebase products
  - *Amazon Web Services:* \$1,000 credit for 1 year, and one month of premium Amazon Business Services
  - *Microsoft Azure:* \$1,000 per month worth of services
  - *Tracxn:* research support from the startup data platform
  - *MSG91:* refill of upto 25,000 SMS credits per month for 6 months
  - *Collect.Chat:* chatbot building service for 3 months, 30% lifetime discount after that
  - *ClearTax:* assistance with financial services and tax compliance
  - *Razorpay:* zero setup fees, zero annual maintenance costs, zero transaction fees for first six months for up to INR 1 lakh per month
  - *Hubspot:* cloud-based marketing software platform
  - *Startup Box Scheme:* equipment kit provided
  - *R&D support:* startups can access FabLabs and Future Technology Labs for their research and prototyping

## Events

### Meetup Café

Meetup Café is the place for startups, industries, institutions and investors to come together, share their knowledge and develop a community whose focus is the overall development of the ecosystem. The café will be developed as a mentorship and investment centre for startups across the state, as well as a one-stop center for all technology awareness.

### SingularityU Global Impact Challenge India

The purpose of the SingularityU India Global Impact Challenge is to foster moonshot innovations and startups that positively impact the lives of people living in India, with an ability to scale and impact a billion people worldwide in 10 years.

SingularityU Global Impact Challenges aim to bring together innovators and stakeholders with a passion to solve one or more of the global grand challenges (environment, energy, water, food, health, disaster resilience, governance, learning, space, security, prosperity, and shelter) by leveraging exponential technologies.

This year, the India Global Impact Challenge is looking for solutions to address the following global grand challenges:

1. Learning, such as addressing skill shortage in emerging technologies and adoption of 21st-century skill sets
2. Environment, such as solid waste management in urban and rural areas and air and water pollution in cities
3. Health, such as access to cost-effective prevention, early diagnosis, and personalised therapy for individuals and communities.

Kerala Trivandrum chapter hosted the event and two startups got selected for the incubation programme in Silicon Valley.

### Seeding Kerala

Investing in early-stage startups is truly an art and is trending in the global level. “Seeding Kerala” is a golden opportunity for investors in Kerala to be a part of this trending investment scenario as well as to be involve in bringing new solutions to life. The event is scheduled for two days in two parallel tracks. On the first day, the general track meant for all registered startups and another track for investors will be held. Fundraising experiences, fundraising opportunities in Kerala and panel discussion will be the general track. The HNI network as well as investors from across the country are invited to witness the promising startups from the state.

Over 2,500 students from 226 IEDCs participated in the summit.

### **FAN 3**

The second leg of the third edition of the FabLab Asia Network conference (FAN3) was held at Mill Hall, Mattancherry on Jan 17-18, 2017. The first leg of the conference was held at Mumbai from Jan 12-15, 2017.

This weeklong event is organised every year by the Fablab Asia Foundation — a network of 81 Fablabs located in 21 countries in the Asia-Pacific region. The Kochi event, hosted by KSUM, Vigyan Ashram and Research Innovation Incubation Design Labs (RiiDL) will focus on digital fabrication and international collaboration. 80 international delegates, 200 local makers are expected to participate in this year's conference. A series of technical workshops, panel discussions and talks was conducted as part of the event. The conference also deliberates on developing the startup ecosystem in the state. The event provides a platform for students and startups to interact and collaborate with makers from across the world.

The delegates visited the Kochi Muziris Biennale(KMB) and explored the opportunities to connect art, design and digital fabrication. The third edition of the Biennale has seen more installations in the new media category – which fuse technology and creativity to create unique art. As KMB's technology partner, KSUM has been providing the necessary technical help for the project. It has deployed the Fablab team under it for the purpose. KSUM has also opened a space -Maker Outpost- at Mill Hall in Mattanchery, as part of the Biennale, for showcasing FabLab skills. Best projects from Innovation & Entrepreneurship Development Centres (IEDC) in colleges in the state have been showcased at the Outpost.The Kerala Fab Academy has also trained the artists from Srishti School of Art and Design Technology at the Fablab. Their projects are also being showcased at the Mill hall. KSUM hopes that FAN3 conference and other maker events has strengthen the Maker culture in the state, by providing makers, hobbyists, students and startups an opportunity to connect with international delegates.

### **IEDC Summit**

IEDC Summit is an annual event hosted by Kerala Startup Mission that brings together young minds from various IEDCs across Kerala to share their thoughts and gain knowledge about the startup ecosystem. Highly motivated entrepreneurs from across the country are invited to be a part of the keynote sessions, where they share their stories to inspire the attendees and also take part in panel discussions where they talk of how they overcame different challenges. Simultaneously, learning stations are set up near the main stage where student projects are exhibited and knowledge sharing takes place through interaction with tech communities, capacity development programmes and KSUM officers. Several workshops are also conducted on topics like design thinking, social entrepreneurship and developing problem-specific solutions. The first IEDC Summit was organised on August 23, 2016 at Girideepam Convention Centre, Nalanchira Trivandrum. Shri Pinarayi Vijayan, Hon. Chief Minister of Kerala was the Chief Guest at the event. The summit was deemed to be a tribute to late Indian President APJ Abdul Kalam, an ardent supporter of pursuing one's dreams.

### **Huddle Kerala**

Huddle India is the focal point for startups and tech talent to meet with top-tier investors, executive and media. The conference features two days full of stage programmes, in addition to several side events, talks at networking sessions, roundtable discussions and facilitated workshops. Its speaker line-up includes successful founders, serial entrepreneurs and investors. The philosophy behind Huddle India is to help the next generation great, world- conquering companies move forward. The very core of the event is to facilitate founder and investor meetings and to build up a huge startup community. Huddle will primarily focus on the emerging sectors like Blockchain, Cryptocurrency, IoT, Gaming and e-Sports, Cyber Security, Digital Entertainment , AR/VR , AI, UI/UX & E-Gov/m-Gov.

### **#Future**

#FUTURE would be the most high-profile Digital Event and the best ever of its kind conducted in the state of Kerala. The two-day event will see the convergence of achievers, professionals, entrepreneurs, academicians, key influencers and other stakeholders in the knowledge industry from across the globe. They will discuss though value adding sessions — keynotes and panel discussions on emerging trends, ground realities and opportunities that would help individuals, enterprises and entrepreneurs to compete and lead in a digital world. The theme of the event is 'Towards a Digital Future'. The purpose of #FUTURE is to inspire and energise people towards a knowledge-driven digital future. Such renewed energy, drive and aspiration should help facilitate the accelerated growth of the IT/ digital opportunities.

### **FABxI**

FABxI was started with the mission “Fabricate the excellence in you”. Fab Lab Kerala, in association with KSUM, conducts 2-day hands-on maker workshops at different IEDCs across colleges in the state. FABxI educates participants on the mechanisms and applications of digital fabrication, familiarises them with how to use digital fabrication machines and trains them on how to convert ideas into prototypes. KSUM has conducted 12 FABxI so far across different IEDCs.

### **Startupi3 (Ideate: Innovate: Incubate)**

The Start Up i3 programme is a platform for students to share their innovative ideas in a collective setting. The programme targets students of the IEDC/Startup Bootcamps and conducts brainstorming sessions as well as mentoring sessions that identify the best ideas and guide them so that they can develop into an executable business plan. The programme follows a three-stage process as follows:

- *Ideate*: Ideation is the initial process through which solutions to problems are identified. KSUM, in association with Open fuel, provides a platform to interact freely with one another and share their ideas.
- *Innovate*: Innovation requires essential technical knowledge. The 3-day programme will help students identify the key areas in which their studies can be supplemented with the necessary skills for innovation.
- *Incubate*: KSUM offers unique platform wherein mentorship and technical guidance help students shape their ideas into viable products.
- KSUM has organised 18 Startup i3 programmes in Kerala so far.



## Tech Communities

### **Kochi Twitter Developer Group**

Kochi Twitter developer Group is a community that brings together developers keen on working with Twitter's developer products and APIs. Meetups range from informal coffee gatherings with a few people sharing their projects and ideas, to formal technical talks and events like hackathons and workshops. Since launching in October 2016, their aim is to support the growth of local developer communities.

*For joining, visit <https://www.meetup.com/Kochi-Twitter-Developer-Community/>*

*Email: [shahul@computer.org](mailto:shahul@computer.org)*

### **Django Girls Thiruvananthapuram**

Django Girls is a women-only community that helps women who lack technical skills learn how to develop websites with an easy-to-use Django framework. The workshops conducted by Django Girls are designed for complete beginners to programming, and all that is required of participants is a laptop. Through its activities, the community aims to enrich the IT industry by bringing more talented women into technology.

*For joining, visit <https://djangogirls.org/thiruvananthapuram/>*

*Email: [misag754@gmail.com](mailto:misag754@gmail.com)*

### **Swathanthra Malayalam Computing**

Swathanthra Malayalam Computing (SMC) is a free software collective that works towards the development, localisation, standardisation and popularisation of various Free and Open Source Software in Malayalam language. "My language for/on My Computer" is the slogan of the organisation. One of the largest language technology developer communities in India, SMC works closely with governmental/semi-governmental organisations to ensure a future for the Malayalam language on computing devices. Over the years, SMC has evolved to accommodate developers focused on developing accessibility support Indic script-based languages, and also provides a generic web-based Indic language computation framework called SILPA.

*For joining, visit <https://smc.org.in/>*

*Email: [hrishi.kb@gmail.com](mailto:hrishi.kb@gmail.com)*

### **Kerala Ruby Users Group**

Kerala Ruby Users Group is a community of Ruby Developers that provides a friendly and open network for Ruby users of all skill levels to meet, interact and share ideas.

*For joining, visit <https://krug.github.io/>*

*Email: [mailme@hsps.in](mailto:mailme@hsps.in)*

### **Drupal Kerala**

Drupal is a highly popular content management software that is backed by one of the largest open-source communities in the world, with over 1,000,000 developers, designers, trainers, strategists, coordinators, editors and sponsors working together. Drupal Kerala is a close-knit community of such users who organise, plan and implement projects. Meetups and regional Drupal Camps are regularly organised, where existing and new Drupal users can meet and share their ideas.

*For joining, visit <https://groups.drupal.org/kerala>*

*Email: [aneesh.nl@gmail.com](mailto:aneesh.nl@gmail.com)*

### **Udacity Community**

The Udacity Community (UCommunity) is a platform for all Udacians to meet their fellow students as well as academicians and industry leaders from around the country, and share ideas with them. The community aims to make learning patterns more social, as it is by mutual exchange of knowledge and collaboration on ideas that learning is optimised.

*Phone: +91 9497727369*

### **Hackster-Kerala**

Hackster Kerala is a community for hardware hackers in Kerala, supported by Hackster.io. It aims to equip the youth of Kerala with the latest technical know-how so that they can design, build and programme Internet-connected hardware. They also host local project nights and events where they update hackers on the newest developments in IoT.

*For joining, visit <https://www.hackster.io/hackerspaces/kerala>*

### **Tinkerhub**

TinkerHub provides an open platform for students and technology enthusiasts to meet, brainstorm, share ideas and experiment. Workshops are hosted to teach participants about the latest technology, and expert guides and visiting industry leaders provide the right mentorship to ensure that projects are taken through to completion. The TinkerHub knowledge network also helps students find internships, fellowships and hackathons to get the right exposure and develop their skills. Through its activities, TinkerHub aims to provide the right knowledge and support system for students to be truly future-ready in the technology age.

*For joining, visit <http://tinkerhub.org/>*

*Email: [syamkumarvg@gmail.com](mailto:syamkumarvg@gmail.com)*

### **Kochi Python**

Python is one of the most important languages for aspiring data scientists to learn. Kochi Python is a community of Python users and developers in and around Kochi — it aims to bring together developers to share best practices and enhance their knowledge and skills.

*For joining, Visit: <http://kochi.python.org.in/>*

*Email: [rahul@entri.me](mailto:rahul@entri.me)*

### **Kerala Machine Learning**

Machines of today are making new strides in data processing and model making that were considered unthinkable even a few years ago. Harnessing the predictive power of data has become crucial for businesses to survive in today's world. Kerala Machine Learning, therefore, aims to create a community where machine learning enthusiasts can share their knowledge, collaborate on projects and learn about the latest advances in the field.

*Email: [prvn431@gmail.com](mailto:prvn431@gmail.com)*

### **Wordpress Meetup Group**

The WordPress Meetup Group has been active since 2014, and has made its presence felt in WordCamps across the county. WordCamp Kochi 2017 was organised by the WordPress Kochi Meetup Group, assisted by sponsors as well as the global WordPress Community. The event was designed with the aim of popularising the use of the WordPress platform through informative sessions and also to bring together WordPress users from around the world to interact and share ideas.

*For joining, visit: <https://www.meetup.com/Kochi-WordPress-Meetup/>*

*Phone: +91 9497279898*

### **Malayalam Wiki Source**

As a part of the tenth Wikisource project celebrations, the projects in various languages around the world conducted completions to enrich their content. Most Indian languages do not have a functional OCR solution, and require more manual effort than Latin languages. The Malayalam Wikisource community organised a digitisation completion in association with various governmental as well as non-governmental establishments and other voluntary organisations.

*For joining, Visit : <http://www.mlwiki.in/>*

*Phone: +91 9495513874*

### **Google Developers Group Cochin**

Google Developer Group Cochin or GDG Cochin is the second GDG in Kerala, and consists of a group of enthusiast developers who came together to share their knowledge. With a focus on Google's and other open source technologies, GDG plans regular events, meetups and workshops including events for less experienced developers. All meetings are free and open to the general public.

*For joining, Visit: <https://developers.google.com/groups/chapter/106046004645175854179/>*

*Email: [shibinazx@gmail.com](mailto:shibinazx@gmail.com)*

### **Xamarin Developers Group**

This is a group of developers who share an interest in iOS, Android, Windows Phone development using C# and Xamarin. They organise meetups, presentations and demos where all those interested, including those without prior knowledge of Xamarin, are welcome.

*For joining, Visit: <https://www.meetup.com/XHackers-Kerala>*

*Phone: +91 9497727369*

### **Internet Society Trivandrum Chapter (ISOC Trivandrum)**

Internet Society Chapters are communities of like-minded people who work together to run a variety of programmes such as educational events, community and public policy programmes and networking events. The ISOC Trivandrum chapter enables a cross-section of communities including end-users, students, NGOs, technical & research institutions, Government and the industries to participate in the governance of the Internet and in related areas. This is carried out through a multi stakeholder model in which connections are made and projects are collaborated on.

*For joining, Visit: <https://www.internetsociety.org/who-we-are/chapters/join-chapter>*

*Email: [ranju@ieee.org](mailto:ranju@ieee.org)*

### **Mozilla Kerala**

Mozilla Kerala is a regional community under the global non-profit organization Mozilla, which is founded on the basis of free and open source software. Mozilla Kerala was formed after the first Community Meetup on September 8, 2013 with the aim of promoting the web and the mission of Mozilla to the Keralite masses. Since then, Mozilla Kerala has organised multiple events throughout the state of Kerala that highlight the importance of online privacy and a free and open web.

*For joining, Visit: <http://mozillakerala.org>*

*Email: [akhiljames@live.com](mailto:akhiljames@live.com)*

## NASSCOM Startup Warehouse

*'An Oasis of Meeting Minds: Inspire, Motivate and Propel Each Other'*

'Startup Warehouse' is a mosaic, which binds startups and entrepreneurs together in a novel working space, with an electric atmosphere that ensures sustained inspiration. Numerous startups co-exist and work together in a well-equipped space with modern infrastructure at very nominal rates. Challenging tasks accomplished in fun and exciting spaces ensure that one is always charged up and buzzing with creativity to challenge problems. 'Plug-and-Play' workspaces ensure that startups need to focus their energies only on their technology products and not waste them on mundane logistical space issues. Entrepreneurship is a different ball game altogether and interacting with people who are playing 'your' game is reassuring and motivating — madmen, aka fools, who applaud and encourage each other.

The startup warehouse has been launched in support with the Kerala Govt. to build entrepreneurial capabilities in the state of Kerala, create a vibrant community to connect investors, mentors and startup entrepreneurs, and building tech-entrepreneurship as a preferred career option. The warehouse will be managed by NASSCOM's 10,000 Startups program. The steering committee of Start-up Warehouse, Kochi includes CEO, Kerala Startup Mission, CEO, Infopark, CEO, Suyati Technologies Pvt. Ltd., Global Head for Development Center Operations, UST Global and Deputy Director, NASSCOM 10,000 Startups.

In 2013, NASSCOM 10,000 Startups launched its first start-up warehouse in Bengaluru followed by its second warehouse in Kolkata. It further announced startup warehouse in Navi Mumbai & Pune in support with Government of Maharashtra and recently in Gurugram in support with Government of Haryana.

The 10,000 Startups program has initiated startup warehouses across different states to create a micro-ecosystem where many startups and entrepreneurs can work together and share their experiences with each other. The environment will result in a collaborative approach and a rub-off effect of working alongside with people who share a passion towards solving some of the problems faced by society, consumers, businesses etc. The key philosophy behind the initiative is to provide startups with — affordable and accessible space, Plug and play services, co-working space, mentor support, workshops and startup events.

## IAMAI- Mobile 10x

The smartphone boom has paved the way for a mobile revolution and as of now, India is home to 350 Mn Internet users out of which 160 Mn users access it on a mobile phone. This number is expected to shoot up to 700 Mn by 2020. However, despite being home to 3 Mn software developers, only 1% of Indian mobile apps feature in the top 1,000 Global Apps and none in the top 100. Towards the twilight of 2018, India will be home to 4 Mn software developers. With a vision of tapping the potential and providing an effective launch pad for the app developers, Internet And Mobile Association Of India (IAMAI) has launched the 'Mobile 10X' initiative.

Backed by the IAMAI members, the initiative is focused on making India, a 'Global App Superpower' via building a large pool of quality app developers both locally & globally. The initiative has the motive of 10 Xing the Quality, Quantity and Revenue of the mobile app ecosystem within three years.

Mobile10X facilitates app developers to flourish in this ecosystem. These hubs will be equipped with a testing lab, a design lab along with co-working spaces. The developers will be allowed to work for free and the costs will be borne by the founding members.

Mobile 10x Kerala will be operating at UL Cyberpark Kozhikode, which will enhance and empower the developer community in Kerala to new heights. As the facilities ensured in Mobile 10x labs are of international standards, giving and enabling Kerala startups to showcase their products worldwide.

## R&D Institutes

**CSIR – National Institute for Interdisciplinary Science and Technology (NIIST), Council of Scientific & Industrial Research (CSIR), Govt.Of India**

**Area of Interest:** Agroprocessing and Natural Products, Biotechnology, Chemical Sciences and Technologies, Materials and Minerals, Process Engineering and Environmental Technology

**Contact:** director@niist.res.in

**Tropical Botanical Garden and Research Institute**

**Area of Interest:** Bioinformatics

**Contact:** drsreekumar@rediffmail.com

#### **Center for Earth Science Studies**

**Area of Interest:** Natural Hazards Management, Earth Science Studies

**Contact:** prakash.thirumali@ncss.gov.in

#### **Rajeev Gandhi Center for Biotechnology**

**Area of Interest:** Animal Biotechnology, Cancer Biology, Environmental Biotechnology, Human Molecular Genetics, Molecular Endocrinology, Molecular Ethnopharmacology, Molecular Reproduction, Mycobacterial Research, Neurobiology, Plant Molecular Biology, Protein Chemistry, Viral Hepatitis Laboratory, Stem Cell Biology

**Contact:** webmaster@rgcb.res.in

#### **Sree Chithra Thirunal Institute for Medical Sciences and Technology**

**Area of Interest:** Cardiology, Neurosciences, Biochemistry, Pathology and Radiology

**Contact:** 91-471-2443152

#### **Central Plantation Crops Research Institute (CPCRI)**

It is a premier institute under Indian Council for Agriculture Research (ICAR) to develop appropriate crop improvement, production, protection and processing technologies for coconut, areca nut, and cocoa through basic and applied research and to conduct transfer the developed technologies to the public, in particularly to farmers through the cooperation of other agencies.

CPCRI is desirous of establishing close linkage with manufacturers who are willing to produce technology, protect the intellectual property rights and are willing to upgrade the quality or any design changes as may be required from time to time in consultation with the Institute. A large number of startups within and outside CPCRR fails to scale up their business. Considering this as a key area of cooperation, Kerala Startup Mission and Central Plantation Corporation are desirous of entering into an agreement to work together in supporting agritech startups and guide agripreneurs to set up successful **agri-business ventures under the initiative called "Startup Green"**.

## Incubators and Accelerators

**Maker Village**, which is the largest electronic hardware incubator in the country is a joint initiative of Ministry of Electronics and Information Technology (MeitY), Government of India and Government of Kerala with Kerala Startup Mission as the leading partner and Indian Institute of Information Technology Kerala (IIITMK), Trivandrum as the implementation agency.

Maker village is based out of Kerala Technology Innovation Zone, KINFRA Hi Tech Park, Kalamasserry, Kochi, Kerala with an annex at Techno park, Trivandrum, Kerala. Currently 65 startups are incubated at the Maker Village, which hosts about 30,000 sqft of fully furnished space with all required amenities. Within a very short span since its inception, Maker Village has made significant strides in the start up landscape of the country with its strong network of associations with Industries, ESDM facilities, Academic institutions and R &D institutes. Maker Village has a unique basket of offerings in terms of infrastructure, hardware & software resources for prototyping, technical support and associated services, making it an end-to-end facility to enable the hardware start ups to traverse the journey from idea to productisation.

In order to facilitate creating a robust and sustainable hardware ecosystem for prototyping, product design and development, Maker Village is in the process of creating a collaborative platform where sharing of talent, ideas, technology, equipments, services and exchange of best practices can be facilitated. Maker village envisions that this collaborative platform would help the hardware eco system to mature faster and also address many of the pain points typical of hardware startups.

It is quite significant to note that a total of 24 patents are filed by 14 companies from Maker Village. Twelve startups are able to generate Purchase Orders and already started selling in the market. Two startups got venture capital funding and four startups are being supported by BPCL under their Project Ankur scheme. The last financial year saw the companies in Maker Village getting a cumulative funding of INR 8.0 Cr.

Almost 60% of the startups who are operating out of Maker Village are having prior professional experience or startup experience. This reservoir of experience at Maker Village is bringing the right kind of entrepreneurial energy and momentum to the ecosystem Maker Village charting its way to become the National Center of Excellence for the hardware startups.

*Contact: Mr Prasad Balakrishnan, CEO*

*Phone: 8281481000*



**BioNest** is jointly run by Rajiv Gandhi Centre for Biotechnology (RGCB), under the aegis of Department of Biotechnology, Government of India and Kerala Startup Mission (KSUM) [the implementing agency of Government of Kerala for entrepreneurship development and incubation activities]. BioNest will provide the platform to synergise the expertise & knowledge power of RGCB with KSUM's infrastructure and facility at Kochi. BioNest, a unique facility designed to provide infrastructure and scientific support to enable researchers and investors entrepreneurs looking to transform biology, medical-based technologies and innovations into real and mature big business. BioNest provides various hand holdings to entrepreneurs' mentorship and advice at all stages of a business from proof of concept, feasibility, validation through commercialisation.

It offers high-tech infrastructure that nurtures innovation and collaboration with tremendous guidance in the area of intellectual property and regulatory support. Intellectual property, IP is given tremendous importance and is considered as the most valuable asset of any business.

Bionest was set up to nurture emerging biotech/life science startups by providing incubator facilities and state of the art biotechnology instrumentation platforms to promote & develop new entrepreneurs. It also aims to provide such instrumentation platforms for SMEs, Academic Institutions & hospitals, to further their research programs in biotechnology, life sciences and biomedical sciences. In addition, Bionest is also providing short term industrial training courses as well as facilities to M.sc/B.Tech/M.Tech Biotech students to carry out their dissertation and project work. The Bionest building is a two floor facility spread around 42,000 sq. ft comprising of incubation spaces for Biotech startups, R & D Labs, facilities like Effluent Treatment Plant, DG Back up and all other facilities necessary for biotech startups to kickstart their operations. Bionest will provide a four-year incubation facility for start-ups and also the required infrastructure for the new company to work independently thereafter.

Technological assistance and support will be imparted all the way through the maturation phases of the startups until their progression into a fully fledged company. Bionest will execute the hand-holding task of assisting the startups with respect to Intellectual property rights, Regulatory and Venture capital support. The centre houses common equipment and facilities like tissue culture, analytical and QC laboratories, with funding support from Department of Biotechnology, Government of India.

*Contact: SAJI GEORGE M. Tech, PhD*

*Phone: +91 8309196271*

*Email: sajigeorge@rgcb.res.in*

## Few Other Incubators and Accelerators

| Name  | Representative     | Email                           | Contact Number | Website              | Sector              |
|---|--------------------|---------------------------------|----------------|----------------------|---------------------|
| NIT TBI   | Ms.Preethi M       | preethi@nitc.ac.in              | 4952286147     | tbi.nitc.ac.in       | Electronics, IT     |
| Startups Valley   | Mr Sherin Sam jose | Sherinsamjose@amaljyothi.ac.in  | 9496805712     | startupsvalley.in    | Rural tech, AI      |
| SCTIMST-TIMed   | Mr Balram          | timed@sctimst.ac.in             | 9249402311     | timed.org.in         | MedTech             |
| Amrita TBI  | Ms Rajasree        | info@amritatbi.com              | 9567979608     | amritatbi.com        | Electronics, IT, AI |
| Technolodge Kannur                                      | Mr Nidhin          | kannurtechnolodge@gmail.com     | 9746241399     | kannurtechnolodge.in | Sector Agnostic     |
| Kerala Agriculture Value Product Research & Development | Mr Baiju           | kavprad@gmail.com               | 9446713767     | N/A                  | Agriculture         |
| IIMK Live   | Amit Jain          | amit@iimklive.org               | 9892346258     | N/A                  | N/A                 |
| IAMAI Mobile 10x  | Ajay               | ajay@iamai.in                   | 9447371902     | mobile10x.in         | IT                  |
| Startup Dreams  | Krishna Kumar      | startupdreams@startupmission.in | 9961822685     | startupdreams.co.in  | Electronics, IT     |

## Co-Working Spaces

### Dot Space

[www.inamaste.space](http://www.inamaste.space)

DotSpace is a provider of managed co-working spaces operating in India. The company offers fully furnished, plug and play offices with amenities such as access to the internet, lockers, cafeteria and more to its registered members. It also provides virtual office services at its locations. Businesses, entrepreneurs and freelance professionals interested in availing the company's services can do so by registering online and opting for monthly membership packages that are available onwards of INR 4,000/month. As of August 2017, the company operates two facilities (in Kowdiar and Kuravankonam) in Kerala, India.

### B hub

[bhubglobal.com](http://bhubglobal.com)

B Hub is a provider of coworking spaces to businesses, investors, students, freelancers and other professionals. Located in Thiruvananthapuram, it offers 24x7 access to fully furnished open spaces as well as conference rooms, a private phone area, projectors and high-speed Internet. It also hosts workshops and business meetups. Interested users can opt for a variety of plans ranging from hourly to monthly usage. Payments are made on a pay-as-you-go basis starting from INR 150/hour.

### Women's Business Incubator

[Wbip.in](http://Wbip.in)

Women's Business Incubation Programme enables women entrepreneurs to make their digital business ideas a reality. Located in Thiruvananthapuram, it invites applications online and selects entrepreneurs on the basis of their startup ideas. Selected candidates can choose from different workshops and incubation processes and are provided access to office space, internet connectivity, networking events and business mentoring. Funding is also provided through collateral-free loans from private and public sector banks.

#### **Centre A**

**[www.centre-a.com](http://www.centre-a.com)**

Centre A is a world-class business centre located on MG Road in Kochi's main business district. It provides fully equipped private offices, meeting rooms, coworking spaces and virtual office solutions to suit the needs of different businesses. It enables organisations to set up new offices without any capital investment, and provides features like a reception area, a lounge, a cafeteria, business concierge services, high-speed Internet connectivity, call forwarding services and car parking area for users and their guests. Virtual offices can be hired from INR 1,500 per month, while coworking spaces can be hired from INR 3,000 per month.

#### **Creative Coworking Cube**

**[www.ccube.space](http://www.ccube.space)**

Creative Coworking Cube is a modern coworking space that welcomes startups from multiple fields like art, music, fashion, entertainment and every innovation connected with media. Located in Kochi, it provides both startups and freelancers with a creative working space featuring high-speed internet, access to meeting rooms, coffee and printing/scanning facilities. Users can also connect with business experts for personal mentoring sessions, while events like community lunches, film screenings and peer-to-peer sessions enable better collaboration. The rates for freelancers start at INR 3,500 per month, while the rates for entrepreneurs start at INR 6,800 per month.

#### **The Office Kochi**

**[theofficekochi.com](http://theofficekochi.com)**

The Office Kochi provides stylishly designed office spaces ranging from coworking spaces to serviced office suites to suit different needs. Located on MG Road in Kochi, The Office features fully furnished spaces with all amenities including meeting rooms, internet connectivity, tech support and reception services. Customers opt for simple monthly plans that do not require huge capital expenditure and involve a simple, automatic billing process. Memberships are of three types - Gold, Diamond and Platinum.



### **Flewhub**

**[www.flewhub.com](http://www.flewhub.com)**

Flewhub offers open, inspiring and collaborative coworking spaces where individuals and businesses can connect and work creatively at affordable rates. The ergonomically designed workspaces are fully air-conditioned and feature high-speed internet connectivity, scanners and printers, a gaming area and a cafeteria. Events and networking sessions are frequently organised to bring together like-minded enthusiasts and encourage collaboration. Prices start from INR 400 per day to INR 6,000 per month.

### **Space bar**

**[getspacebar.in](http://getspacebar.in)**

Spacebar is the first coworking space in Calicut, and provides modern workspaces with facilities like meeting rooms, high-speed Internet connectivity, printing/scanning services, power backup and IT services to enable new entrepreneurs to set up their businesses more quickly. With a monthly charge of INR 3,500, Spacebar is an affordable option that does not call for any capital investment on the part of its customers. A daily package at INR 300 per day is also available.

## Investors

| Angel Network       | Representative       | Role/designation | City       |
|---------------------|----------------------|------------------|------------|
| Federal Bank        | Shyam Sreenivasan    | MD               | Kochi      |
| Gods Own Angels     | Afsal Salu           | Member           | Kochi      |
| Individual Investor | Raveendranath Kamath | NA               | Kochi      |
| Individual Investor | Namith               | NA               | Kozhikode  |
| Individual Investor | Jose Pattara         | NA               | Alapuzha   |
| Kerala Angels       | Rajesh Nair          | President        | Kochi      |
| Kerala Angels       | C. Balagopal         | Member           | Kochi      |
| Kerala Angels       | John K Paul          | Member           | Kochi      |
| Kerala Angels       | George C J           | Member           | Kochi      |
| Kerala Angels       | A. V. George         | Member           | Kochi      |
| Kerala Angels       | George Paul          | Member           | Calicut    |
| Kerala Angels       | Hari Krishnan Nair   | Member           | Kochi      |
| Kerala Angels       | John Chacko Neroth   | Member           | Kochi      |
| Kerala Angels       | V. K. Mathews        | Member           | Trivandrum |
| Kerala Angels       | NandaKumar.K         | Member           | Trivandrum |
| Kerala Angels       | Raghulal T R         | Member           | Alappuzha  |
| Kerala Angels       | Navas M Meeran       | Member           | Kochi      |

| <b>Angel Network</b>         | <b>Representative</b> | <b>Role/designation</b>      | <b>City</b> |
|------------------------------|-----------------------|------------------------------|-------------|
| Kerala Angels                | Ravi D C              | Member                       | Kottayam    |
| Kerala Angels                | Roy I Varghese        | Member                       | Trivandrum  |
| Kerala Angels                | Mathew Andrews        | Member                       | Kochi       |
| Kerala Angels                | Umang Patodia         | Member                       | Mumbai      |
| Kerala Angels                | Sam Santhosh          | Member                       | Bay Area    |
| Kerala Angels                | Ajith Moopan          | Member                       | Kochi       |
| Kerala Angels                | Veluthedath Noushad   | Member                       | Calicut     |
| Kerala Angels                | Jacob Mathew          | Member                       | Mumbai      |
| Kerala Angels                | George M Thomas       | Member                       | Trivandrum  |
| Konglo Ventures              | Vinod Jose            | Partner                      | Dubai       |
| Konglo Ventures              | Robin Alex Paniker    | Partner                      | Trivandrum  |
| Malabar Angels               | Shilen Sugunan        | Founder                      | Kannur      |
| Pirate Fund                  | Deepak Ravindran      | Partner                      | Kochi       |
| SEA Fund                     | Manoj Aggarwal        | Co Founder                   | Mumbai      |
| SEA Fund                     | Mayuresh Raut         | Co Founder                   | Mumbai      |
| SPARC - The Kozhikode Angels | Vinay Kynadi          | Member                       | Kozhikode   |
| Unicorn Ventures             | Anil Joshi            | Founder and Managing Partner | Mumbai      |

## Kerala Startup Mission Infrastructure

Kerala Technology Innovation Zone: The Government of Kerala has established the Kerala Technology Innovation Zone (TIZ) — a global innovation startup hub for diverse technology sectors under one umbrella. This is a one-stop startup hub with multiple sector incubators on a 13-acre campus. Currently, the TIZ has a biotech incubator named Bionest, hardware incubator named Maker Village, a Kerala Startup Mission IT/ITES Incubator, a scale-up space, a digital fabrication lab, etc. The TIZ will have a 5 Lakh sq ft space for incubation, acceleration, an R&D facility, a corporate and government innovation centre, commercial spaces, plug-and-play centre, experience centres, technology labs, and business and investor facilitation centres.

### *Proposed Incubation Space for the FY : 18-19*

| Location   | Incubation  | Area (sq. ft) | Seating Capacity |
|------------|---|---------------|------------------|
| Trivandrum | ICFOSS incubation space - Greenfield international stadium                                | 10000         | 120              |
| Trivandrum | Accelerator in Electronics Technologies (ACE), CDAC                                       | 46000         | 900              |
| Trivandrum | Space-Tech Application Development Ecosystem (STADE), Drishya Building, KINFRA video Park | 8168          | 188              |
| Kochi      | Office Plaza Building   | 100000        | 1000             |
| Kochi      | Cusat - Fablab  | 906           | N/A              |
| Palakkad   | KSUM Incubation, Govt polytechnic college-Palakkad  | 2558          | 55               |
| Palakkad   | KSUM Fablab, Govt polytechnic college-Palakkad  | 2357          | N/A              |
| Kannur     | MI Zone, Kerala Clays and Ceramic Products Limited  | 23000         | 213              |



### **Existing Incubation Spaces**

| <b>Location</b> | <b>Incubation</b>                         | <b>Area<br/>(sq. ft)</b> | <b>Seating<br/>Capacity</b> |
|-----------------|---|--------------------------|-----------------------------|
| Trivandrum      | KSUM Inncubation - GF                     | 10000                    | 104                         |
| Trivandrum      | KSUM Incubation - B2                      | 5498                     | N/A                         |
| Trivandrum      | Fab Lab                                   | 1500                     | N/A                         |
| Trivandrum      | KSUM Scale up space                       | 19210                    | 391                         |
| Trivandrum      | Startup Dreams                            | 5000                     | 48                          |
| Trivandrum      | KEY Accelerator, KINFRA video Park        | 1500                     | 40                          |
| Kochi           | KSUM Scale up space, 10K Building, TIZ    | 10000                    | 136                         |
| Kochi           | Office Plaza                              | N/A                      | N/A                         |
| Kochi           | KSUM incubation - B2                      | 12000                    | 154                         |
| Kochi           | Maker Village - B1                        | 25000                    | 120                         |
| Kochi           | Bionest                                   | 42000                    | N/A                         |
| Kochi           | Fab Lab                                   | 2000                     | N/A                         |
| Kochi           | KSUM Scale up Space, Jothirmaya, Infopark | 14000                    | 256                         |
| Calicut         | KSUM - incubation                         | 5035.22                  | 82                          |
| Calicut         | KEY accelerator                           | 2191.33                  | 40                          |
| Calicut         | IAMAI - Mobile 10X                        | 12000                    | N/A                         |
| Kasaragode      | KSUM - incubation                         | 1000                     | 16                          |

## Startup Box

In its mission to develop the entrepreneurial spirit among the youth of the state, the Government of Kerala has launched the Startup Box Initiative, implemented through the Kerala Startup Mission (KSUM).

It aims to encourage young people who may be diffident about starting their own venture by debunking the myth of a difficult setting-up process.

Each year, the initiative will provide 50 teams chosen through KSUM bootcamps or various incubators with a Startup Box, a toolkit equipped with essential items like a computer, a smartphone, a dongle, an ebook reader etc. to help them set up a digital age startup — the kit remains the property of KSUM is to be returned to the startup incubator in its original condition once the programme is complete.

So far, **150 Startup Boxes** have been distributed across various incubators associated with KSUM.

## K- Accelerator Program

Kerala Accelerator Program is a virtual accelerator program designed to give global exposure to startups. Kerala Startup Mission has joined hands with Zone Startups India to roll out this three-month virtual acceleration program focussed towards hand holding startups who are in the early revenue stage. Startup going through this program will graduate with a market validated product tested, relevant customer and industry connect, and introductions to investors.

## Future Technologies Lab

Future Technologies Lab is an initiative by Kerala Startup Mission to provide the necessary tools, equipments and infrastructure for Research & Development of emerging technologies, and serves as a platform to introduce it to startups and students.

**The current key focus areas for Innovation and Research at Future Technologies Lab are:**

- Virtual Reality (VR) and Augmented Reality (AR)
- Artificial Intelligence (AI)
- Robotics
- Brain Computer Interface (BCI)
- Blockchain

## MIT Fab Labs

With the support of Government of Kerala, KSUM has started two MIT USA Electronics Fabrication labs each at Technopark, Trivandrum and Kerala Technology Innovation Zone (KTIZ), Kochi with the objective of promoting digital fabrication. The FabLab in Technopark, Trivandrum is established inside the Indian Institute of Technology and Management - Kerala (IIITM-K). 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 that can be tailored to meet local or personal needs. The FabLab also becomes a medium for connecting with a global community of learners, educators, technologists, researchers and innovators – essentially, it assumes the role of 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 related fields. KSUM has associated with Centre for Bits and Atoms, MIT Fab Lab Foundation, USA for this purpose.

### **The FabLabs established in Trivandrum and Ernakulam feature the following inventory of equipment:**

- Laser Cutter
- Large Scale CNC Mill: Shopbot
- 3D printers: Dimension SST 3D printer and Ultimaker 2
- High Resolution Mini NC Mill: Modela
- Vinyl Plotter
- Sand Blaster
- Electronic Components and Tools
- Molding and Casting

## Government as a Marketplace

The Government of Kerala, in its IT Policy 2017, has indicated its intent to help new ventures by becoming an early-adoption market for startups. The Kerala Startup Mission (KSUM), being the nodal agency for startups in the state, has been coordinating this by acting as a facilitator between the government and startups.

In the last two years, the KSUM has been working closely with various government departments to address their needs through startups. In order to effectively help in finding solutions for various departments, the Government of Kerala has made provisions for departments to procure directly from startups without any tender process up to INR 20 Lakh. The KSUM had coordinated two Demand Days — one for various departments and one exclusively for the Kerala Police.

- Number of government projects by startups: 25
- Funds disbursed: INR 1.3 crore

## Singularity University, Trivandrum Chapter

Singularity University is a worldwide network of local communities to address humanity's most persistent challenges. SingularityU Trivandrum chapter offers a meeting place for alumni, speakers, and the curious to discuss exponential technologies and research how these can be leveraged to address issues locally. It is empowering the startups and communities to adopt future technologies in developing their products/forums and gradually developing a pool of professionals from multiple sectors, who share common thoughts which are unique/innovative and can create solutions for identified problems with the implementation of future technologies. It acts like a single spot for engaging the academics, startups, corporates, government to adopt and adapt the technology changes.

The university works to facilitate a future of endless possibilities that is free from global problems. It believes in catalysing an exponentially transformed, engaged, and activated community of inspired solvers, startups, corporations, development organisations, governments, academic institutions, and investors, to better address systemic problems faced by the world today.

## Incubation Program

Kerala Startup Mission (KSUM) is designed to provide a springboard to budding entrepreneurs who wish to launch themselves into the world of technology-based business careers. KSUM is designed to provide entrepreneurs all the support they need to develop advanced technology solutions to different problems.

The highly innovative and productive environment of KSUM provides entrepreneurs with the right ambience to build up technology ventures that meet international standards.

KSUM is restricted to high-tech startups with a limited time frame to build a solution — this encourages the entrepreneur to speedily come up with a market viable prototype.

### Programme Highlights

- Startup Induction Programme
- Milestone setting with Startups
- Mentoring-Mentor Speed Dating, Mentor Reviews
- KSUM Reviews & Quarterly Expert Reviews
- Workshops, Sessions and Events for Startups
- Pitching Workshops & Investor Connects
- Demo days
- Graduation day

## International Entrepreneurial Exchange Scheme

The International Entrepreneurship Exchange Programme is a combination of schemes that provides talented students and young entrepreneurs of Kerala with exposure to international startup ecosystems and fosters cooperation with them. The programme, executed by KSUM acts as an exchange programme that takes selected participants to advanced/mature startup destinations like the Silicon Valley, Menlo park, USA, London, Tokyo, Tel Aviv, etc. to interact with startups and clients there. This can potentially enhance marketing/funding opportunities for local startups and also provide an international platform for their products. Selected college faculty may also be sent to renowned universities like Harvard or Stanford to study the startup ecosystem there. In addition, world-class entrepreneurs may be invited to work with startups in Kerala for mutual exchange of knowledge and ideas. These international Startup Delegations are led by IAMAI, FICCI, CII, TiE, etc.

### *Guidelines*

#### International Visits:

- Startup entrepreneurs (a maximum of two founders/executives from each startup) from DST approved TBI's or startups registered with KSUM, are eligible to be sent abroad for participation in various international workshops, exhibitions, competitions and other such events or for business visits, funding, marketing endeavours etc. Prior to the visit, the startups are to submit a detailed proposal to KSUM specifying the business need for such a visit alongwith a budget for the same.
- Makers and innovators are given opportunities to explore the global startup network by participating in international events and conferences.
- Startups are eligible for reimbursement of 50% of the travelling expenses or INR 1 lakh, whichever is lower (per startup representative).
- Travelling expenses include Visa charges, flight charges (to & fro) and inland travelling cost.
- The expenses may be reimbursed upon the submission of a detailed report on the outcome of the visit along with all original invoices.

*“Altogether 63 entrepreneurs and innovators were sent to various different programmes and visits to different continents worldwide.”*

## Startup Community Partner Development Programme (SCPDP)

The SCPDP is an initiative by the Kerala Startup Mission that aims to create an inclusive startup ecosystem in Kerala.

It focuses on doing so by setting up a strong interlinked network of entrepreneurs, innovators, maker communities, investors, students, industry professionals, government officials and academicians who will share their experience and create an environment that fosters and supports innovation in the state. By linking with community partners, capacity-building can be fostered from the grassroots level by means of student workshops, seminars, leadership camps, discussions and mentoring sessions — KSUM will provide community partners with the necessary financial support and technical know-how to organise these events.

### Key Objectives of the Scheme:

- To foster inclusive growth in the startup ecosystem
- To channelise and distribute the activities of KSUM across the state
- To connect students, professionals and entrepreneurs across the state
- To impart technical skills to students by means of hands-on trainings, workshops, seminars, mentorship sessions, leadership camps etc.
- To instil confidence and an entrepreneurial spirit in the youth of Kerala
- To connect students around the world and thus facilitate international knowledge transfer
- To bring in successful entrepreneurs to mentor students

## Technology Innovation

### Fellowship Programme

KSUM has initiated a Technology Innovation Fellowship Programme for young graduates keen to work with technology startups and student entrepreneurs.

This flagship programme of the government implemented under the KSUM's Youth Entrepreneurship Programme. Applications are invited every six months from interested candidates. Those who are selected will receive a fellowship of INR 25,000 each month, and be an active campaigner for technology startup activities and also organise events like entrepreneurship awareness camps, maker sessions, hackathons and ideathons in academic institutions.

Applicants should possess expertise in technology as well as experience in conducting programmes. Selection will be carried out through an open invitation/screening and interview of the shortlisted applicants. The fellowship will be for a period of 12 months.

## United Nations—EMPRETEC

### Training Workshop (ETW)

EMPRETEC is an integrated capacity building programme of the United Nations that focuses on SMEs and the promotion of entrepreneurship by aiding talented youngsters to implement their business ideas. The programme has been designed with the broader aim of enhancing the productive capacity of developing nations to guide them out of poverty and inequality and enable them to compete with international players.

Its core product, the Entrepreneurship Training Workshop, is based on a unique methodology designed at Harvard University, which focuses on a behavioural approach to entrepreneurship. KSUM, as the state government's nodal agency for the promotion of entrepreneurship, has tied up with UN-EMPRETEC and EMPRETEC India Foundation for collaborating in the Startup Leadership programme.

#### Implementation:

- Selection of startups from different incubators across the state
- Selected candidates shall be sent to the ETW workshop conducted in different states as and when required
- The training cost will be borne by KSUM
- Travelling and accommodation shall be borne by the startups
- Nominated officers from Startup Mission may participate in the workshop



## Management Development Programme at IIMK

KSUM in association with Indian Institute of Management - Kozhikode (IIM-K), organises a 5-day residential Management Development Programme on the theme of 'Aspire, Change and Transform' (ACT) for startup entrepreneurs at IIM Kozhikode. This programme addresses some of the significant competency gaps of the startup entrepreneurs and enables them to resolve the challenges they may face while scaling up their businesses.

The objective of the MDP is to equip the participants to transform their startup enterprise into a viable business model, and also overcome any competency or skill gaps in this context. The programme fee is borne by KSUM and covers the cost of attending, required reading material, board and lodging and a certificate of participation.

**Eligibility:** The startup should be within 3 years of registration/ incorporation

**Selection Criteria:** Startup entrepreneurs who have developed their product and are in the commercialisation stage

## Industrial Connects

### **BPCL**

Public sector oil refiner Bharat Petroleum Corporation Ltd (BPCL) signed a MoU with Kerala Startup Mission to provide aid and investments in start-ups across various technology domains. It will also provide exclusive access for selected startups to its R&D facilities, technical expertise and industry network. BPCL will utilise selected products designed by these startups in its business verticals on a chargeable basis. It will also conduct workshops to promote startup culture in Kerala.

### **HPCL**

The startup scheme of Hindustan Petroleum Corporation Limited (HPCL) is a programme to enable innovators and entrepreneurs pursue a promising idea, establish and validate proof of concept (POC) and kick off commercialisation. HPCL aims to assist innovators and entrepreneurs with this process.

### **GTECH**

GTech Innovation Focus Group, an initiative by Group of Technology Companies (G-Tech) to promote innovation and entrepreneurship in Kerala has initiated the Adopt A Young Idea (AAYI) programme to identify and adopt potential ideas and nurture them towards maturity. The key objective of the programme is to create socially relevant projects that can be commercialised and made viable.

### **UNTIL**

The UN Technology Innovation Labs (UNTIL) are designed to move humanity forward, faster by focusing on the use of innovative technology to solve some of humanity's most pressing problems. Recognising that innovation plays a critical role in moving the United Nations forward and acknowledging that the United Nations' ability to innovate and engage in partnerships will be a significant factor in the efforts to successfully implement the SDGs (and the broader mandates of the United Nations), the UNTIL Lab programme is designed to support the journey to review, build, adopt and implement technology solutions to address problems that the Member States are facing. Each UNTIL is based on different humanitarian themes that are central to the needs of each individual labs specific geolocation. The labs will use AI, Blockchain, IoT and other high-tech tools to develop technology solutions that will be open source and available globally to all member states once operational. The goal of the UN Technology Innovation Labs is to function as a startup environment and create a platform for collaborative problem solving between UN resources, private sector, academia and civil society. Each lab will facilitate linking this platform with innovators and mentors from across the globe as well as to facilitate the global exchange of ideas and resources. UNTIL will function as a Laboratory and tool, offering advisory support and guidance that will facilitate problem-solving through hands-on-workshops, immersion-learning, and incubated projects.

## Networking Opportunities

Kerala Startup Mission finances startups to participate in national and international events, and also hosts conferences where startups can pitch their ideas for investment, exhibit their products and interact with industry stalwarts.

### Letsignite

Hosted by LetsVenture, Letsignite is the flagship event for the angel investor fraternity. The event focuses on the key trends that are impacting the investment value chain most significantly, and hosts conferences and workshops to provide investors with a space to share insights, network and connect with marquee investors.

<http://letsignite.in/>

### Techsparks

For eight years, TechSparks has been the best platform to showcase, meet and connect the leaders of India's startup ecosystem with ambitious new entrepreneurs who seek to propel the digital disruption in India. Hosted by YourStory, It features multiple events such as "Stories To Tell", panel discussions, debates, fireside chats, pitches and master-classes from the brightest and most motivated minds in the country.

<https://techsparks.yourstory.com/2017/>

### Nasscom Product Conclave

The rapid assimilation of technology and digitisation in all sectors ranging from ecommerce and banking to manufacturing and healthcare is propelling India towards a 4th Industrial Revolution. NPC endeavours to make attendees aware of which technologies, products and companies will fuel this revolution and which business sectors will lead digital adoption.

<http://productconclave.in>

### Technology Senate

Established in 2003, Technology Senate brings together India's top CIOs and IT decision makers at a common platform. Express Computer, an initiative of the Indian Express Group, has been hosting this IT leadership conclave for the past 14 years. The 2-day conference is an enriching blend of keynote sessions, panel discussions, thought leadership insights and presentations by industry stalwarts. The focus of the discussions is on real-world IT deployments and the latest business insights that attendees can put to practical use.

<http://technologysenate.expresscomputeronline.com/>

### **Unconvention**

Unconvention is Villgro's platform to seek out and nurture social enterprises and grow the social enterprise movement all over India. Since 2009, the Unconvention platform has supported thousands of entrepreneurs through 38 events, which have witnessed 120 pitches, 3,200 attendees, 75 partners and over 100 speakers.

*For information, visit: <http://villgro.org/unconvention/>*

### **TiEcon**

The TiEcon conference is an opportunity for startups and budding companies to learn and grow through information sharing. The 2-day conference will see more than 100 speakers, over 40 concurrent sessions and over 2000 participating delegates, and is an ideal platform for students who wish to become job providers rather than job seekers.

*For information, visit: <http://kerala.tie.org/>*

### **Slush, Helsinki**

Slush is a not-for-profit startup and tech event, organised by a community of entrepreneurs, investors, students and festival organisers. Held annually in Helsinki, Finland, it has evolved from a 300-person conference in 2008 into one of the leading global startup event of its kind in 2017. In 2017, Slush witnessed 20,000 attendees from 130 countries, with over 2,600 startups, 1,500 investors and 600 journalists coming in to be a part of this global networking arena. The primary objective of Slush is to facilitate founder and investor meetings and build a worldwide startup community. Slush also aims to change student attitudes towards entrepreneurship, as it provides a platform for youths and student volunteers to contribute towards the event and hone their entrepreneurial talents.

### **TiE Inflect -SFO**

*For information, visit: <https://www.tieinflect.org/>*

### **GITEX Future Stars - Dubai**

This is where the world's most imaginative ideas are seen in action, where technologies like blockchain and AI come to life as business realities, and where industries evolve in real-time. *For information, visit: <https://www.gitexfuturestars.com/>*

# ILLUSTRATIVE 30 STARTUPS.

*The List of 30 most illustrative startups of Kerala:*

| Company                          | Founder                               | Mobile     | E-Mail Id                        | Website                  | Domain              |
|----------------------------------|---------------------------------------|------------|----------------------------------|--------------------------|---------------------|
| Accubits                         | Jithin                                | 9746227322 | mahadevan@accubits.com           | www.accubits.com         | Blockchain          |
| Agrima Infotech                  | Arun Ravi                             | 9447376521 | nikhil@agrimaryinfotech.com      | www.agrimaryinfotech.com | Foodtech            |
| BestDoc Technology               | Afsal Salu                            | 9686185858 | afsal@bestdocapp.com             | www.bestdocapp.com       | Health Tech         |
| Buildnext Construction Solutions | GopikrishnanV                         | 7506033510 | gk@buildnext.in                  | www.buildnext.in         | Construction        |
| CLAP Research Private Ltd        | Anoop Ambika                          | 9447168522 | anoop.ambika@clapresearch.com    | www.clapresearch.com     | Enterprise Solution |
| Clootrack                        | Shameel Abdulla                       | 9886809638 | shameel@clootrack.com            | www.clootrack.com        | IT Solution         |
| Curvelogics                      | Brijesh                               | 9880103691 | brijesh@curvelogics.com          | www.curvelogics.com      | IT Solution         |
| Exponential Digital solutions    | Binu Koshy                            | N/A        | binukkoshy@gmail.com             | www.10xds.com            | Automation          |
| Eyerov                           | Johns Mathew                          | 9496366763 | johns@eyerov.com                 | www.eyerov.com           | Hardware            |
| Farmers Fresh Zone               | Shajan Babu P S                       | 7293943993 | pradeep@farmersfz.com            | www.farmersfz.com        | Agritech            |
| Genrobotics Innovations          | Vimal Kumar                           | 7012133360 | vimalg@genrobotics.org           | www.genrobotics.org      | Hardware            |
| God's Own Food solutions         | James Joseph                          | 9740877566 | jamesjoseph@hotmail.com          | www.jackfruit365.com     | FMCG                |
| Good Methods Global/CareStack    | Abhilash Krishna                      | 4714000669 | arjun@carestack.com              | www.carestack.com        | IT Solution         |
| Ignitarium Technology Solutions  | Pradeep                               | 8861836454 | pradeep.sukumaran@ignitarium.com | www.ignitarium.com       | Hardware            |
| Inntot Technologies              | Rajith Raman Pillai Indusekharan Nair | 9995883612 | rajith.ri.nair@gmail.com         | www.inntot.com           | Hardware            |

| Company                                | Founder           | Mobile      | E-Mail Id                    | Website                 | Domain      |
|--|-------------------|-------------|------------------------------|-------------------------|-------------|
| Instio                                 | Girish Prabhu     | 9037001485  | girish@instio.co             | www.instio.co           | Hospitality |
| Logidots Technologies                  | Anand             | 9048514599  | anand@logidots.com           | www.logidots.com        | Analytics   |
| Menerva Software                       | Sony Gabriel      | 9448466968  | sgabriel@menervasoftware.com | www.menervasoftware.com | IT Solution |
| Open bank                              | Deena Jacob       | 9740209438  | deena@openbank.co            | www.bankopen.co         | Fintech     |
| Payspoon                               | Kurian George     | 9995809712  | kg@payspoon.com              | www.payspoon.com        | Fintech     |
| Performant systems                     | derrick sebastian | 8590806030  | derrick@perfosys.in          | www.perfosys.in         | N/A         |
| Profoundis                             | Arjun             | 17208555077 | arjun@fullcontact.com        | www.fullcontact.com     | Analytics   |
| Sastra Robotics India                  | Aronin P          | 9447709894  | Aronin@sastrarobotics.com    | www.sastrarobotics.com  | Robotics    |
| Servntire Global                       | Mahesh            | 7994355599  | mohan@servntire.com          | www.servntire.com       | N/A         |
| Student of Fortune E-learning Services | Subash            | 8547232812  | info@solutionasap.com        | www.solutionasap.com    | IT Solution |
| Subdine                                | Nithin            | 9074149739  | info@subdine.com             | www.subdine.com         | IT Solution |
| Sukino Healthcare Solutions            | Rajinish Menon    | 9902357575  | ceo@sukhino.com              | www.sukino.com          | Health Tech |
| Survey Sparrow                         | Shihab Muhammed   | N/A         | shihab@surveysparrow.com     | surveysparrow.com       | Analytics   |
| UnityLiving                            | Jithin Sreedhar   | 9895981814  | jithin@unityliving.com       | www.unityliving.net     | IT Solution |
| Verteil Technologies                   | Satheesh S.       | 9846705700  | satheeshs.tvn@gmail.com      | www.verteil.com         | Travel Tech |

# AWARD WINNING STARTUPS.

Following is the list of Award winning startups of Kerala:

These startups have been featured in various prestigious lists like "13 Indian Blockchain Startups To Watch Out For In 2018 by Inc42 ", and has won innovation and startup challenges i.e "Destination Kerala Startup Awards 2017 ", "Huddle kerala", "Kairali Innotech Best Start up Award 2018 ", "India Innovation Growth Program winner " etc.

| Company                          | Founder                              | Mobile     | E-Mail Id                        | Website            | Domain              |
|----------------------------------|--------------------------------------|------------|----------------------------------|--------------------|---------------------|
| Accubits                         | Jithin                               | 9746227322 | mahadevan@accubits.com           | accubits.com       | Blockchain          |
| Agrima Infotech                  | Arun Ravl                            | 9447376521 | nikhil@agrimaifotech.com         | agrimaifotech.com  | Foodtech            |
| Buildnext Construction Solutions | Gopikrishnan V                       | 7506033510 | gk@buildnext.in                  | buildnext.in       | Construction        |
| CLAP Research Private Ltd        | Anoop Ambika                         | 9447168522 | anoop.ambika@clapresearch.com    | clapresearch.com   | Enterprise Solution |
| Eyerov                           | Johns Mathew                         | 9496366763 | johns@eyerov.com                 | eyerov.com         | Hardware            |
| Farmers Fresh Zone               | Shajan Babu P S                      | 7293943993 | pradeep@farmersfz.com            | farmersfz.com      | Agritech            |
| Genrobotic Innovations           | Vimal Kumar                          | 7012133360 | vimalg@genrobotics.org           | genrobotics.org    | Hardware            |
| CareStacks                       | Abhilash Krishna                     | 4714000669 | arjun@carestack.com              | carestack.com      | IT Solution         |
| Ignitarium Technology Solutions  | Pradeep                              | 8861836454 | pradeep.sukumaran@ignitarium.com | ignitarium.com     | Hardware            |
| Inntot Technologies              | Rajith Raman Pilla Indusekharan Nair | 9995883612 | rajith.ri.nair@gmail.com         | inntot.com         | Hardware            |
| Sastra Robotics India            | Aronin P                             | 9447709894 | Aronin@sastrarobotics.com        | sastrarobotics.com | Robotics            |

| Company                                | Founder            | Mobile     | E-Mail Id                | Website          | Domain      |
|--|--------------------|------------|--------------------------|------------------|-------------|
| Student of Fortune E-learning Services | Subash             | 8547232812 | info@solutionasap.com    | solutionasap.com | IT Solution |
| UnityLiving                            | Jithin Sreedhar    | 9895981814 | jithin@unityliving.com   | unityliving.net  | IT Solution |
| Verteil Technologies                   | Satheesh S.        | 9846705700 | satheeshs.tvm@gmail.com  | verteil.com      | Travel Tech |
| Westghats Technologies                 | Jyothis            | 8129385444 | jyothis.is@westghats.com | westghats.com    | Hardware    |
| Navalt                                 | Sandit Thandeserry | 9895343637 | N/A                      | N/A              | N/A         |
| Appmaker XYZ                           | Saleeh             | 9995556560 | N/A                      | N/A              | N/A         |



# INNOVATIVE PROJECTS.

Following is the list of the on-going Innovative projects in Kerala:

| Idea                           | Product Description  | Contact Person   | Company/IEDC   |
|--------------------------------|--|------------------|--|
| Swasthi Smart Furniture Series | Smart Furniture implements the idea of foldable or self- assembly type furniture which is suitable for populated Cities and smart homes in affordable budget. Its first smart furniture series was SWASTHI SMART FURNITURE SERIES, which was presented as a model of our idea in the KSUM Idea day   | Athira K         | Vidya Academy of Science and Technology              |
| Pepper Plucker Cum Seperator   | Pepper plucker cum separator comprises of two guiding vanes that direct the pepper spikes to the conical drum in which the separation of the pepper grains from the spikes takes place by the rolling action and friction.   | Sreerag V        | Amal Jyothi College of Engineering                   |
| Roadway Mapper                 | This project aims to reduce vehicles falling into potholes, sudden drops by by collecting data to determine the condition of roads and traffic. A sensor array to be attached to a vehicle that detects variations in level, sudden drops and lifts, and other related equilibrium shifts, and processes the gathered data using machine learning algorithms in order to identify potholes, hazards on roads etc. This would allow the competent agencies to set more accurate speed limits and prioritize maintenance. Impact | Athul Ram        | Rajagiri School of Engineering and Technology        |
| Latinno                        | Latinno - Latex carry backpack is a device invented to provide collection, storage and transportation of latex (natural rubber) in an easier, safer and comfortable manner.  | Ajin Omanakuttan | Amal Jyothi College of Engineering                   |
| Parkin                         | Parkin uses LAN and Internet to monitor and parking inside a city. parkin will increase the probability of finding parking space around their destination by creating a new parkin network structure.  | Sujith S         | SCT College of Engineering                           |
| Matrix                         | Matrix is an IoT based security system which offers authentication service with better security than biometric and simple as password in a low cost, which verifies the response of user in real time to a random event  | Sajith Surendran | GEC Thrissur   |
| Cypher                         | Stormpad is a tool used to sieve the right individuals for any job. It maintains a database of their education, achievements, and projects like a resume, but in an extensive manner. The main issue faced while recruiting candidates mentioned by companies is that they can't really understand an individual merely by looking at their resume or by conducting an interview.  | Mathew Varghese  | Mar Athanasius College of Engineering, Kothamangalam |

| <b>Idea</b>   | <b>Product Description</b>  | <b>Contact Person</b> | <b>Company/IEDC</b>                          |
|---|---|-----------------------|--|
| <b>VirtualDeck</b>  | VirtualDeck is a mobile application that can create, scan and share digital business cards.                             | Ajay Zachariah        | Model Engineering College, Thrikkakara       |
| <b>Sentyment</b>  | Its an AI based cybersecurity product.  | Adarsh D              | TKM Engineering College, Kollam              |
| <b>Machines for separating mace from nutmeg</b>                     | The product is a machine to separate mace from nutmeg which is a herculean task for humans.                             | Ajith P Jose          | St Joseph College Engineering & Technology   |
| <b>HotFoot Ticket Mechanism</b>                                     | The product is a solution for managing students concession in public transportation systems.                            | Harikrishna M.S.      | Gurudeva Institute of Science & Technology   |
| <b>YOU CAN</b>  | The team is trying to develop an assistive system for bedridden patients which is automated using brain signal mapping. | Anjana Sunil          | Sahrdaya College of Engineering & Technology |
| <b>Robotic Mobilization Aid For Partially Paralyzed Individuals</b> | Robotic mobilization aid for paraplegic persons, who needs mobility and that cannot be achieved with normal wheelchair. | Leeson Jose           | Sahrdaya College of Engineering & Technology |
| <b>el-KANE Cognitive Assistant</b>                                  | Visually impaired people using Cognitve software and hardware solutions..   | Amjad N               | Elkanio Research Labs                        |

| Idea                                   | Product Description  | Contact Person         | Company/IEDC                              |
|--|--|------------------------|---|
| Neurobuds                              | Brain wave mapping smart earphones   | Nithin Vasanth         | NT Labs Pvt Ltd, Maker Village            |
| Smart Healthcare Solutions             | SYNAPSE acts as a central hub that supports an array of connected devices enabling nurses to manage and monitor clinical practices efficiently   | Vishnu, Sanjai, Sruthi | Evelabs (TIMED)                           |
| Solutions Squad                        | An idea of modern Land surveying Technology which will disrupt current manual land surveying method.   | Christo Jose           | IEDC Sahridaya                            |
| Assistive Bot for children with Autism | To build a Robotic (Non-Humanoid) Companion for children with Autism Spectrum Disorders(ASD) to aid in their education and social skill development, by being a constant part of their lives. This is going to be a small bot that will interact with the autistic child to help them in their learning process. and also accompany them around as an emotional support tool providing haptic, audio, video feedback when necessary. | Roshan                 | Amal Jyothi College of Engineering        |
| TagDrive                               | Low power bluetooth solution to track valuables  | Vishnu Nagaraj         | Alumini - Nehru College of Engineering    |
| CrankPhone                             | A type of phone which can be used only for calling. Mainly focused on phone addicts, who can use this as a primary phone. Others can use this as a secondary phone.  | Nikhil                 | Toc-H Institute of Science and Technology |
| Helios                                 | Helios is a multipurpose, high performance, easy to use multi-copter drone with increased flight capabilities which is designed to assist police and armed forces for surveillance and disaster management.  | Ani Sam Varghese       | Mar Baselious College                     |
| Railbot                                | Automating the USFD (Ultrasonic Flaw Detection System) can increase the efficiency of track testing. USFD automation ensures a full-time inspection with an average coverable length of 10 km per hour. It can detect both the external cracks and the internal one that are unseen, measure its depth and intensity.  | Naseef                 | MES College                               |
| Kineamch Landpro                       | Kinemach LandPro is a multipurpose Agricultural Land Preparation machine which replicates the human hand action of working on soil.  | Ashwanth               | Kinemach Engineering & Machines Pvt Ltd   |

| Idea   | Product Description   | Contact Person | Company/IEDC                                 |
|--|---|----------------|--|
| <b>Automated Portable Rubber Smoke House</b>                       | To fabricate Automated Portable Rubber Smoke House. To improve the grade of the RSS Sheet made by the farmer using scientific flow control mechanisms. Substitute firewood now used with briquettes of higher calorific value. To reduce the time required to 18 hrs from 4-5 days currently. We plan to associate with the rubber board for further development of the project and to get the product to the end user. | Jeevan Joji    | Rajagiri School of Engineering & Technology  |
| <b>Beeswax And Bee venom</b>                                       | Primary objective is to extract maximum honey from the bee boxes. Then to extract maximum products from this agriculture. By expanding this agriculture pollination can be increased and sustainability. Products with better quality is necessary for this society.  | Adhithya       | Vidhya Academy                               |
| <b>Smart Hybrid Power Drive For Agriculture Motor</b>              | The proposed system mainly deals with power sharing and combining the solar and KSEB supply and sharing them depend on the load requirements.   | Vaishnav       | Sahrdaya College Of Engineering              |
| <b>Extra Home Security System</b>                                  | When somebody tries to intrude the house, the photograph of that person is taken by the camera and sent it to the user's smartphone which can be accessed by an Android application and the owner can take necessary actions through the app. LPG leakage can also be detected and alert the owner and neighbors.   | Sooraj         | Jyothi Engineering College                   |
| <b>Extraction Of Silica From Rice Husk &amp; Commercialization</b> | Sand is usually used for the synthesis of silica. In our project we are using rice husk as the raw material which is a waste material in rice processing industries. Using rice husk we can reduce the burning of it in the field itself and can also reduce the usage of sand. We are planning to start a processing industry on this topic  | Gokul Kesav    | Mohandas College Of Engineering              |
| <b>BIOME</b>   | The product utilizes the phototropic nature of microorganisms like Algae and bacteria to fix ambient carbon dioxide. The construction is basically a glass box in which water inoculated with algae is present. An air pump is used to intake air.  | Anna Jelson    | Sahrdaya College of Engineering & Technology |
| <b>Tripbuz</b>   | Tripbuz is a common portal for tourist buses and packages that creates an equal opportunity for registered operators  | Subin          | Vidhya Academy                               |

| Idea  | Product Description   | Contact Person | Company/IEDC                                 |
|---|---|----------------|--|
| <b>Semi-Autonomous Electric Vehicle</b>                         | Our project aims to eliminate pollution by converting an IC Engine car into a fully functional electric car. A car that is intelligent enough to an extent where it can detect a collision and apply brakes, park itself into tight spots and be a non-polluting vehicle.   | Aby            | Rajagiri School Of Engineering & Technology  |
| <b>Brown Filler</b>   | Brownfiller tiles is a paving tile made from brownfiller material. Brown filler is the waste obtained from a glass manufacturing company and its a thermal filler waste. Being completely inert lost all its properties. The brownfiller paving tile made is of high strength and highly economical and environment-friendly. Enhancing properties are thermal insulation and colour sustenance.  | Anju           | Sahrdaya College Of Engineering & Technology |
| <b>Accident Preventive Vehicle System</b>                       | Project helps reduce accidents. The system including many systems in a unit. 1. Intelligent braking system. 2. Alcohol detecting engine off unit, 3. Seat belt based ignition system, 4. Eye blink sensors based automatic braking, 5. Mobile phone detector in driver, 6. Automatic vehicle accident informing system.   | Adarsh K       | SSM Polytechnic College                      |
| <b>Assistive Bed Frame For Sanitation Of Paralysed Patients</b> | Design & develop a low-cost product for aiding paralyzed patients. The major difficulties faced by bedridden patients as well as their caretakers include sanitation, bathing, dress changing, posture maintenance and patient transferring in case of emergency situations. The products currently available in the market are very costly, which cannot be afforded by the majority of people. So this product is a low-cost customizable framework that could be fixed on an existing cot in the home providing all critical facilities required for the bedridden patient.  | Jasmine        | Sahrdaya College Of Engineering & Technology |
| <b>Marijuana And Alcohol Detector</b>                           | The prominent content of marijuana is tetrahydrocannabinol (THC) which is a fat soluble substance. When consumed, THC directly dissolve in blood and it becomes impossible to detect this substance in breath. Since, THC can be found only on body fluids, existing technologies include urine, saliva and blood test, which takes 1-4 week time period for testing. This project is focussed on a handy device for the detection of marijuana and alcohol consumed by people. The matrix that is used in detection of marijuana is oral fluid as it is easy to obtain and also does not interfere with the privacy of the test subject and alcohol is detected from breath-out air. | Manu           | Sahrdaya College Of Engineering & Technology |

| Idea   | Product Description  | Contact Person | Company/IEDC  |
|--|--|----------------|---|
| E-Stick  | This is an electronic multi-handicap (blind and deaf) walking stick which helps measure the distance from obstacles using ultrasonic sensors with the help of mini coin type vibration motors.   | Saheer         | NSS College Of Engineering & Technology                 |
| Autoclean  | The cleaning of the dialysis unit & filter is a tedious task and the reusable filters are cleaned manually in hospitals. The automated reprocessing system for dialyzer filters is a solution to a number of problems such as exposure to strong chemicals, damage to filter due to improper handling as well as current unhygienic cleaning processes. The cleaning of the filter is a 3 stage process, which includes rinsing the filter with water, hydrogen peroxide, filling the filter with formalin and finally storing it. The cost savings associated with reuse is substantial, especially with high-flux synthetic membrane dialyzers, making Autoclean cost effective. | Aswini         | Sahrdaya College Of Engineering & Technology            |
| Cooling Blanket for Neonatal Therapeutic Hypothermia | The title of our project is "Cooling Blanket for Hypothermia in neonates".Our aim is to design a cooling blanket which can reduce the internal body temperature of the neonates which is the solution for Hypothermic disorders in new born babies.The body temperature has to be reduced to 33.5 degrees and to maintain it for 72 hours.This will resolve the problems regarding the disorder.   | Josna          | Federal Institute Of Science And Technology, Fisat IEDC |
| Baltem Gyrate  | Baltem agyrate is a smart spoon with features that help people who are suffering from parkinsson disease and also shivering of hands to have their food more effectively.  | Abhinav        | Adi Shankara College Of Engineering                     |

## State Government

### DIRECTORATE OF INDUSTRIES AND COMMERCE

#### Entrepreneur Support Scheme (ESS)

*Eligibility:* All MSMEs engaged in manufacturing activities are eligible for assistance

*Overview:* The programme extends support to micro, small and medium enterprises by helping them operate flexibly and utilise funds optimally

*Sanctioning Authority:* All assistances under the ESS shall be sanctioned by The General Manager (District Industries Centre) For Startup Support District Level Committee — For Fixed Capital Investment below INR 200 lakhs  
State Level Committee — For Fixed Capital Investment above INR 200 lakhs

*Fiscal Incentives:*

- Investment in land, buildings, plant & machinery, electricity, essential office equipment, pollution control devices and other fixed assets are eligible
- For General Category, assistance is 15% up to a limit of INR 20 lakhs
- For Young (18 to 45 years), Women and SC/ST entrepreneurs, the assistance is 20% up to INR 30 lakhs
- Enterprises in priority sectors are eligible for an additional assistance of 10% up to INR 10 lakhs
- MSMEs started in the districts of Idukki, Wayanad, Kasargode and Pathanamthitta are eligible for an additional support of 10% up to INR 10 lakhs
- Industries set up after acquiring new technology from approved research institutions are eligible for an additional support of 10% up to INR 10 lakhs
- The total assistance an enterprise is eligible for is limited to INR 30 lakhs

*Stages in Entrepreneur Support Scheme:*

- 1st stage: The startup support is provided for enterprises before they commence commercial production. The assistance is limited to 50% of the total eligible support up to INR 3 lakhs on sanctioning the term loan from the bank.
- 2nd stage: The Investment Support is provided after the commencement of commercial production. The entrepreneurs shall apply within one year from the date when production begins. Enterprises undertaking expansion, diversification and modernisation are also eligible for investment support.
- 3rd stage: The Technology Support is provided after commencing production upon the acquisition of new technology. Startups can apply for technology support within 6 months from the date of commencement after installing the new technology from authorised agencies.

For more information, visit <http://industry.kerala.gov.in/index.php/schemes/ess>

## DIRECTORATE OF INDUSTRIES AND COMMERCE

### Assistance Scheme for Handicrafts Artisans (ASHA)

**Overview:** The Assistance Scheme for Handicrafts Artisans (ASHA) replaced the previous scheme “Entrepreneur Assistance Scheme in Handicrafts” and aims to bring artisans in the handicrafts sector under the ambit of a single scheme for availing financial assistance in the form of grant assistance for setting up handicrafts businesses. For eligible applicants, support is also provided as back-end assistance in the form of grants once the enterprise has been commissioned and after filing EM Part II/ Udyog Aadhaar.

**Eligibility:** The applicant should be enrolled as an artisan/craftsman under the office of the Development Commissioner (Handicrafts) or Surabhi, HDCK Ltd., KELPALM, KSBC, KADCO. The artisan has to apply in the prescribed format with copies of bills/ vouchers/ invoice/ assessments in support of the investments claimed as FCI. There is no fee charged for applying for assistance.

**Sanctioning authority:** The General Manager, District Industries Centre will be the sanctioning authority. The assistance amount will be disbursed through bank.

**Fiscal Incentives:** 40% of the expenditure on Fixed Capital Investments (FCI) subject to a ceiling of INR 2 lakhs and 50% of the expenditure on fixed capital investment for women, SC/ST and young artisans subject to a ceiling of INR 3 lakhs will be given as assistance. The principal elements of Fixed Capital Investment include the cost of constructing work shed/workshop, essential tools, equipment, machinery, accessories and electricity. Technology transfer fees, consultancy charges and product/design development charges will also be considered for financial assistance.

For more information, visit <http://industry.kerala.gov.in/index.php/schemes/asha>



## DIRECTORATE OF INDUSTRIES AND COMMERCE

### PM's Employment Generation Programme

**Overview:** PMEGP is a credit linked scheme of the government of India by merging the erstwhile REGP and PMRY schemes. During 2015-16, 734 units were assisted with Rs1,081.61 lakh creating employment to 3,902 persons.

**Sanctioning Authority:** The Scheme is implemented through KVIC and State/UT Khadi & V.I. Boards in Rural areas and through District Industries Centres in urban and rural areas in a ratio of 30:30:40 between KVIC / KVIB / DIC respectively.

**Eligibility:** Assistance under the Scheme is available only to new units yet to be established, and per capita investment should not exceed INR 1 lakh in plain areas and INR 1.50 lakhs in hilly areas.

**Fiscal Incentives:** The rate of subsidy is 15% - 35% of project cost which will be paid into the loan account. The margin to be brought in by the promoter is 5% of the project cost for Special category (SC/ST, OBC, Minority, Women, PH and Ex-Service men) and 10% of the project cost for General category. The maximum project cost can be INR 25 lakhs in manufacturing sector and INR 10 lakhs in Service Sector.

| Particulars           | General Category | Special Category (SC/ST/OBC/Women/Ph/Ex Service) |
|-----------------------|------------------|--|
|                       | Rural            | Urban  |
| Margin Money Grant    | 15%              | 25%  |
| Promoter Contribution | 10%              | 10%  |

## **Kerala Financial Corporation (KFC)**

**Loan schemes / interest rates:** KFC endeavours to provide comprehensive services such as term loan, working capital and special schemes that may be required for the benefit of the SME sector. The interest and principal are to be paid in monthly instalments for all schemes. The extent of financing provided is based on the type of the project and credit rating.

For information regarding Interest rates, extent of financing and maximum period of loans can be found here: <http://www.kfc.org/loan-schemes.php>

## **Kerala State Council for Science Technology and Environment (KSCSTE)**

### **Scheme for promoting young talents in science (SPYTIS)**

**Sanctioning Authority:** Kerala State Council for Science, Technology and Environment has launched a special programme called Scheme for Promoting Young Talents in Science (SPYTIS).

**Eligibility:** Students from schools, polytechnic colleges and those admitted to undergraduate level courses in colleges

**Fiscal Incentives:**

- SPYTIS- I: Under the scheme, a group consisting of 2 or more students of Class VIII-XII from a school will be selected for the award (INR 5,000) for carrying out a science project. The duration of the project is one year.
- SPYTIS-II: Under the scheme, students who have innovative ideas in science & technology and are enrolled in polytechnic colleges a undergraduate courses in colleges will be provided financial assistance of INR 10,000 for conducting projects. The support will be project-based and will be given for a period of one year.

**Features:** Under both schemes, grants will be sanctioned to the host institution and the student has to work under the guidance/supervision of a faculty member. The awardees shall be requested to participate in a Science Talent Fair, Children Science Congress or Kerala Science Congress organized by KSCSTE for presenting their projects/findings.

**Duration:** One year for both schemes (SPYTIS- I & I I).

## **Kerala State Council for Science Technology and Environment (KSCSTE)**

### **Rural Technology Programme (RTP)**

**Overview:** The Kerala State Council for Science, Technology & Environment (KSCSTE) is an apex body that promotes R&D programmes in the rural technology sector by providing financial support for the implementation of project proposals. Rural Technology Programme (RTP) is designed to encourage and promote grassroots innovators and individuals by helping them perfect their ideas in the rural technology space.

**Eligibility:**

- Faculty of research organizations/ academic institutions/ non-governmental organisations in this field
- Grassroot innovators
- Individuals

**Sanctioning Authority:** Ten copies of the project proposal in the prescribed format are to be submitted to the Joint Director, KSCSTE. The Technical Committee for Rural Technology Programmes (TC-RTP) will evaluate the project proposals. The proposals may be submitted throughout the year.

**Fiscal Incentive:** A financial grant up to INR 4 lakhs is awarded based on the recommendations of TC-RTP to the tie-up institution where the innovator/principal investigator intends to implement the project. In addition, the tie-up institution will be eligible for an overhead at 10% of the total project cost.

**Time Period:** 2 years

For more information, visit <http://www.kscste.kerala.gov.in/>

## Kerala Startup Mission

Since 2015, KSUM has been providing seed funding to startups by means of an online portal through which applications are collected. Taking the process online has increased the speed and frequency of seed funding. Startups can receive amounts of up to INR 10 lakh.

Startups need to register via website and the link: <https://startupmission.kerala.gov.in/support/register>

The startup who are registered in the website can directly send the requirement of seed fund to [surya@startupmission.in](mailto:surya@startupmission.in). The application will be verified in the portal on the credibility of the particular startup and then conveyed to the expert panel, following which there is a review meeting for releasing the seed fund.

### **The procedure followed for fund release is as follows:**

- Online company registration on KSUM website
- Online validation of the startup asking for seed funding
- After validation the request will be put forward to an expert committee that comprises technical experts, financial experts and marketing experts
- The startup will then pitch their product to the committee along with the timeline for execution and utilisation of the funds
- Upon approval by the committee KSUM shall release the fund in two or three instalments
- The full process happens in three weeks. The selected startups will be given a cheque at the end of the third week from the date of application
- A total of 35 startups have applied for the seed funding of which 27 startups have been granted the fund. Other startups were requested to iterate their business model or refine the product

## **Kerala State Industrial Development Corporation (KSIDC)**

Kerala State Industrial Development Corporation (KSIDC) is the premier agency of the Government of Kerala, overseeing industrial and investment promotion in Kerala. Formed in 1961, KSIDC's primary objective was to promote, facilitate and finance large- and medium-scale industries and catalyse the development of the physical and social infrastructure necessary for industrial growth in the state.

Over the years KSIDC has become the one-stop solution for any investment in Kerala and the single point of contact for investors setting up shop in the state. KSIDC offers a comprehensive set of services including support in developing business ideas and viable projects, assistance in conducting feasibility studies, providing various financial products tailor-made for different types of investments, handholding and facilitation from project conceptualisation to commissioning, and providing developed infrastructure facilities and guidance for implementation.

A nodal agency for foreign and domestic investments in Kerala, KSIDC facilitates clearances and approvals, and processes various incentive schemes for starting new business ventures. KSIDC acts as a spokesperson of the state for spreading awareness about the startup ecosystem, and also acts as a link between industry and the government. The KSIDC team includes a core group of skilled professionals from various fields like engineering, management, finance and law.

KSIDC has over five decades of proven experience in attracting large volumes of investment in the state. The corporation has so far promoted over 750 projects in the state and has played a vital role in the setting up of pioneering organisations.

### ***Criteria for Seed Funding:***

- Seed Funding shall be provided to innovative ventures/potential start-ups promoted by Young Entrepreneurs, subject to a maximum of INR 25 lakhs per venture or 90% of the initial cost of the project, whichever is lower
- Seed Funding shall be made available to promoters who have incorporated or intend to incorporate Limited Companies for implementation of the venture.
- All the Seed Funding proposals have to be accompanied by a proper business plan
- The promoters have to furnish details as per the Know Your Customer (KYC) norms
- Promoters' Credit Report shall be submitted from Banks/Financial Institution

- Project evaluation shall be done by KSIDC along with entrepreneur assessment.
- The seed fund assistance, if sanctioned, shall be treated as Soft Loan to the company for a period of one year.
- The Company shall take necessary steps to convert the soft loan into Equity Capital at face value within one year from the date of disbursement, subject to the condition that the shareholding of KSIDC shall not exceed 49%. If the Company fails to comply with this condition within one year, the Soft Loan shall be recalled and would become repayable, together with applicable interest, worked out at the bank rate (presently @ 6.50% per annum) as on the date of sanction of financial assistance.
- After conversion of the Soft Loan into Equity, if other investors are identified for major capital infusion for scaling up or commercialisation of the project, KSIDC shall have the option to exit from the venture either by sale of investment to the intended buyers or buy-back of shares by promoter-directors, which shall be based on independent investment valuation. If the book value or face value of shares is more than the price offered by the investors, then the shares would be sold at whichever between the two is higher.
- In case of wilful abandonment of the project or company by promoter-directors, soft loan shall be demanded at funds disbursed plus simple interest from the date of release, worked out at the bank rate (presently @ 6.50% per annum) as on the date of sanction of financial assistance.
- The Promoter-Directors shall not sell or transfer or alienate their equity holding in the company without prior written consent of KSIDC, which shall be subject to standard conditions on right of first refusal for Co-Sale and Tag-Along Rights.
- All proprietary rights, patents, trademarks, logos, copyrights, licences etc., and all revenue streams of the project approved by KSIDC for which the seed fund assistance has been sanctioned, shall be in the name/favour of the company.
- The company shall not undertake any new project or expansion or diversification without the prior sanction of the Corporation, so long as the Corporation holds shares/soft loan in the company.
- KSIDC shall have the right to appoint a Nominee Director or an Observer on the Company's Board as long as KSIDC holds shares /soft loans in the company.
- There shall not be any change in the share holding pattern of the company in the company without prior written consent of KSIDC.

*For more information, visit: <http://www.ksidc.org/startups.php>*

## Central Government: Schemes & Initiatives

In the past couple of years, the Indian government has floated a wide array of startup schemes to encourage the launch and further fuel the growth of the Indian startup ecosystem by supporting the startups, SMEs, MSMEs and Businesses directly and via supporting ecosystem entities such as the Research Institutes, Incubators, Accelerators, etc. The startup schemes by the Indian government has been listed below.

### **Support for International Patent Protection in Electronics & Information Technology (SIP-EIT)**

*Headed by:* Department of Electronics and Information Technology (DeitY)

*Industry Applicable:* IT Services, analytics, enterprise software, technology hardware, Internet of Things, AI

*Eligible For:* MSMEs and technology startups in the ICTE sector

*Fiscal Incentives:* Reimbursement will be limited to a total of INR 15 Lakhs per invention or 50% of the total expenses incurred in filing and processing of the patent application upto grant, whichever is less.

### **Multiplier Grants Scheme (MGS)**

*Headed By:* Department of Electronics and Information Technology (DeitY)

*Industry Applicable:* IT Services, analytics, enterprise software, technology hardware, Internet of Things (IoT), AI (artificial intelligence).

*Eligible For:* Startups, incubator/academia/accelerators. Should have Projects in electronics & information technology

*Overview:* It encourages collaboration between industry and academics/R&D institutions for development of products and packages

*Fiscal Incentives:* Individual industry grants would be limited to a maximum of INR 2 Cr per project and the duration of each project should, preferably, be less than two years. For industry consortiums these figures would be INR 4 Cr and three years.

### **Software Technology Park (STP) Scheme**

*Headed By:* Software Technology Parks of India (STPI)

*Industry Applicable:* IT services, fintech, enterprise software, analytics, AI

*Eligible For:* Software companies

*Overview:* It provides statutory services, data communications servers, incubation facilities, training and value-added services. The scheme allows software companies to set up operations in convenient and inexpensive locations and plan their investment and growth, driven by business needs.

*Fiscal Incentives:* Sales in the DTA up to 50% of the FOB value of exports is permissible and depreciation on computers at accelerated rates up to 100% over five years is permissible.

## **Electronic Development Fund (EDF) Policy**

*Launched In:* N/A

*Headed By:* Department of Electronics and Information Technology (DeitY)

*Industry Applicable:* IT Services, analytics, enterprise software, technology hardware, Internet of Things, AI, nanotechnology

*Eligible For:* Startups pursuing innovation in technology sectors like electronics, IT, and nanoelectronics

*Overview:* Its aim is to achieve “Net Zero Imports” by 2020. The EDF will help attract venture funds, angel funds and seed funds towards R&D and innovation in the specified areas. It will help create a cell of daughter funds and Fund Managers who will be seeking good startups (potential winners) and selecting them based on professional considerations.

*Fiscal Incentives:* The Electronic Development Fund (EDF) is set up as a “Fund of Funds” to participate in professionally-managed “Daughter Funds” which, in turn, will provide risk capital to companies developing new technologies. CANBANK Venture Capital Funds Ltd. (CVCFL) is the Fund Manager for EDF.

## **Modified Special Incentive Package Scheme (M-SIPS)**

*Launched In:* July 2012

*Headed By:* Department of Electronics and Information Technology (DeitY)

*Industry Applicable:* Technology hardware, Internet of Things, aeronautics/aerospace & defence, automotive, non-renewable energy, renewable energy, green technology, and nanotechnology

*Eligible For:* Startups in electronic manufacturing

*Overview:* The scheme aims to support IPR awareness workshops/seminars for disseminating awareness about Intellectual Property Rights.

*Fiscal Incentives:* It provides capital subsidy of 20% in SEZ (25% in non-SEZ) for units engaged in electronics manufacturing. It also provides for reimbursements of CVD/ excise for capital equipment for the non-SEZ units. For some high capital investment projects, the scheme provides for Central Taxes and Duties reimbursement of Central Taxes and Duties.



## **NewGen Innovation and Entrepreneurship Development Centre (NewGen IEDC)**

**Launched In:** N/A

**Headed By:** NewGen Innovation and Entrepreneurship Development Centre (NewGen IEDC)

**Industry Applicable:** Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, AI, AR/VR (augmented + virtual reality), automotive, telecommunication & networking, computer vision, construction, design, non-renewable energy, renewable energy, green technology, fintech, Internet of Things, nanotechnology, social impact, food & Beverages, pets & animals, textiles & apparel.

**Eligibility:** The parent institution should have the requisite expertise and infrastructure. This includes a minimum dedicated space of about 5,000 square feet to establish a NewGen IEDC, library, qualified faculty, workshops, etc.

**Overview:** It helps educational institutions to develop institutional mechanisms to create entrepreneurial culture in S&T academic institutions and to foster techno-entrepreneurship for the generation of wealth and employment by S&T persons.

**Fiscal Incentives:** It provides a limited, one-time, non-recurring financial assistance, up to a maximum of INR 25 Lakhs. Also, non-recurring grants would be provided for supporting working capital cost.

## **Aspire - Scheme for Promotion of Innovation, Entrepreneurship and Agro-industry**

**Headed By:** Steering Committee, Ministry of MSME

**Industry Applicable:** Agriculture, pets & animals, social impact, healthcare & life sciences

**Eligibility:** All MSMEs with an Entrepreneurs Memorandum (EM) registration

**Overview:** Its aim is to set up a network of technology centres and incubation centres to accelerate entrepreneurship and also to promote startups for innovation in rural and agriculture-based industries. It also includes the setting up of Technology Business Incubators (TBIs).

**Fiscal Incentives:**

- One-time grant of 50% of cost of Plant & Machinery excluding the land and infrastructure or an amount up to INR 30 Lakhs, whichever is less, to be provided for supporting 20 existing incubation centres.
- One-time grant of 50% of cost of Plant & Machinery excluding the land and infrastructure or an amount up to INR 100 Lakhs, whichever is less, to be provided for setting up of new incubation centres.
- Support would be provided for incubation of ideas at the inception stag. Each idea would be provided financial support @INR 3 Lakhs per idea to be paid up front to the incubator, with a target of 450 ideas.
- A one-time grant of INR 1 Cr will be provided to the eligible incubator as seed capital. The incubator will invest as debt/ equity funding upto 50% of total project cost or INR 20 Lakhs per startup, whichever is less, with a target of 150 ideas.
- INR 200 Lakhs for accelerators to hold 10 workshops for incubates (out of the existing centres supported and new centres set up) to assist them in creating successful business enterprises. The plan is to conduct 10 such workshops.

## Atal Incubation Centres (AIC)

**Launched In:** N/A

**Headed By:** Atal Innovation Mission (AIM)

**Industry Applicable:** Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, AI, AR/VR (augmented + virtual reality), automotive, telecommunication & networking, computer vision, construction, design, non-renewable energy, renewable energy, green technology, fintech, Internet of Things, nanotechnology, social impact, food & beverages, pets & animals, textiles & apparel.

**Eligibility:** AICs can be established in public/private/public-private partnership mode. These can be established in: Academia (includes higher educational institutes and R&D institutions) and Non-academic (includes companies/ corporates/ technology parks / industrial parks/ any individual/ group of individuals)

**Overview:** AICs are set up under the Atal Innovation Mission (AIM), and aim to support and encourage startups to become successful enterprises. They will provide necessary and adequate infrastructure along with high-quality assistance or services to startups in their early stages of growth. As per a June 16, 2017 Startup India Action Plan status report, NITI Aayog has approved 10 institutes to establish new incubators with a grant of INR 10 Cr each.

**Fiscal Incentives:** AIM will provide a grant-in-aid of INR 10 Cr to each AIC for a maximum of five years to cover the capital and operational expenditure cost incurred in running the centre. The applicant will have to provide a built-up space of at least 10,000 sq. ft to qualify for the financial support.

## Atal Tinkering Laboratories (ATL)

**Launched In:** July 2016

**Headed By:** Atal Innovation Mission

**Industry Applicable:** Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, AI, AR/VR (augmented + virtual reality), automotive, telecommunication & networking, computer vision, construction, design, non-renewable energy, renewable energy, green technology, fintech, Internet of Things, nanotechnology, social impact, food & Beverages, pets & animals, textiles & apparel.

**Eligibility:** Schools (Grade VI – XII) managed by the Government, local body or private trusts/society can apply to set up an ATL

**Overview:** The objective is to foster curiosity, creativity, and imagination in young minds and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing etc. to make them truly future-ready. As per the Startup India Action Plan, 500 Tinkering Labs are to be established. NITI Aayog has selected 457 schools for establishing Tinkering Labs. Of the selected, 350 Tinkering Labs have received a Grant-in-Aid of INR 12 Lakhs each. Earlier this month, NITI Aayog CEO Amitabh Kant stated that, this year, the Atal Innovation Mission (AIM) scheme will look to select 1,000 schools. They will receive a grant of about \$31K (INR 20 Lakhs) each. The money will be utilised to set up tinkering labs where students can learn and develop the innovation mindset.

**Fiscal Incentives:** AIM will provide grant-in-aid that includes a one-time establishment cost of INR 10 Lakhs and operational expenses of INR 10 Lakhs for a maximum period of five years to each ATL.

## Scale-up Support to Establishing Incubation Centres

**Headed By:** NITI Aayog

**Industry Applicable:** Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, AI, AR/VR (augmented + virtual reality), automotive, telecommunication & networking, computer vision, construction, design, non-renewable energy, renewable energy, green technology, fintech, Internet of Things, nanotechnology, social impact, food & Beverages, pets & animals, textiles & apparel.

**Eligibility:** To avail benefits, startup should be a legal entity registered in India as public, private, or public-private partnership and must be in operation for a minimum of three years

**Overview:** This envisages to augment capacity of the Established Incubation Centres in the country. It will provide financial scale-up support to enable established incubation centres. The scheme would radically transform the startup ecosystem in the country by upgrading the Established Incubation Centres to world-class standards.

**Fiscal Incentives:** Grant-in-aid support of INR 10 Cr will be provided in two annual instalments of INR 5 Cr each.

## Enhancement of Competitiveness in the Indian Capital Goods Sector

**Launched In:** November 2015

**Headed By:** Department of Heavy Industries (DHI)

**Industry Applicable:** Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, automotive, construction, non-renewable energy, renewable energy, green technology, Internet of Things, nanotechnology, social impact, food & beverages, textiles & apparel

**Eligibility:** Indian capital goods sector unit or their consortium

**Overview:** The scheme objective is to boost the Indian economy by making the Indian Capital Goods Sector globally competitive. The Technology Acquisition Fund Programme (TAFP) under the scheme provides financial assistance to existing capital goods industrial units for acquiring, transferring and assimilating advanced technologies as well as the development of technologies through contract route, in-house route or joint route in order to reach global standards.

**Fiscal Incentives:** Selected startups will get a one-time grant up to 25% of the cost of the technology acquisition of each technology. Maximum amount given shall not exceed INR 10 Cr.

#### **4E (End to End Energy Efficiency)**

*Launched In:* September 2016

*Headed By:* Small Industries Development Bank of India (SIDBI)

*Industry Applicable:* Sector-agnostic

*Eligibility:* MSME units in the manufacturing or services sector that have been operating for at least three years and have earned cash profit in at least the last two years of operation are eligible. The startup should not be in default to any bank/FI, and should have undergone a process of Detailed Energy Audit (DEA) through a technical agency or group of consultants with BEE certified Energy Auditors. In addition, the Detailed Project Report (DPR) prepared by the technical agency / consultant should have been vetted by the EEC, SIDBI. The unit should also not have availed a Performance Linked Grant under the WB-GEF Project for the proposed EE Project and should be in compliance with the Environment & Social Management Framework.

*Overview:* The scheme has been launched jointly by India SME Technology Services Ltd. (ISTSL) in association with the World Bank, and its main objective is to implement energy efficiency measures on an end-to-end basis. Costs that can be met include (i) capital expenditure including for purchase of equipment/machinery, installation, civil works, commissioning, etc. (ii) any other related expenditure required by the unit, provided it is not more than 50% of (i). It also aims to help startups finance second-hand machinery/equipment for use.

*Fiscal Incentives:* Under the 4E scheme, the MSME unit has to pay only INR 30,000 and applicable taxes, and the balance fee will be paid by SIDBI to the auditors. Up to 90% of the project cost with minimum loan amount of INR 10 Lakhs and maximum loan amount of INR 150 Lakhs per eligible borrower can be granted under this scheme. The eligible loan amount should not exceed one-fifth of the total turnover of the applicant unit. In addition, the repayment period including initial moratorium period of up to six months, shall not be more than 36 months for loans up to INR 100 Lakhs and 60 months for loans beyond INR 100 Lakhs.

## **Pradhan Mantri Mudra Yojana (PMMY)**

**Launched In:** February 2016

**Headed By:** Micro Units Development and Refinance Agency Ltd. (MUDRA)

**Industry Applicable:** Sector-agnostic

**Eligibility:** Non-Corporate Small Business Segment (NCSB) comprising millions of proprietorship / partnership firms running as small manufacturing units, service sector units, shopkeepers, fruits / vegetable vendors, truck operators, food-service units, repair shops, machine operators, small industries, artisans, food processors and others in both rural and urban areas can apply for the loan. All types of manufacturing, trading and service sector activities can get a MUDRA loan.

**Overview:** MUDRA provides refinance support to banks / MFIs for lending to micro-units that have loan requirements of up to INR 10 Lakhs. As per recent media reports, loans extended under the PMMY during 2016-17 have crossed the target of INR 1.8 Lakh Cr. The estimated number of borrowers in this fiscal were more than 4 Cr, of which 70% were women. In addition, for the fiscal year 2017-18 the target has been kept at INR 2.44 Lakh Crore for MUDRA Loan.

**Fiscal Incentives:** MUDRA offers incentives through these interventions:

- Shishu: covering loans upto INR 50,000/-
- Kishor: covering loans above INR 50,000/- and upto INR 5 Lakhs
- Tarun: covering loans above INR 5 Lakhs and upto INR 10 Lakhs
- Generally, loans upto INR 10 Lakhs issued by banks to Micro and Small Enterprises are given without collateral. Within these interventions, MUDRA endeavours meet the requirements of different sectors / business activities as well as business / entrepreneur segments
- Time Period: N/A

## Startup Assistance Scheme

*Launched In:* N/A

*Headed By:* Small Industries Development Bank of India (SIDBI)

*Industry Applicable:* Agnostic

*Eligibility:* Early-stage units where revenue has commenced after product acceptance by at least one corporate customer with repeat orders or, in the case of retail consumers, a trend of revenue for six months has been observed. Only those early-stage MSMEs which are defined in the MSMED Act, 2006 (Constitution of the units to be Private Limited Companies) will be considered eligible. These companies, should not, in general, be in existence for more than 5 years; or have not received adequate and regular bank credit facilities (except under the Credit Guarantee Trust for Micro & Small Enterprise or Overdraft against Fixed Deposits); or could have incurred losses in the past years. However, to avail of scheme benefits, a clear plan for profitability (EBIDTA, cash and net level) over the next two years should be in place.

*Overview:* It aims to provide structured financing for 'startups' and 'early-stage enterprises', primarily in sectors which traditionally do not involve physical assets like technology, biotech, asset-light service sector businesses, web/ mobile-based businesses, clean technologies, social ventures, etc. Innovative business models in other asset-based sectors could also be considered selectively.

*Fiscal Incentives:* The financial assistance provided is need-based, subject to a maximum of INR 200 Lakhs and equity kicker (1%-2% equity on paid-up capital at par or a suitably structured kicker). Currently, 14% rate of interest is applicable on the loan amount.

*Time Period:* The loan repayment tenure is upto 7 years including need-based moratorium.

## National Science & Technology Management Information System (NSTMIS)

*Headed By:* Department of Science and Technology (DST)

*Industry Applicable:* Chemicals, technology hardware, healthcare & lifesciences, aeronautics/aerospace & defence, agriculture, AI, AR/VR (augmented + virtual reality), automotive, telecommunication & networking, computer vision, construction, design, non-renewable energy, renewable energy, green technology, fintech, Internet of Things, nanotechnology, social impact, food & beverages, pets & animals, textiles & apparel

*Eligibility:* Scientists & technologists, statisticians and economists, sociologists as well as development/ planning/ policy experts, management specialists etc. from academic/research institutions, registered societies, voluntary agencies (NGOs), professional bodies & consulting organisations etc. can apply.

*Overview:* DST sponsors research projects/studies to interested investigators / organisations where studies could be taken up in the areas of S&T investment, S&T infrastructure, S&T output, S&T databases, S&T manpower, R&D productivity/efficiency etc.

*Fiscal Incentives:* Grant-in-aid is provided for projects. Overheads on projects are also provided at the rate of 10% of the total project cost for educational institutions and NGOs and 8% for laboratories & institutions under Central Government departments/agencies.

## **Biotechnology Industry Partnership Programme (BIPP)**

*Launched In:* N/A

*Headed By:* Biotechnology Industry Research Assistance Council (BIRAC)

*Industry Applicable:* Healthcare & life sciences

*Eligibility:* An Indian company, whether small, medium, or large with a DSIR-recognised in-house R&D unit, is eligible under this scheme. Also, a joint association of an Indian company and national R&D organisations and institutions; as well as a group of Indian companies along with national research organisations etc. are eligible.

*Overview:* The scheme is a government partnership with industries for support on a cost-sharing basis for path-breaking research in frontier futuristic technology areas having major economic potential and making the Indian industry globally competitive. It is focused on IP creation with ownership retained by Indian industry and, wherever relevant, by collaborating scientists.

*Fiscal Incentives:* The eligible stakeholders are provided support for high-risk, accelerated technology development especially in futuristic technologies. Support is also provided for companies working in very high-risk, nationally- and socially-relevant areas, with no assured market. It provides for product evaluation and validation through limited and large-scale field trials for agriculture products and clinical trials (Phase I, II, III) for health care products, and also supports research project for novel IP generation.

## **Industry Innovation Programme on Medical Electronics (IIPME)**

*Launched In:* N/A

*Headed By:* Biotechnology Industry Research Assistance Council (BIRAC)

*Industry Applicable:* Healthcare & life sciences

*Eligibility:* Indian startups which are less than three years old from date of advertisement which have 51% ownership, Indian LLPs and those which have Department of Scientific and Industrial Research (DSIR) Recognition (only for early transition & transition to scale) are eligible to apply under the scheme.

*Overview:* BIRAC aims to promote and foster cutting-edge technologies in the field of medical electronics through this scheme. The project IIPME is a partnership project between the Department of Electronics and Information Technology, the Ministry of Communications and Information Technology, the Government of India and the Biotechnology Industry Research Assistance Council, a public sector undertaking of the Department of Biotechnology, Ministry of Science and Technology, Government of India.

*Fiscal Incentives:* The loan and grant are provided according to the startup stage. The Seed Grant (Idea to PoC) is INR 50 Lakhs for 18 months, early transition funding includes INR 100 Lakhs for 24 months and for those transitioning to scale, a mix of grant and loan for 24 months is provided.

## **SPARSH (Social Innovation programme for Products: Affordable & Relevant to Societal Health)**

*Launched In:* N/A

*Headed By:* BIRAC

*Industry Applicable:* Healthcare & life sciences

*Eligibility:* If at idea and PoC stage:

- Biotechnology Indian startups should be incorporated under the Indian Companies Act and have a minimum of 51% Indian Ownership. They should also be less than three years old on the date of advertisement, and hold Indian citizenship
- Limited Liability Partnership (LLP) should be incorporated under the Limited Liability Partnership Act, 2008. It should also be less than three years old on the date of advertisement, and a minimum half of the persons who subscribed their names to the LLP document as its partners should be Indian citizens
- Indian academic scientists, researchers, PhDs, medical degree holders, biomedical engineering graduates (who must be willing to incubate in a business incubator)
- Proprietorship concern established by an Indian citizen and a certificate/license should be issued by the municipal authorities under the Shop & Establishment Act or any other relevant statute
- No DSIR certification is required

*If at Proof of Concept to Validation stage:*

- Companies incorporated under the Indian Companies Act with a minimum of 51% Indian ownership
- DSIR recognition
- Limited Liability Partnership (LLP) incorporated under the Limited Liability Partnership Act, 2008
- Indian institution/ universities/ public research organisation who can become co-applicants along with the company/LLP as main applicant established in India and having NAAC/ UGC/ AICTE or any equivalent recognition certificate
- Partnership firms/ society/ trust/ NGO/ foundation/ association established in India under the relevant Indian Law, with at least half of the stakeholders (partners/ trustees/ members/ associates etc) as Indians



Furthermore, access to Innovative Pilot Scale Delivery Models is provided only to:

- Companies incorporated under the Indian Companies Act having a minimum of 51% Indian ownership
- DSIR recognition
- The product should have gained necessary approvals from the concerned regulatory authorities for pilot studies
- It is recommended that the projects show partnership or a consortium between the product/service innovator company, an implementer/deployer (research foundations, Section 25 companies etc.) and clinical partner(s). Any such partner for execution/ implementation can become a co-applicant in the proposal

**Overview:** The scheme intends to create a pool of social innovators in the biotech arena who will identify specific needs and gaps in healthcare. The social innovators will be provided with financial and technical support for developing market-based solutions that have the potential to bring cost-effective healthcare breakthroughs to those who require it.

**Fiscal Incentives:** For startups at idea to proof of concept (PoC) stage, grant-in-aid up to INR 50 Lakhs for a period up to 18 months is available. For those at PoC to validation stage, the amount remains the same but the time period increases to 24 months. In case of access to Innovative Pilot Scale Delivery Models, granting aid for a period up to 24 months is provided. The project cost sanctioned for the company would be matched equally by BIRAC and the company.

## **Promoting Innovations in Individuals, Startups and MSMEs (PRISM)**

**Headed By:** Council of Scientific & Industrial Research

**Industry Applicable:** Sector-agnostic

**Eligibility:** The scheme runs in two phases. For PRISM I, any Indian citizen including student innovators can apply. For PRISM II, PRISM innovators or those who have successfully demonstrated proof of concept with the support of government institution/agency; PRISM-R&D proposals and public funded - R&D institutes/ autonomous institutions/ laboratories/ academic institutes etc. are eligible.

**Overview:** The scheme provides grants, technical guidance and mentoring to individual innovators by incubating their idea towards the creation of new enterprises in phases. It also provides grant-in-aid support to technology solution providers developing solutions designed to help the MSME cluster.

**Fiscal Incentives:**

- PRISM Phase-I Category-I: For proof of concept/prototype/models, with project cost upto INR 5 Lakhs, a maximum of INR 2 Lakhs or 90% of the total project cost (whichever is less) is provided
- PRISM Phase-I, Category-II: For fabrication of working model/ process

## Opportunities For Startups

Kerala has a unique model of economic development, leveraging its high-quality manpower and better standard of living. The high rate of literacy and strong education systems at all levels has enabled the State to create educated manpower who excel in multiple sectors. Being a state with limited industrial development, the State could not exploit these human resources adequately, leading to migration of Keralites to other parts of the globe, especially to Gulf countries. With the advent of Knowledge industries, this trend however, has slowed down substantially during past few years. In order to channelize the strength of its education systems to create a sustainable ecosystem of Startups, Govt. of Kerala has put substantial emphasis on developing startups right from colleges itself. With the formulation of first Student Startup Policy in India, way back in 2014, Government has made clear its intentions to create a conducive environment for a “ground up” growth of startups in the state.

Kerala follows a multi-prong approach for startup development. With a host of mini incubators, commonly known as Innovation Entrepreneurship Development Centers — attached to more than two hundred technical education institutes spread over 300,000 sq ft of incubation space in specialised domains, with high-end Fab Labs infrastructure set up in association with Centre of Bits and Atoms, MIT USA, skill development initiatives in Industry 4.0 technologies — Kerala is providing a right environment for budding startups focusing on high-end technology products, be it electronic hardware, biotech or space tech. The state government also positions itself as an early marketplace of startups allowing direct purchase of products and services from startups and also operates a Fund-of-Fund scheme to provide angel funding for early-stage ventures. All these provide right opportunity for startups from across the country to explore Kerala as a right cradle for their growth and development.

Kerala is just recovering from the August 2018 devastating flood, and is initiating a massive exercise of rebuilding which is estimated to be in excess of INR 30,000 Cr. Startups with innovative solutions that hasten the pace of development have a huge opportunity to partner in this rebuilding exercise. Kerala invites such innovative startups to join its ecosystem.

## THE WAY FORWARD

In 2017, KSUM announced that it would extend financial support for startups in the state to seven years from the current five. These benefits are also extended to merged, acquired and amalgamated startups. This is a welcome move for product development ventures that typically take longer to mature than service companies, and highlights KSUM's dedication towards understanding and responding to the needs of the startups under its wing. Further financial initiatives are also in the making, including a fund of funds that is to be set up during 2017-2020 with a corpus of around INR 500 Cr.

KSUM and the Government of Kerala continue to demonstrate commitment towards making Kerala future-ready. The state government, for instance, is planning to address the shortage of skilled manpower by introducing online courses on essential skills like product engineering, design thinking and customer orientation in engineering colleges. As technology continues growing exponentially and global business becomes ever more demanding, the creation of smart, agile, tech-savvy and future-oriented businesses will become the need of the hour.

Startups, more than ever, are the answer to this — their growth is often impeded, however, by the lack of funding, poorly designed business models and an inherent fear of failing. In this context, KSUM can play a significant role in channelising funds where they are most needed and bringing startups and industry leaders together to learn and grow from each other — as the catalyst in the intricate network of stakeholders in the startup ecosystem, it has the power to take its success so far to even greater heights and establish Kerala as a truly global contender in the competitive world of modern business.

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# Inc42

Inc42 is a new-age digital media platform which brings its readers all the important news, views, developments, and insights on the startup and technology ecosystem of India. We decode the jargon, make sense of the noise, and tell you what you need to know in a variety of formats — well-rounded news stories, analysis, interviews, features, long forms, videos, and more. Inc42's twin mission, apart from educating its audiences, is also to be an enabler for the Indian startup ecosystem. Our special research and data-backed reports on the health of the Indian startup ecosystem aim to help startups and ecosystem stakeholders be prepared for and emerge as winners in the ongoing technology revolution in India.

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## Datalabs.

Inc42 has published over 20 reports in the last year through Inc42 DataLabs, which is tasked with producing detailed research reports covering diverse industries and startup ecosystem entities spread across the 29 states and seven Union territories of India. The data from our DataLabs reports has been cited by many reputed publications, including Mary Meeker's annual report.



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# Kerala

*Startup Ecosystem Report*

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