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2022

THE STATE OF
KERALA STARTUP
ECOSYSTEM
REPORT

POWERED BY

KERALA
STARTUP MISSION®

MESSAGE BY

PINARAYI VIJAYAN

Chief Minister of Kerala

India is the world's third largest Startup Ecosystem with more than 66,000 Startups. And as far as Kerala is concerned, we are in the forefront of the Startup ecosystem in India. Startup India Ranking has placed Kerala as one of the top Indian States which has built a robust Startup environment. Each State has a significant role to play in the overall development of our national Startup ecosystem. Kerala is poised to play its role to perfection by setting up 15,000 Startups and creating 200,000 jobs in new and emerging technologies during the tenure of this Government.

The Government of Kerala plans to set up an Emerging Technology Startup Hub in the State capital considering the vital role of Startups in the present scenario. Various Government initiatives such as IEDC (Innovation and Entrepreneurship Development Centres for Colleges), YIP (Young Innovators Programme), programmes for incubation and acceleration, corporate innovation, and so on, have made Kerala the best place in the country to set up businesses. We are keen to further develop our Startup ecosystem. Accordingly, the Kerala Startup Mission has initiated several activities to create awareners about our activities, especially among youngsters from all walks of life.

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Kerala has consistently ranked high among Indian States with regard to education, healthcare and human development indices. Now, we are seeking to transform the State into a knowledge based economy. We have a wide range of highly qualified and skilled human resources and a world class physical and digital infrastructure that can attract knowledge based companies. We aim to develop our strengths further by promoting industries that are most suitable to

the State, like IT, BT, pharmaceuticals, food processing, services and so on. Startups are making a big impact in each of these industries around the world, and as Kerala has the best Startup ecosystem in the country, they can make a significant contribution by establishing themselves in the State.

The Government of Kerala strives to utilise technology in such a way that it transforms society and enables human progress. The idea is to re-invent various sectors like education, health, business, services and so on, using technology tools like AI and machine learning. It is not just physical infrastructure that we are focusing on; we are preparing the much required digital infrastructure as well. We are promoting Startups like never before by providing both technical and financial support. We are also investing in skill development platforms, apart from ensuring last mile connectivity. We invite Startups from across the globe to innovate from Kerala.

Pinarayi Vijayan

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FOREWORD

DR. RATHAN.U. KELKAR (IAS)

Secretary, Electronics & IT Govt. Of Kerala

Kerala is at the forefront of implementing various innovative technology projects, e-governance initiatives, e-literacy programmes and the creation of cutting edge technology infrastructure facilities.

The first step towards fostering the startup ecosystem was taken in April 2006 with the establishment of a DST (Department of Science & Technology) approved incubator named Technopark Technology Business Incubator. The state government, understanding the importance of supporting the startup ecosystem has upgraded the Incubator to the State Nodal Agency and rebranded it as Kerala Startup Mission.

Since 2015, KSUM has made its mission to discover, support, nurture and establish startups throughout the state. KSUM'S efforts over the past decade have helped the state in amplifying the number of new startups, which in turn have been able to come up with viable and scalable products, catering to problem-specific solutions and those trying to tackle various societal problems. Envisaging the various hurdles and challenges a startup faces in our system, KSUM has moulded several programs that foster the needs of the startup. These programmes encompass the entire life cycle of a startup, from its ideation stage to its final stage of establishment. With more than a decade of experience in the startup ecosystem, KSUM has been able to foster the startup needs with extreme efficiency, foreseeing future needs and framing policy.

KSUM houses multiple incubators, innovation zones, and accelerators to support the startups by creating world-class infrastructure facilities across the state. The Maker Village – India's largest electronic hardware incubator and Electronics System Design and Manufacturing (ESDM) facility is supported by KSUM to support hardware startups.

In continuation to support sector-specific startups and programmes, the Digital Hub was launched in 2021, set up in a two lakh sq ft space with the capacity to support at least 200 startups. Bionest is part of KSUM'S state of the art biotechnology instrumentation platform to promote and develop new entrepreneurs.

Research Innovation Network Kerala (RINK) operates actively to mould a culture of entrepreneurship, thus delivering the best motivation for a larger circle of researchers. This, in turn, utilises the huge research potential of Kerala, RINK will provide an interdisciplinary workspace for research institutions from various

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industrial sectors. Fab Lab Kerala Network consists of one Super Fab Lab and 22 Fab Labs across the state, have been designed in such a way that, people with minimal training can come and work on developing their own technology products.

KSUM also aims to create a global platform for its entrepreneurs by giving mentorship and conducting exchange programs. Scale-up programmes like Fail Fast or Succeed enable startups to evaluate themselves and guide them through various stages of development. KSUM also envisions bringing in more women participation in the startup ecosystem by running activities at the school level and providing them with an introduction to entrepreneurship at an early stage. KSUM will also be focusing on healthtech development in the state by supporting health care startups and by collaborating with reputed knowledge partners.

Accelerator programmes are an essential part of the startup ecosystem as it acts as a booster to catapult and support early-stage, growth-driven companies through education, mentorship and financing. Corporate Innovate Network is a cohort-based Open Innovation Programme undertaken by KSUM that will enable startups to collaborate with a cohort of startups to build a joint solution for corporate challenge areas, client projects of corporates and solving prevailing industry problem statements.

Looking today, the organisation has been able to build a vibrant ecosystem allowing technology entrepreneurs to pursue their goals and dreams by providing them complete support in the areas of Incubation space, Seed loans & Grants, Business Investor connections & networking events/exhibitions, Fablabs, R&D. KSUM has also branched out to support women entrepreneurs, Medical & Cancer Research, Driving Entrepreneurship for students by setting up IEDC cells in academic institutes and other state CSR activities. All of these secure KSUM's spot as the go-to destination for aspiring entrepreneurial startups within the state.

This report provides a comprehensive view of the overall impact the mission has had on the startup ecosystem and also acts as a showcase of various stakeholders, their interplay, and policy interventions that shape the Kerala startup ecosystem.

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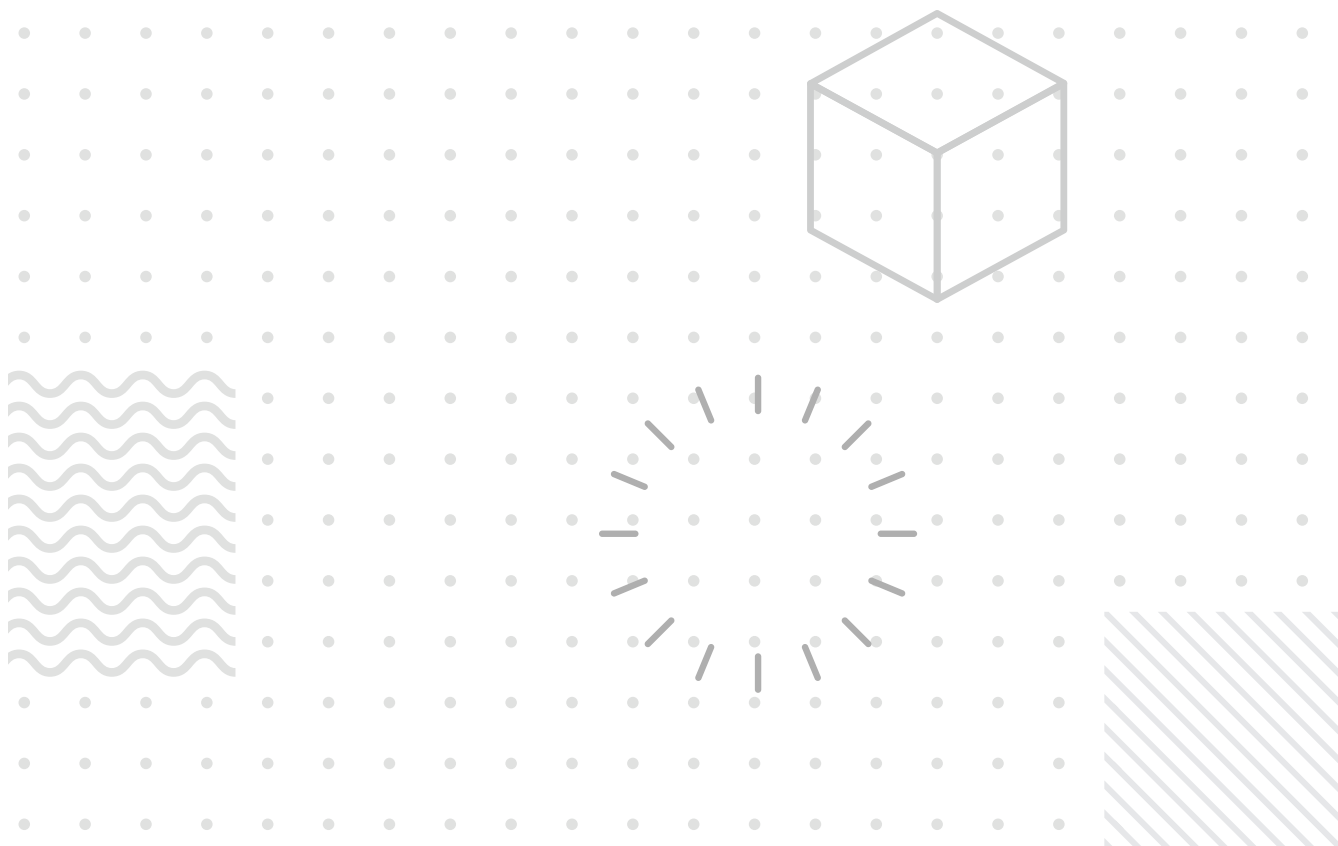
PREFACE

ANOOP AMBIKA
CEO, KSUM

Building on the continuous efforts of Kerala Startup Mission to promote entrepreneurship and innovation in the State, the aim over the next three years is to broaden the umbrella of services provided by Kerala Startup Mission to a much wider spectrum. Focusing developments in fields that have a direct influence on society will be the immediate goals. While keeping up our outstanding work in enterprise software the focus will also broaden to sectors like food, clean water, affordable healthcare, Spacetech, circular economy, and the creator economy.

The Government of Kerala has dubbed 2022 the Year of Entrepreneurs, and has set an ambitious goal of creating 15,000 startups over the next five years. Various government initiatives such as Innovation and Entrepreneurship Development Centers (IEDCs), Young Innovators Programs, and incubation and acceleration programs are joining in the effort in making Kerala a hub for entrepreneurs. Extending our programs from Universities and Colleges to rural entrepreneurs and innovators will be of prime importance as this will help to tap the vast range of rural resources in Kerala. Setting up innovation zones in departments like Kerala Electricity Board Limited

and Kerala Water Authority chalking out various plans to make the best use of our startups by working closely with these innovation zones will lead to unlocking the huge knowledge potential within these organizations, more government departments will be provided with the innovation zones to bring problem statements which can be solved by the startups from across the country.

The need for connected healthcare technology solutions has accelerated since the pandemic and this in turn has opened a wide range of opportunities for new and innovative ideas in the healthtech sector. Biotechnology has spread its wings so far that now biotechnologists are in demand in many unconventional industries like textile, food industry, corporate, legal, etc.The same goes for agriculture as innovation is leading an evolution in agricultural practices, thereby reducing losses and increasing efficiency. Use of digital and analytic tools is driving continuous improvement in agriculture, and the trend is here to stay, resulting in improving crop yields and helping to increase the income of the farming community. KSUM will be devising programmes which will create a social impact.

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NOTE

JOHN M THOMAS

Former CEO , KSUM

The launch of Kerala Startup mission has acted as a catalyst in promoting the startup ecosystem in the state which has seen exponential growth in the number of new startups and investment coming to the state since the launch of the organisation. The various initiatives taken up by the Kerala startup mission have helped in creating an ideal ecosystem for startups which has resulted in the Startup India, DPIIT recognition of Kerala as the top performer in the state startup ranking in 2018 and 2019.

With 4,000+ startups registered to date, INR 20 Cr Grants disbursed, INR 1,000 Cr Fund of Fund, 63+ Incubators and 10 L Sq Ft Office Space allotted the Kerala Startup Mission has been able to establish itself as an inevitable part of not only Kerala's but also India's Technology Startup sector.
'Digital Hub' at Technology Innovation Zone in Kochi by the Kerala Startup Mission is envisaged to be a destination for designing and prototyping. The 4 lakh sq. ft. campus, including the already functioning Integrated Startup Complex can support 365 startups. KSUM also has campuses in Trivandrum, Calicut, Palakkad and Kasargod.
Kerala Startup Mission has introduced several schemes to support and cater to the various needs of startups in Kerala. Soft Loan Scheme for Women Entrepreneurs, a seed fund for women entrepreneurs, startup community's development

and partnership programmes, innovation and entrepreneurship development centres for students, innovation grants, loans, international exposure programmes, business for startups, and government as a marketplace are among the various schemes and policies provided by the Kerala Startup Mission.

KSUM also offers a number of startup programmes for budding innovators. Programs like Fail Fast or Succeed, Physical Incubation, Norka Pravasi Startup Program, Cross-sell Platform, Accelerator, and Corporate Social Responsibility activities are all various support programs provided by KSUM.

KSUM also has a wide range of funding schemes that play a vital role in providing much-needed support for Startups in their different stages of development. The government of Kerala has introduced the Scheme, Innovation Grant and Idea Grant and Productisation Grant/ Scale-up grant are given to encourage innovations.

KSUM has introduced the Seed Support scheme to provide financial assistance to startups to foster the formation and development of innovative, technology-based business enterprises that will stimulate the economy of Kerala through venture creations, increased employment and leveraging of private investment.
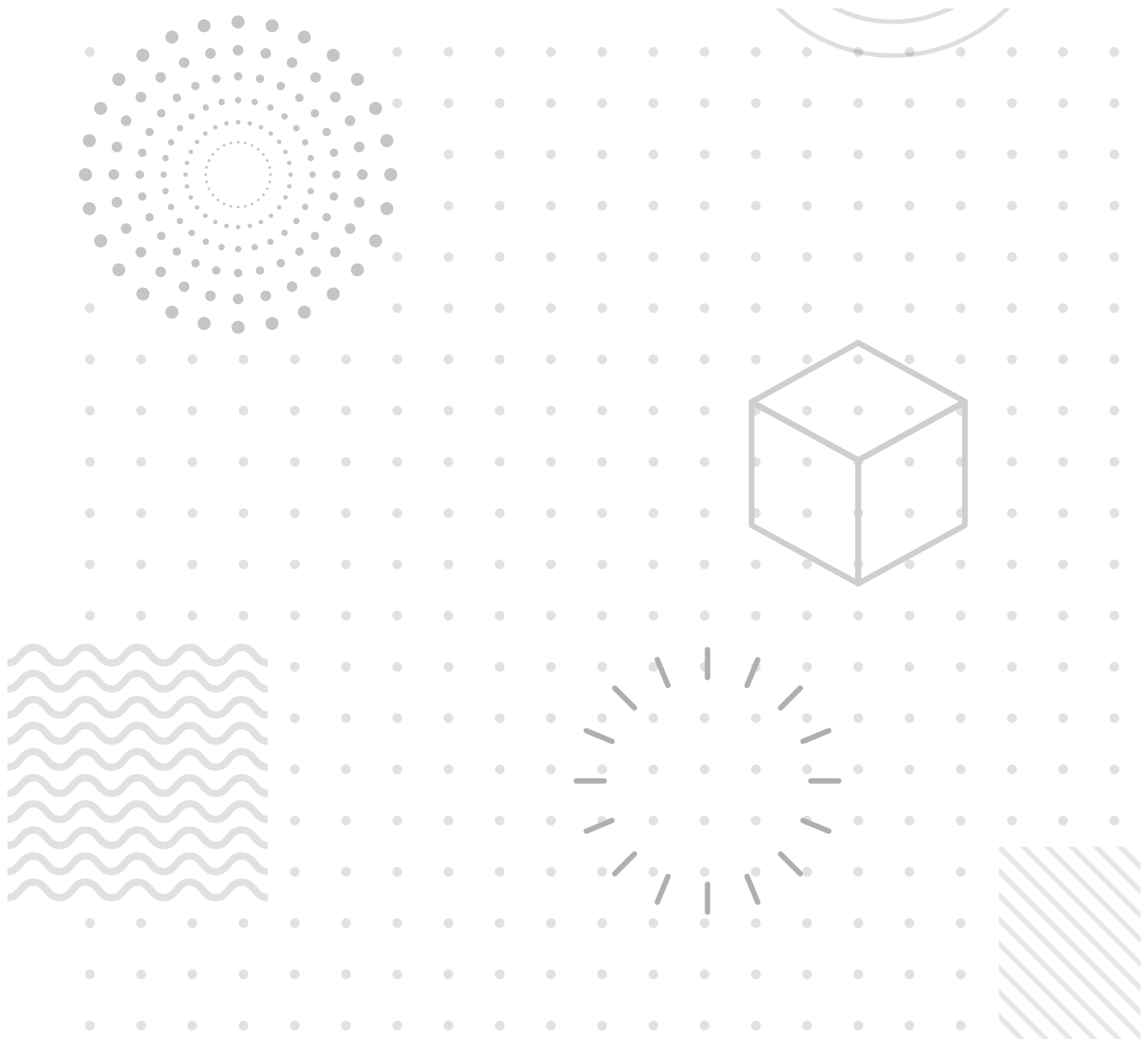
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For early stage equity funding, KSUM is partnering with SEBI accredited Venture Capital Funds for the creation of a corpus fund for supporting the emerging startups in the state.

Public Procurement Summit 2022 was organised with a focus on bridging the gap between the vibrant startups and the Government Departments. Kerala has become the first state in India to provide direct recruitment from startups for government departments. The facilitation mechanism includes Direct Procurement from startups Department Facilitation Demand Day Demo Day and Innovation Zone.

Aiming to tap into the growing fintech market in India, Fintech Summit 2022 brought together attendance of over 250 fintech professionals and speakers who're shaping the current and future of payments and digital banking & financial products & services. Kerala's first fintech accelerator cohort — 'Open up' was also launched during the programme. Open has become the 100th Unicorn Company in India, also the first in Kerala which is a startup registered under Kerala Startup Mission.

These various innovative policies and programs have played a vital role in establishing KSUM as the harbinger of innovation in Kerala. Kerala Startup Mission has a significant role to play in helping India project itself as a technological giant competing with the very best across the world and in providing the best of facilities, thereby attracting more and more innovative minds to the country.
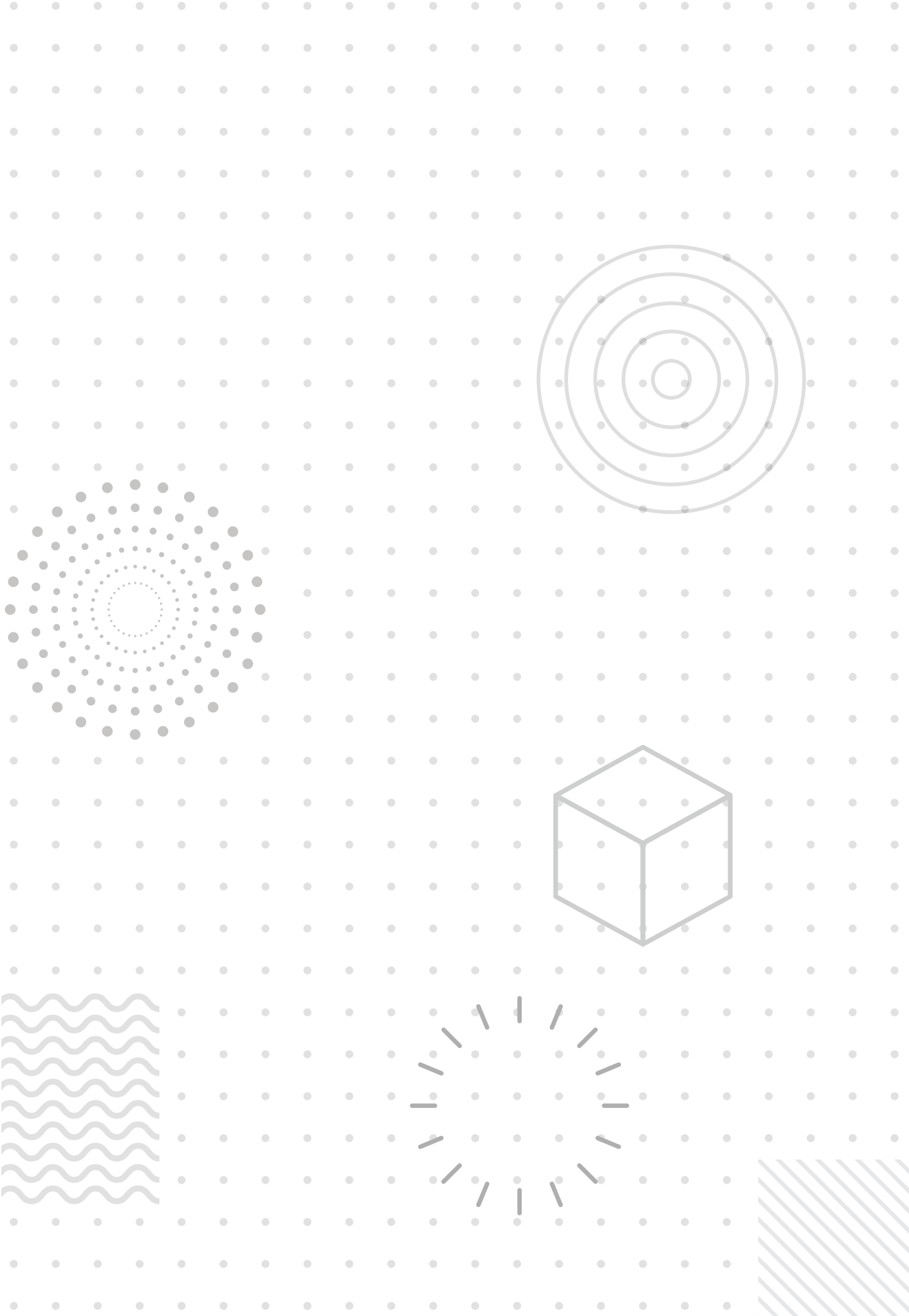
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Table Of Contents

Kerala Startup Ecosystem: Key Highlights

30K+
Number Of Aspiring Entrepreneurs

4K+
Number Of Startups

$101 Mn+
Fund Of Funds For Startups (FoF) Created By The State Government

$551Mn+
Venture Capital Funding

40K+
Jobs Created By Startups

$2.8 Mn
Innovation Grant Provided By The State Government

63
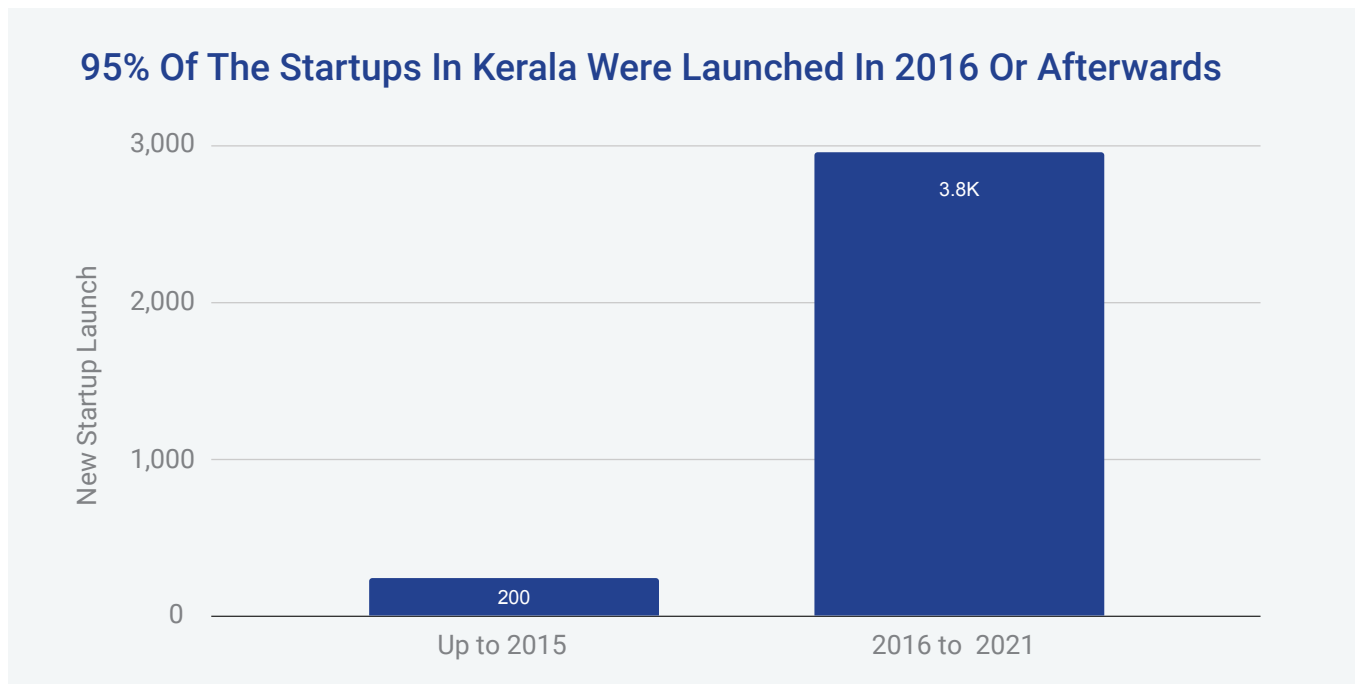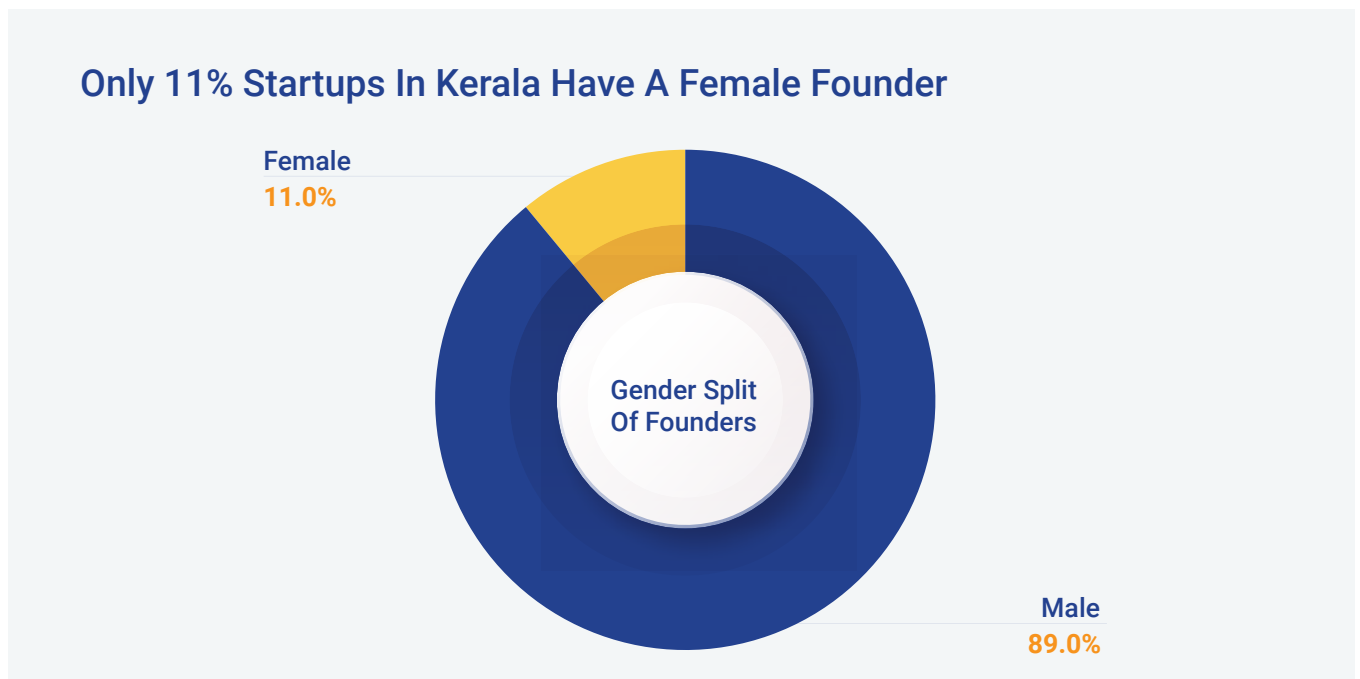Number Of Active Incubators In The State

375+
Number of IEDCs/Mini Incubators Operating In The State

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The Rise Of Kerala's Startup Ecosystem

Between 2016 and 2021 the Kerala startup ecosystem has witnessed the launch of over 4K startups. Out of the total 95% of the startups were launched in the past five years (2016 to 2021).

95% Of The Startups In Kerala Were Launched In 2016 Or Afterwards

New Startup Launch

Up to 2015	2016 to 2021
200	3.8K

However, in 2021, the pace of new startup registrations in the state has slowed down. Macroeconomic factors such as — the pandemic, economic slowdown and an atmosphere of uncertainty, are one of the major reasons behind this dip in Kerala and even in the overall startup ecosystem.

Only 11% Startups In Kerala Have A Female Founder

Female
11.0%

Gender Split
Of Founders

Male
89.0%

Kerala has always stood out as one of India's most literate (literacy rate 92.2%) and skilled states. The state has also efficiently interlinked schools, colleges, incubators, government institutions and startups to build a well-orchestrated ecosystem. This has helped create excellent opportunities for innovation, investment and entrepreneurship in the state.

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$551 Mn Venture Capital Raised Across 109 Deals Since 2015

97% of the total capital was invested post-2015
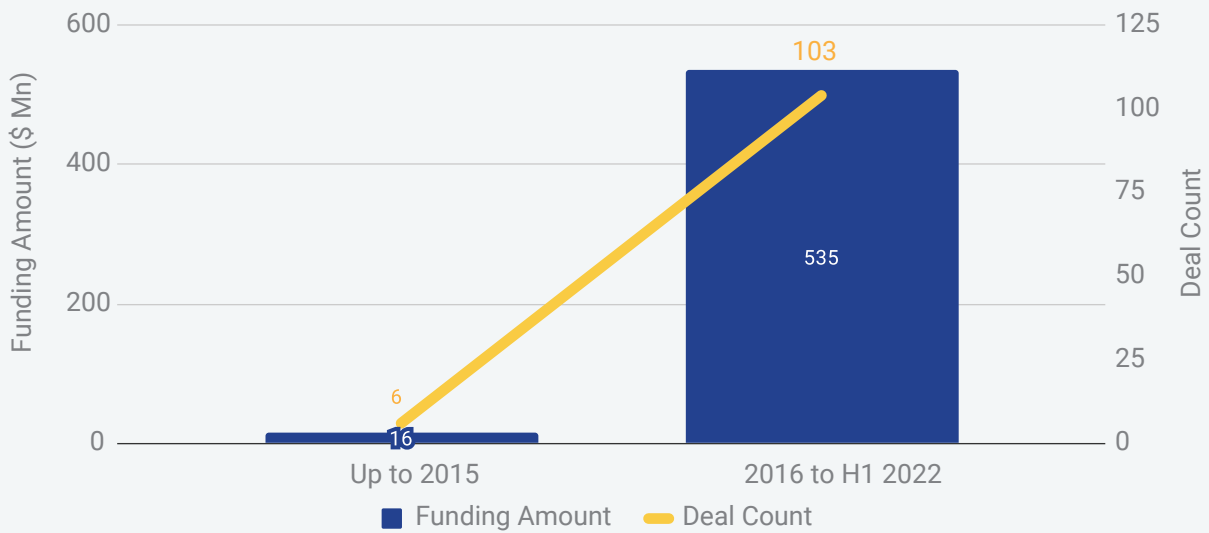
Source: KSUM, Inc42
INR to USD exchange rate is 80
Note: A startup is considered Kerala-based if the company is headquartered in Kerala, registered with Kerala RoC or has a branch/office in Kerala (only in case of international registration of the company). Graph updated on 20 December 2022

Fintech and SaaS (enterprisetech) startups are at the forefront of raising venture capital in Kerala. Together, the sectors accounted for 66% ($364 Mn out of the total $551 Mn) of the investments bagged by Kerala-based startups since 2015.

Fintech And SaaS Startups Lead The Funding Charts In Kerala
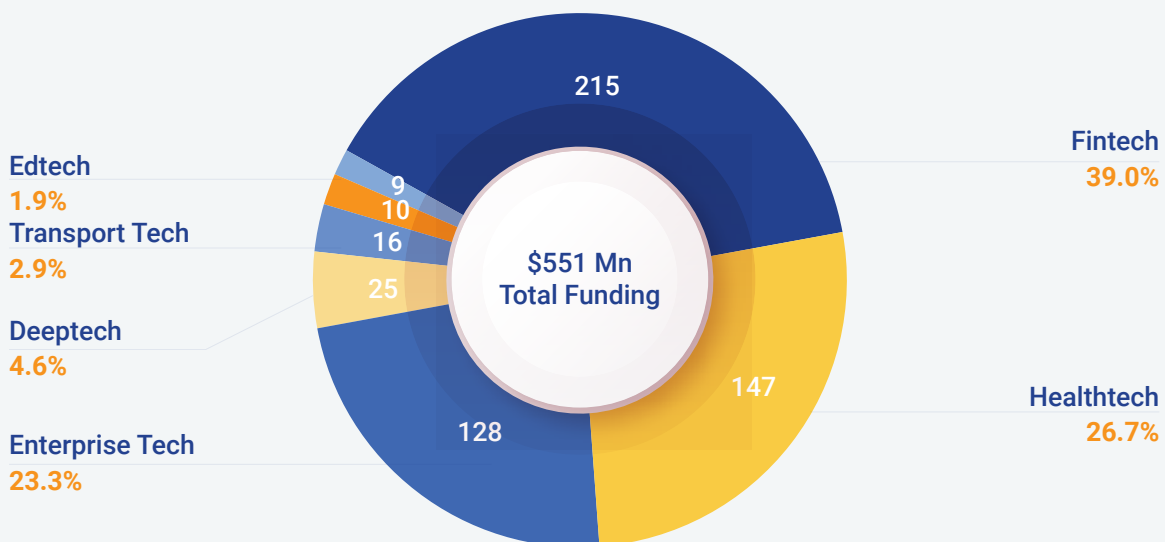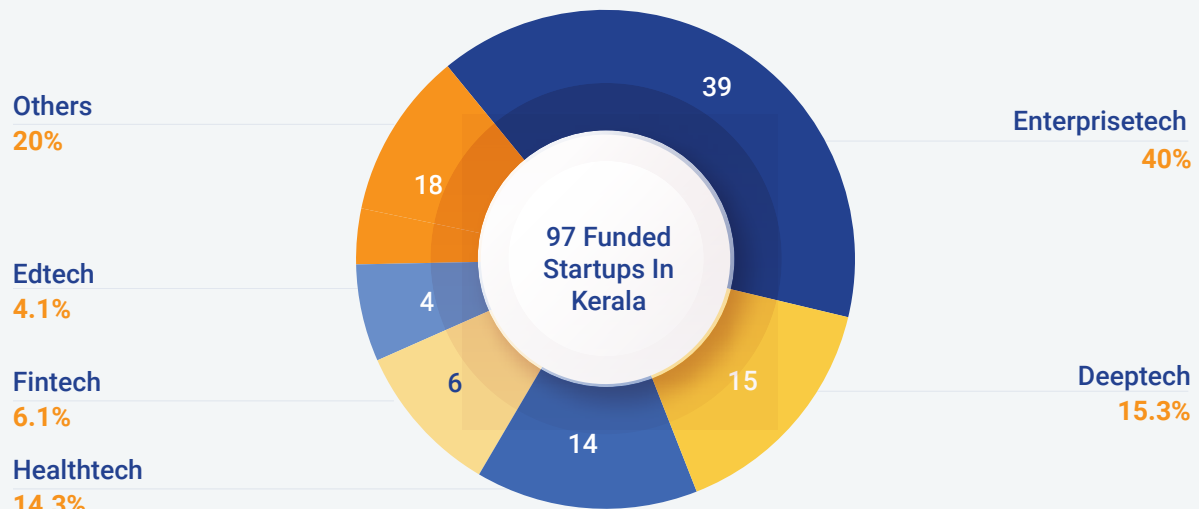

Source: KSUM, Inc42

If we remove the funding ($183 Mn) in Open Money (a Kerala-registered and Bengaluru-headquartered fintech startup), overall venture capital investments in Kerala-based fintech startups stands at $32 Mn. Therefore, enterprisetech, primarily comprising SaaS startups, is the clear leader in investor confidence and venture capital inflow.

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2 Out Of 5 Funded Startups In Kerala Are In The SaaS Sector

97 Funded Startups In Kerala

- Enterprisetech **40%** — 39
- Deeptech **15.3%** — 15
- Healthtech **14.3%** — 14
- Fintech **6.1%** — 6
- Edtech **4.1%** — 4
- Others **20%** — 18

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Source: KSUM, Inc42
Note: Graph updated on 20 December 2022

Hardware Startup Funding Is Higher In Kerala Than Other Indian State

	% Share of hardware focused startups in funding
Kerala	3
India (Overall)	0.6

% Share of hardware focused startups in funding
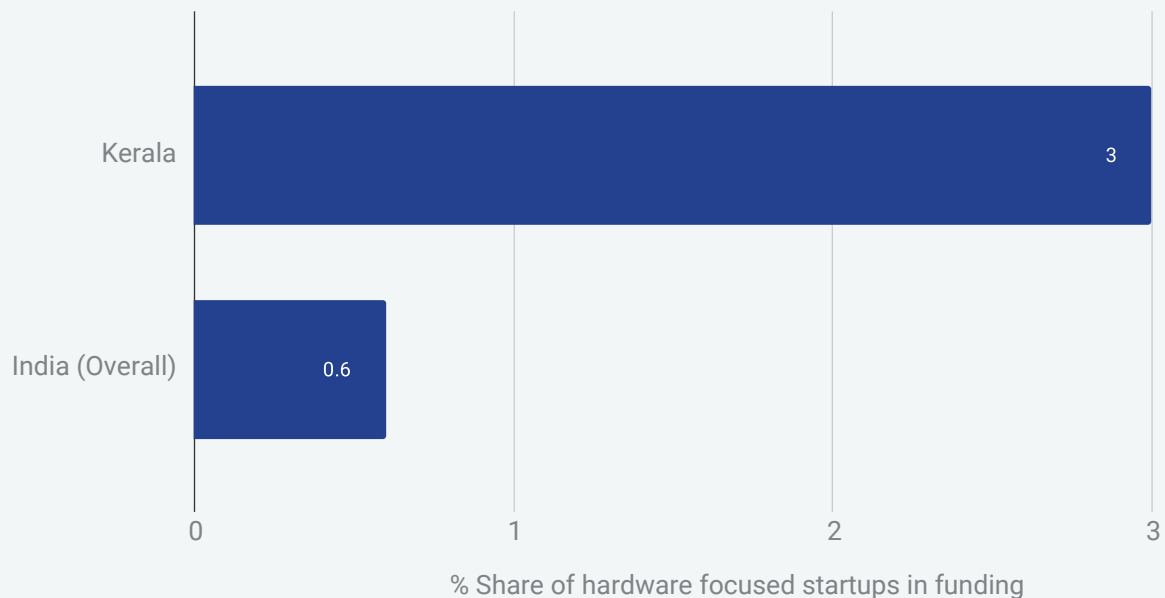
Source: KSUM, Inc42

Since 2014, hardware product/service-focused startups in Kerala have raised $15.2 Mn or 3% (precisely 2.7%) of the total $551 Mn raised. But the total funding raised by this sector accounts for less than 1% of the venture capital inflow at the pan-India level.

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Hardware Startups Command A Higher Share In Kerala's Venture Capital Investments Compared To Other States

Bar chart — "% Share of hardware focused startups in funding":
- Kerala: 3%
- Mumbai: 1%
- Delhi NCR: 0.92%
- Bengaluru: 0.03%
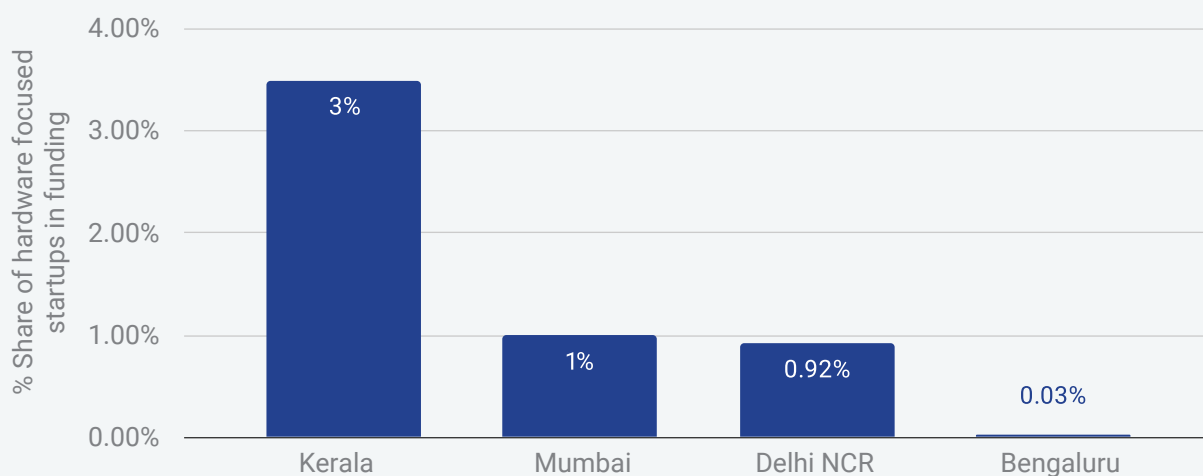
Source: KSUM, Inc42

Growth Capital Commands The Highest Share In Kerala's Venture Capital Funding

Donut chart — $551 Mn Total Funding:
- Seed Stage: 12.2% (67)
- Late Stage: 31.7% (175)
- Growth Stage: 56.1% (309)
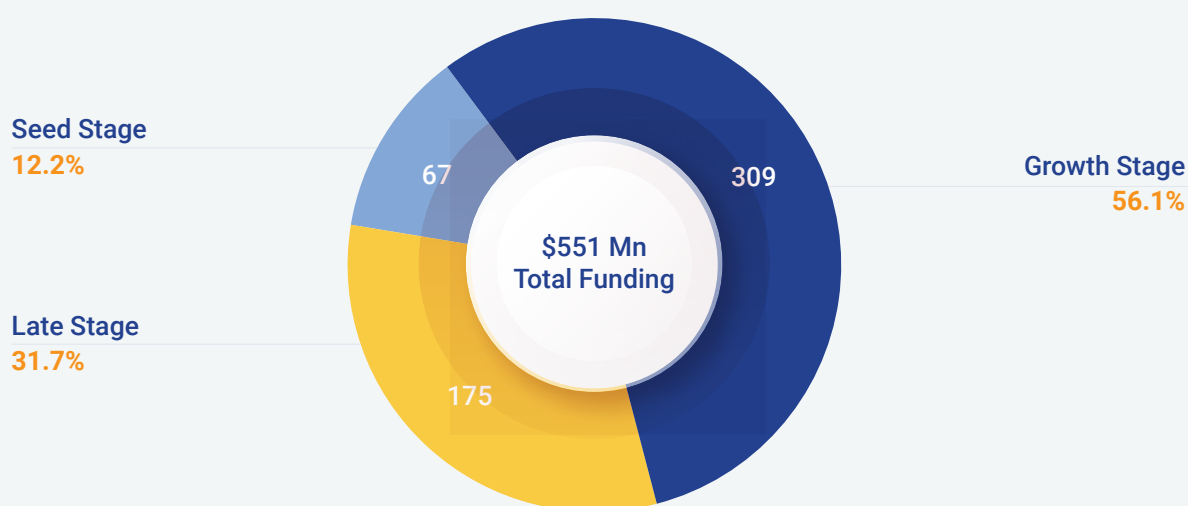
Source: KSUM, Inc42

Growth stage investments surged 5x, from $19 Mn in 2018 to $96 Mn in 2021, indicating rising investor confidence in Kerala-based startups' scaling potential.

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Seed Stage Deals Make More Than Two-Thirds Of The Total Funding Deals

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Late Stage
4%

4

Growth Stage
21%

23

109 Total Deal Count

82

Seed Stage
75%
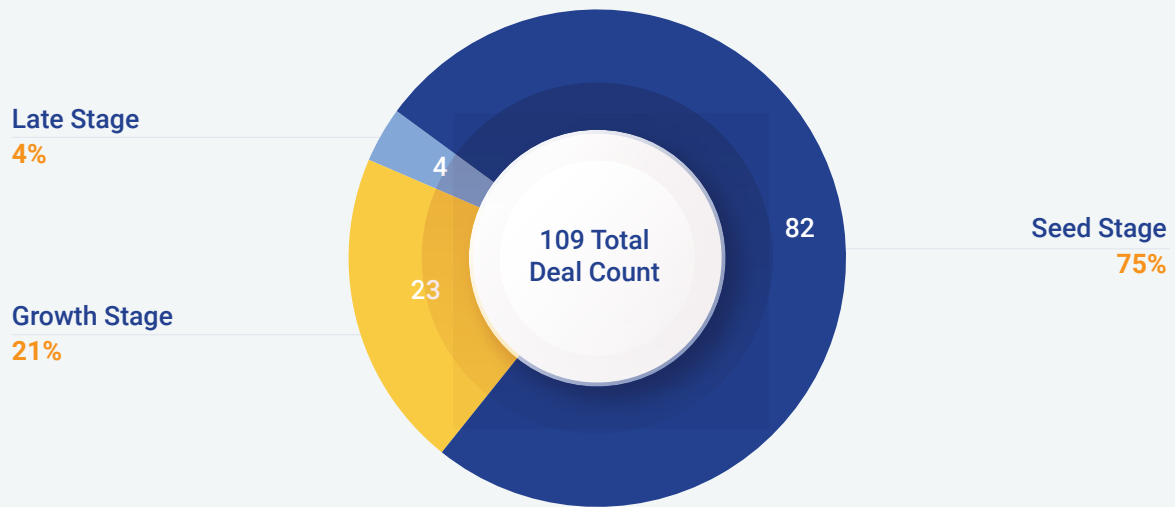
Source: KSUM, Inc42
Note:Graph updated on 20 December 2022

Thiruvananthapuram Tops The Chart In Terms Of Venture Capital Inflow

Others
24.2%

133

$551 Mn Total Funding

217

Thiruvananthapuram
39.4%

200
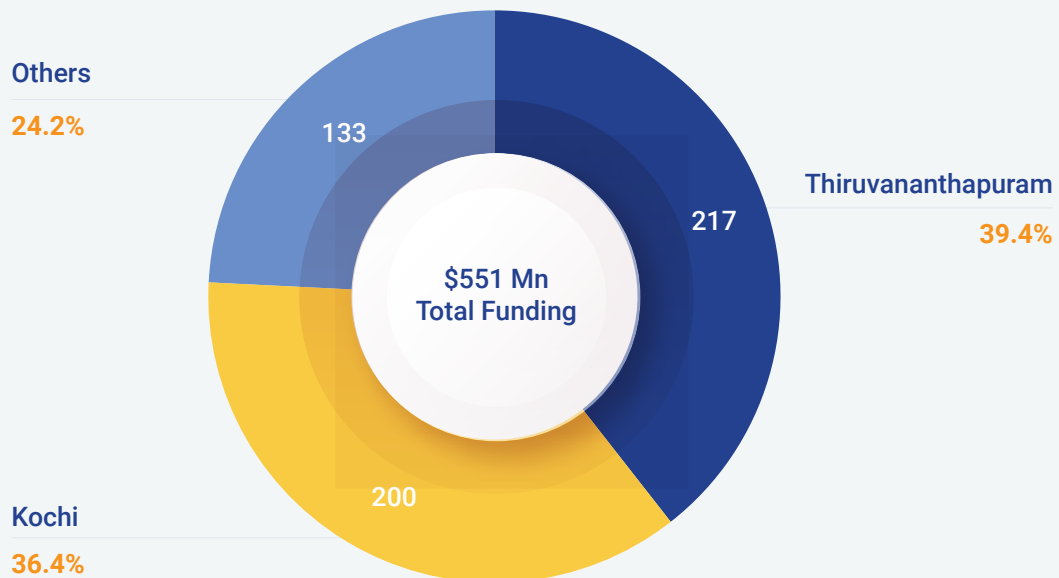
Kochi
36.4%

Source: KSUM, Inc42
Note:Graph updated on 20 December 2022

Kochi is home to the highest number of funded startups in the state. Out of the total funded startups, 40% (39 out of 97) are based in Kochi.

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Kochi Based Startups Bagged The Highest Number Of Venture Capital Deals

Others
12%

13

109 Total Deal Count

Thiruvananthapuram
26%

28

68

Kochi
62%
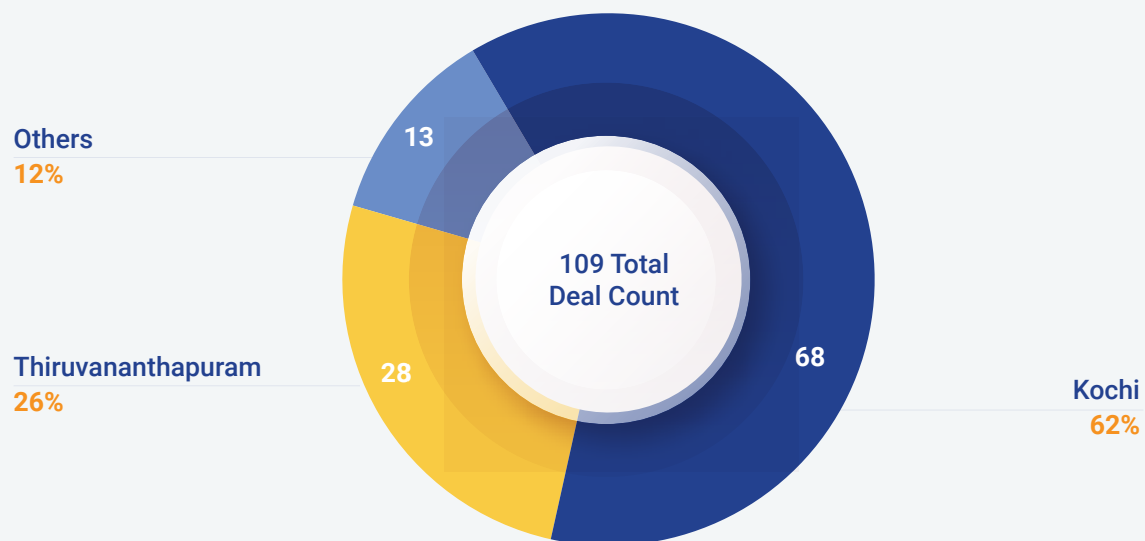
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Source: KSUM, Inc42
Note:Graph updated on 20 December 2022

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The Startup Enabler Ecosystem In Kerala

Time and again, Kerala has emerged as one of the best startup hubs in India. Holding a leadership position in the Human Development Index (HDI), this southern state has a literacy rate of 94% (according to the 2011 census) and offers a robust social and intellectual infrastructure conducive to innovation. More importantly, hardware is a key segment where Kerala has excelled and proven its leadership in the country.
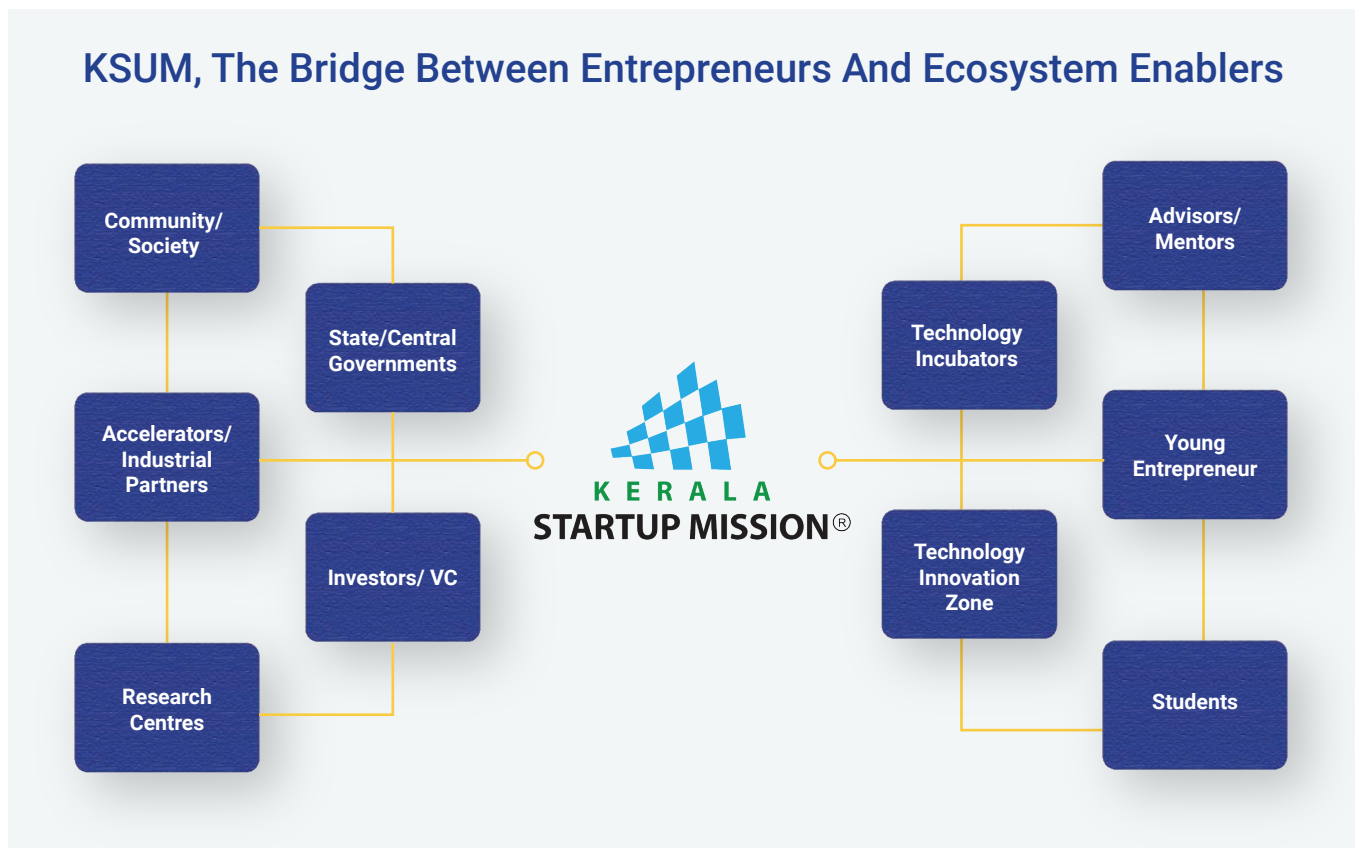
But to flourish in the long run, a startup ecosystem also requires an all-encompassing enabler ecosystem that includes investors, accelerators and incubators, academic institutions and government support.

KSUM, The Bridge Between Entrepreneurs And Ecosystem Enablers

Community/Society — State/Central Governments — Accelerators/Industrial Partners — Investors/VC — Research Centres

KERALA STARTUP MISSION®

Advisors/Mentors — Technology Incubators — Young Entrepreneur — Technology Innovation Zone — Students

Known for its proactive approach towards helping startups, Kerala has been ahead of the curve for more than a decade. The state's distinctive socio-economic factors, including a high literacy rate and per capita income, enable it to nurture the most promising startup ecosystem in the country.

Another interesting fact about Kerala's startup ecosystem is that, unlike the popular startup hubs (Bengaluru, Delhi-NCR and Mumbai), venture capital investments in Kerala startups are more egalitarian in terms of the hardware-software split.

Hardware startups in Kerala have bagged 3% of the state's total funding compared to Bengaluru (0.03%), Delhi-NCR (0.92%) and Mumbai (1%).

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The KSUM Support System: Government Policies, Investments And Grants

Both central and state governments now focus on supporting the startup ecosystem in areas like incubation, business grants and investments. However, the Kerala government has gone a step ahead and ensured organic growth for these companies by helping them participate in the government's procurement drive.

360-Degree Government Support: From Incubation To Business Generation And Everything In Between
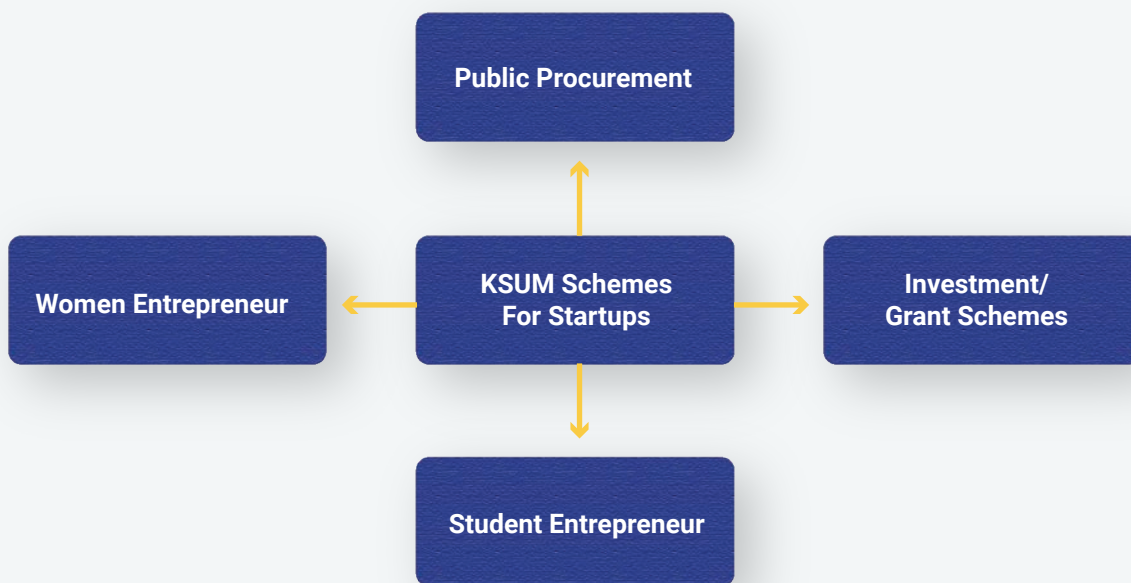
Source: KSUM, Inc42

From a macro perspective, KSUM aims to create a holistic ecosystem for the support and sustainability of tech startups in the state. Kerala's startup mission further includes special subsidies and investments to promote innovation through Innovation Grant, R&D Grant and Technology Commercialisation Support for Women. Such initiatives affirm that the state is ready to drive and grow innovative companies in areas like AI/ML, robotics, hardware & IoT and biotechnology.

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Investment/ Grant Schemes For Startups

Scheme	Amount	Key Eligibility
KSUM Fund Of Funds	INR 715 Cr	Should be registered as Category I/ Category II Alternative Investment Fund under SEBI AIF Regulation
Government As A Marketplace (Procurement from KSUM startups)	Up to INR 3 Cr	Startups legally registered with KSUM and issued unique IDs
R&D Grant	Up to INR 30 Lakh	KSUM-registered hardware startups with a significant R&D component
Patent Reimbursement	INR 2-10 Lakh per patent awarded	DPIIT-approved startups with unique IDs issued by KSUM
Innovation Grant	INR 3-15 Lakh	Students studying in Kerala (Idea Grant only)
		Innovators based in Kerala (Idea Grant only)
		Startups registered with KSUM and issued unique IDs (for Idea/ Productisation/market acceleration/ Scaleup Grant)
		Upto Rs 20 Lakh is offered for Women Entrepreneurs
Seed Fund Support Scheme	Up to INR 15 Lakh	DPIIT-approved startups with unique IDs issued by KSUM
		Applicants must be working on an innovative product or technology.
		Startup directors should have a good CIBIL score, preferably more than 750.

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Scheme	Amount	Key Eligibility
		Seed fund support is not generally provided for service startups or SMEs in the trade and commerce space.
Rent Subsidy	50% of the rent amount	DPIIT-approved startups with unique IDs issued by KSUM
		Should have at least 10 employees with 70% of them from Kerala
		Rent subsidy is granted to companies operating in government parks/any other location owned or leased by government agencies.
Cross Sell By KSUM: Corporate Innovation By Startups	Startups solving corporate challenges	Product Showcase: The product showcase is a platform-cum-event where innovative porudtcs from the Kerala startup ecosystem are showcased to the domestic and international business corporations.
		Industry Challenges: A digital platform by KSUM which enables the corporates from India and around the world to publish their problem statements which then can be viewed and accepted by relevant Kerala based startups.
		Reverse Pitching: A physical event organised by the Kerala Startup Mission where the participating corporates pitch their problem statements/requirements to the local startups
Marketing Support Scheme	Up to INR 5 lakhs	Kerala Startup Mission has developed a plan to subsidise the creation of product videos with the goal of assisting entrepreneurs with their marketing endeavours. Those that have quality items and are just starting to generate revenue will be chosen for the programme.

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Schemes For Women Entrepreneurs

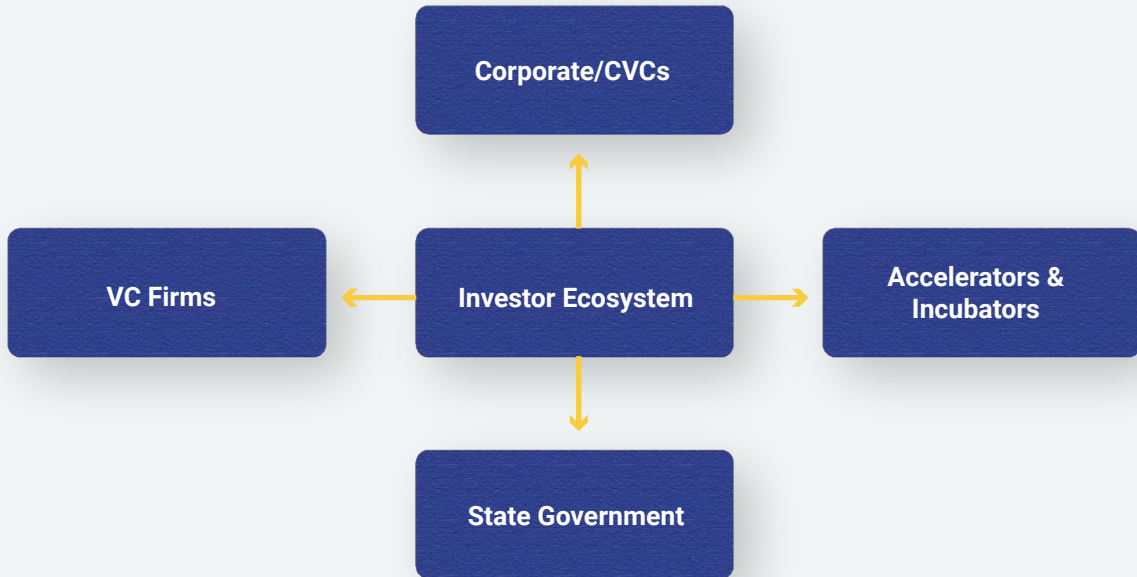| Scheme	Amount	Key Eligibility
Soft Loan Scheme	Up to INR 15 Lakh	DPIIT-approved startups with unique IDs issued by KSUM The women cofounder should have a majority stake in the startup. Startups should be registered in Kerala.
Seed Fund	Up to INR 15 Lakh	DPIIT-approved startups with unique IDs issued by KSUM The women cofounder should have a majority stake in the startup Startup directors should have a good CIBIL score, preferably more than 750.
Technology Commercialisation Support	Up to INR 10 Lakh	DPIIT-approved startups with unique IDs issued by KSUM The women cofounder should have a majority stake in the startup Startup directors should have a good CIBIL score, preferably more than 750.
Soft Loan Against Purchase Order	Up to INR 15 Lakh	DPIIT-approved startups with unique IDs issued by KSUM The women cofounder should have a majority stake in the startup Startup directors should have a good CIBIL score, preferably more than 750.

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Schemes For Student Entrepreneurs

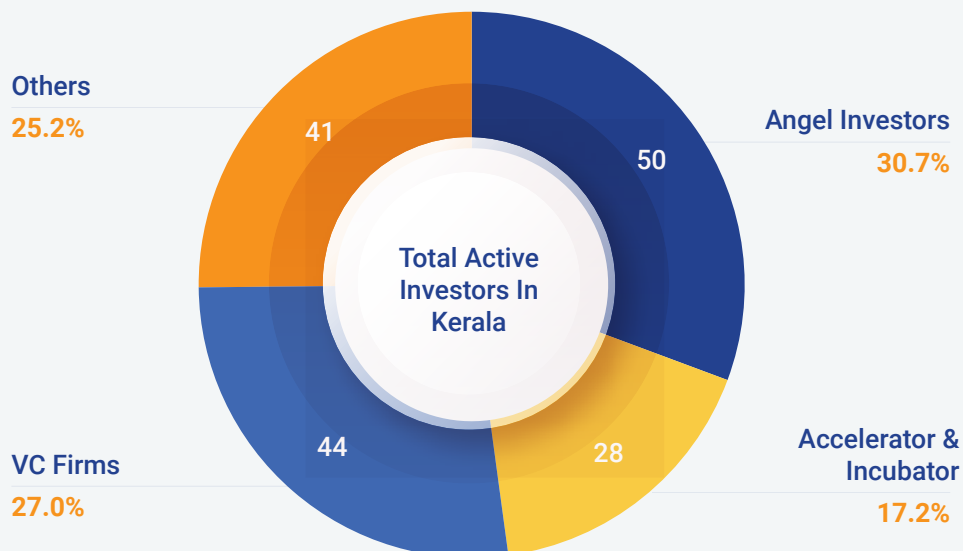| Scheme	What They Offer
Innovation And Entrepreneurship Development Centres (IEDCs)	A KSUM initiative to promote innovation and entrepreneurship among students and the academic fraternity across educational institutions
INSPIRE	Zonal meetups held across campuses; here students get an opportunity to know about various schemes and support extended by KSUM to potential innovators.
Startup Awareness & Leadership Training (SALT)	Creates awareness regarding entrepreneurship opportunities among 9th standard students and inculcates the scientific spirit among young minds
Local Entrepreneurship Advancement Programme (LEAP)	Provides a broader canvas for IEDCs to design their programmes and projects
WhyHacK	Organised by KSUM to find best technology solutions to address pressing problems
IDEA Fest	Provides student innovators with an opportunity to be part of a structured programme and pitch their ideas before an expert panel; their ideas can win them grants up to INR 2 Lakh and get mentorship, lab support and other product development support from KSUM
Faculty Development Programme	Builds resource capacity for IEDCs; faculty members are trained on various aspects of setting up an innovation ecosystem and running a successful IEDC.

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Investors Backing Kerala Startup Story

Access to venture capital is critical in building a sustainable startup ecosystem. India is now home to more than 7K investors actively participating in venture capital funding. However, many of them (82% of the total) are primarily skewed towards startups located in Bengaluru, Delhi-NCR and Mumbai.

Startup Investors In Kerala

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                    ┌──────────────────┐
                    │  Corporate/CVCs  │
                    └──────────────────┘
                             ↑
┌────────────┐      ┌──────────────────┐      ┌──────────────────┐
│  VC Firms  │ ←→   │ Investor Ecosystem│ →   │  Accelerators &   │
└────────────┘      └──────────────────┘      │    Incubators     │
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Kerala's startup ecosystem offers plenty of funding opportunities for early stage startups. Some of the schemes introduced by KSUM, including Innovation Grant and Seed Fund Support, also offer working capital without equity dilution. This means entrepreneurs across the early stage ecosystem can build and launch their products without requiring private capital.

Kerala's Startup Ecosystem Houses 163+ Unique Investors

Others **25.2%** — 41

Angel Investors **30.7%** — 50

Accelerator & Incubator **17.2%** — 28

VC Firms **27.0%** — 44

Total Active Investors In Kerala

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Also, early-stage investors (angels and accelerators and incubators) account for 48% of the total active investors in the state, indicating the presence of a robust investment inflow that propels the early stage entrepreneurial ecosystem in Kerala.

Venture Capital Firms Active In Kerala

VC	Headquarters	Deal Count	Notable Investments In Kerala
Unicorn India Ventures	Mumbai	6	Genrobotics, Clootrack, Is Going Online, Open
Accel	Bengaluru	3	BestDoc, CARESTACK
Sea Fund	Bengaluru	4	Genrobotics, Is Going Online, BestDoc
Mumbai Angels Network	Mumbai	2	brainwired
KAN (Kerala Angel Network)	Kochi	2	Zappyhire, bumberry
Indian Angel Network Fund	Delhi-NCR	5	Farmers Fresh Zone, Astrek Innovations
Good Capital	New York	2	Entri
Malabar Angels	Kannur	2	Farmers Fresh Zone
100X	Mumbai	2	inzpira, Finline

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Accelerators & Incubators Active In Kerala

Accelerator/ Incubator	Headquarters	Deal Count	Notable Investments In Kerala
India Accelerator	Delhi-NCR	Private	brainwired, technisanct
Barclays	Tel Aviv	Private	KRED
10,000 Start-Ups (A NASSCOM Initiative)	Bengaluru	Public	MAILCASTR, messengerify, eYogi
brinc	Hong Kong	Private	Bagmo, EyeROV
itic (IIT Hyderabad Technology Incubation Center)	Hyderabad	Public	ROVONIZE
Huddle	Delhi-NCR	Private	ASTREK INNOVATIONS
HealthStart Foundation	Delhi-NCR	Private	ASTREK INNOVATIONS
Maker Village	Kochi	Public	SASTRA ROBOTICS, EyeROV, NiMO TV
Zone Startups	Mumbai	Private	OPEN

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Corporates Active In Kerala's Startup Ecosystem

Organisation	Type	Parent Company	Notable Investments
Microsoft For Startups	CVC	Microsoft	Profoundis
Google Developers Launchpad Accelerator	CVC	Google	recipebook
Barclays Accelerator (powered by techstars)	CVC	BARCLAYS	KRED
GenNext Innovation Hub (A Reliance Enterprise)	CVC	Jio	Oztern.com
BRAND CAPITAL LEAPFROG AMBITION	CVC	THE TIMES GROUP	doubtbox, Oztern.com, pling
Qualcomm ventures	CVC	Qualcomm	dextra
UST	Corporate	UST	Cogniphi
ZOHO	Corporate	ZOHO	GENROBOTICS

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List Of KSUM Services Partners For Supporting Startups

Partner Name	Description	Website link
aws	$5K+ digital credit for using AWS to KSUM startups	Application Link
Cashfree Payments	Zero transaction fee solutions for KSUM startups	Application Link
cometchat®	Early access to cometchat conversational AI platform for KSUM startups	Application Link
Digital Ocean	Digital cloud credits for KSUM registered startups	Application Link
freshworks	$4K digital credit of Freshworks integrated software suite for KSUM startups	Application Link
Google Cloud	The Google Cloud Startup Program is designed to help startups build and scale using Google Cloud.	Application Link
HubSpot	HubSpots startups/SMB focused solutions for KSUM startups	Application Link
Microsoft for Startups	The program provides tools for Go-to-Market resources, Azure marketplace Onboarding support	Application Link
MSG91	Complimentary communication API package for every product KSUM startup	Application Link
OVHcloud	100K euros worth of digital credit to KSUM startups	Application Link
Razorpay	Razorpay allows online businesses to accept and process digital payments through payment modes like debit cards, credit cards, net banking, UPI and prepaid digital wallets.	Application Link
STEVE Pay e-Payment made Simple...Smart...Secure	All-in-one payments solution for KSUM startups	Application Link
Webtiles Gres Porcellanato	Free technical support of Webtiles for KSUM incubated startups	Application Link
ZOHO	Access to Zoho One's 40+ integrated solutions for KSUM startups	Application Link

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Active R&D Institutions In Kerala For Startup Support

Research Institute	District	Point Of Contact	Email
Center For Development Studies	Thiruvananthapuram	Prof. Sunil Mani	director@cds.edu
Central Coir Research Institute	Thiruvananthapuram	Dr. Anita Das Ravindranath	anitadas30@gmail.com
Center For Earth Science Studies	Thiruvananthapuram	Dr. T. N. Prakash	prakash.thirumali@ncess.gov.in
Center For Water Resources Development And Management	Kozhikode	Dr. Manoj P. Samuel	manoj@cwrdm.org
Central Institute Of Fisheries Technology	Ernakulam	Dr. Ravishankar C.N	cnrs2000@gmail.com
Central Marine Fisheries Research Institute	Ernakulam	Dr. A. Gopalakrishnan	agopalkochi@gmail.com
Icar-Central Plantation Crops Research Institute	Kasaragod	Dr. Anitha Karun	director.cpcri@icar.gov.in
Central Tuber Crops Research Institute	Thiruvananthapuram	Dr. M. N. Sheela	ctcritvm@yahoo.com.
Cochin University Of Science And Technology	Ernakulam	Dr. A. Mujeeb	mujeeb@cusat.ac.in
Tropical Botanical Garden And Research Institute	Thiruvananthapuram	Dr. R. Prakashkumar	director@jntbgri.res.in
Vikram Sarabhai Space Center	Thiruvananthapuram	Dr. S. Unnikrishnan Nair	Not Available
National Institute For Interdisciplinary Science And Technology(NIIST)	Thiruvananthapuram	Dr T.P.D. Rajan	tpdrajan@niist.res.in

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Research Institute	District	Point Of Contact	Email
Indian Cardamom Research Institute	Idukki	Dr. A.B. Rema Shree	remashreeab.sb@gov.in
Kerala University Of Digital Sciences Innovation And Technology	Thiruvananthapuram	Dr.Asharaf S	asharaf.s@iiitmk.ac.in
Kerala University Of Digital Sciences Innovation And Technology	Thiruvananthapuram	Dr. Malu G	Not Available
Indian Institute Of Science Education And Research	Thiruvananthapuram	Dr R. S. Swathi	deanrdc@iisertvm.ac.in
Indian Institute Of Space Science And Technology (IIST)	Thiruvananthapuram	Dr.Raju K George	dean-rnd@iist.ac.in
Indian Institute Of Spices Research	Kozhikode	Dr.J Rema	director.spices@icar.gov.in
Integrated Rural Technology Centre	Palakkad	Prof (Dr.) J. Sundaresan Pillai	mail@irtc.org.in
Kerala Agricultural University	Thiruvananthapuram	Dr. Roy Stephen	adrvellayani@kau.in
Kerala Forest Research Institute	Thrissur	Dr. T. K Dhamodaran	tkd@kfri.res.in
Indian Institute Of Oil Palm Research (Research Centre)	Thiruvananthapuram	Dr.G. Somasundaram	sicrc.iiopr@icar.gov.in
Rajiv Gandhi Centre For Biotechnology (RGCB)	Thiruvananthapuram	Prof. Chandrabhas Narayana	cbhas@rgcb.res.in
Regional Cancer Centre	Thiruvananthapuram	Dr. Paul Sebastian	director@rcctvm.gov.in
Sree Chithra Thirunal Institute For Medical Sciences And Technology	Thiruvananthapuram	Dr. Harikrishna Varma P. R.	head-bmtw@sctimst.ac.in

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Research Institute	District	Point Of Contact	Email
Central Institute Of Fisheries Nautical & Engineering Training	Ernakulam	Office Of The Director	cifnet@nic.in
The Marine Products Export Development Authority	Ernakulam	The Head Office	ho@mpeda.gov.in

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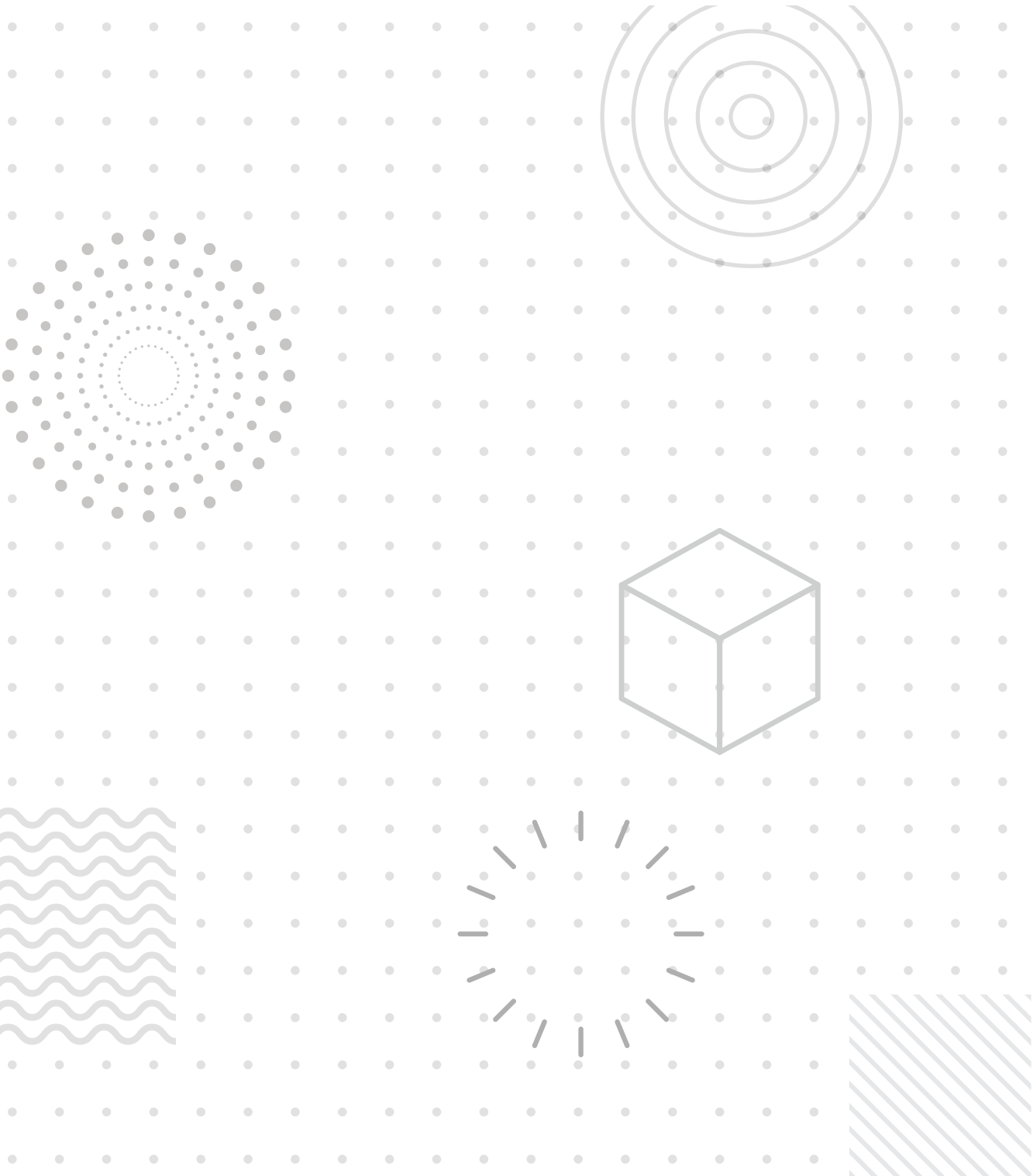
Kerala: A Look At The Key Development Indicators

$115 Bn
Gross State Domestic Product (GSDP)

135 Internet Subscribers Per 100 People
Highest Rural Internet Penetration In India

30 Mn+
Number Of Internet Subscribers In Kerala

$2K+
Per Capita Income, 56% Higher Than The National Average

1st In Asia
For procurement of affordable talents by Global Startup Ecosystem Report 2022

92%
Literacy Rate Among Women, Highest In India

94%
Literacy Rate, Highest In India

Internet As A Basic Right
Provided through KFon (Kerala Fiber Optic Network)

Note: 135 per 100 individual internet subscribers is as per the latest data by TRAI. It represents that individuals in the rural regions of Kerala hold more than one (at least 3 connections per individual) internet subscription.

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# A Growth Journey From Formal Economy To The Startup Economy

Higher rural internet penetration, superior literacy rate among women and 56% higher per capita income as compared to the national average. Kerala is leading on the fronts and other states in India are lagging behind. This is a clear indication of efficient & effective governance and policymaking to enhance the socio-economic development of the state.

With major business hubs in Kochi and Thiruvananthapuram, Kerala is home to prestigious educational institutions such as the Indian Institute of Management (IIM) and the National Institute of Technology (NIT). Both the cities combined make 99% of the total $551 Mn raised by Kerala based startups to date.

Although promotion of entrepreneurship remains the foundation stone for a sustainable growth of any startup ecosystem. The skilled workforce required to fullfill the day-to-day operations of a digital startup is of equal importance. To ensure that the mushrooming startup ecosystem of Kerala can be self-sufficent in terms of talent acquisition by local startups, the government of Kerala had established Digital University Kerala in 2000, which offers porgrams focused on developing business and technology skills for the digital first economy of India. Some notable programs offered by the institution include— Post Graduate Diploma in e-Governance (PGDeG) by the School of Digital Sciences, MSc in Data Analytics with specialisation in Geoinformatics/Bio AI, MSc In Computer Science with specialisation in Cyber Security/ NLP and others.

With the growing number of deeptech companies/startups in the state. The demand for skilled local graduates is poised to increase. As a result, increasing the significance of digital native courses, similar to what is being offered by the Digital University of Kerala. To bridge the gap between adequate talent and the employer, the state government has also launched an online job portal— Knowledge Mission which aims to facilitate 20 lakhs jobs by 2026.

The Startup Value Chain: KSUM'S 360-Degree Support System

KSUM'S 360-Degree Support System For Startups

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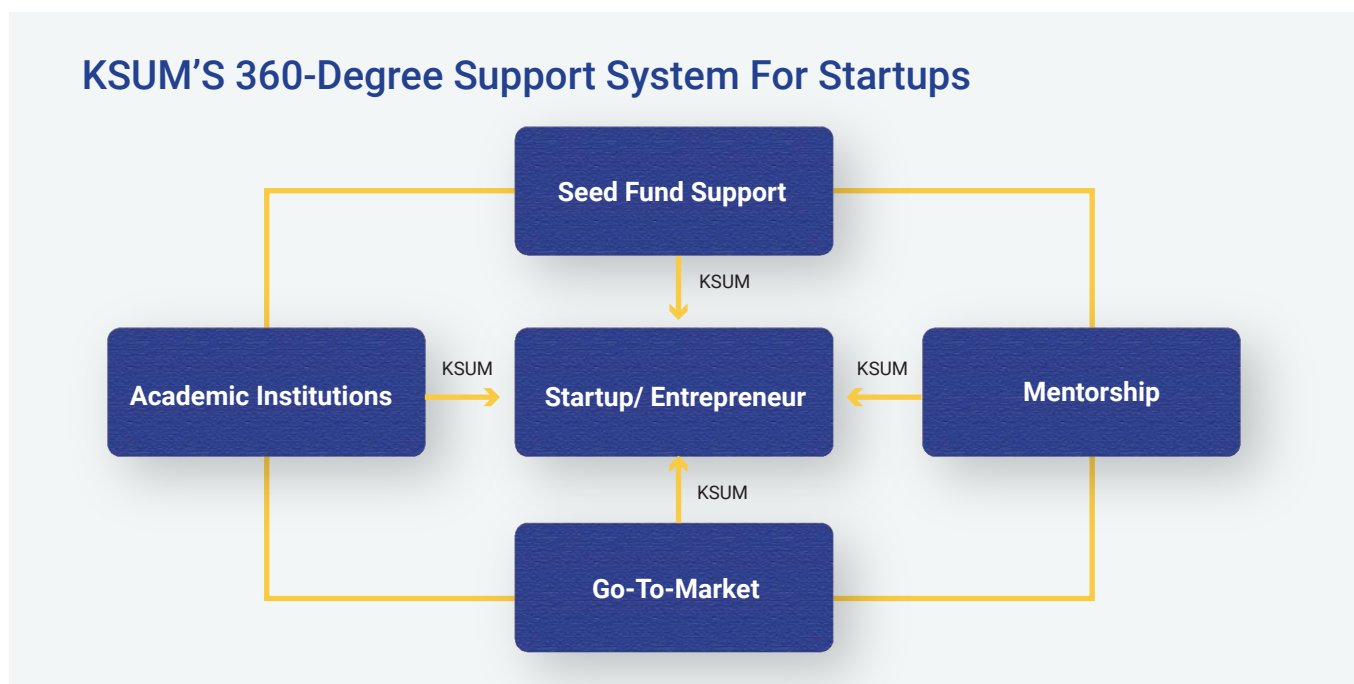
Kerala is home to more than 375 IEDCs across colleges and universities, 27 R&D institutions and 63 incubators. These numbers underline the presence of a vibrant, early stage startup ecosystem with a focus on support/enablement and funding, which are critical for startup operations until entrepreneurs find the right product-market fit.

Venture Capital Support

1. Seed Fund Support Scheme

The scheme provides financial assistance to startups to foster a culture of innovation and entrepreneurship in the state. The programme aims to create innovative businesses led by local talent so that these initiatives can add significant value to Kerala's socio-economic development.

Eligibility Criteria

The startup should be a registered company in Kerala as an LLP or a private limited entity and have an active KSUM unique ID.

The startup must be registered with the Department of Industrial Policy and Promotion (DIPP) and should have an 'Active/Active Compliant' status at the Ministry of Corporate Affairs (MC). As applications with 'Active Non-compliant' status may get rejected, Form INC 22A should be filled in before the fund disbursement.

The startup must be working on an innovative product or technology. Seed funding is not generally extended to service startups or SMEs operating in the trade and commerce space.

The startup must not have pending dues with any government agency, KSUM or other incubators in the state and shall not be blacklisted by any government agency in India.

The startup directors should have a good CIBIL score, preferably more than 750.

Advantages

Access to seed capital worth INR 15 Lakh at a subsidised interest rate of 6% per annum

A moratorium period of 12 months

Repayment flexibility; startups can pay 24 EMIs for loans up to INR 5 Lakh and 36 EMIs for loans above INR 5 Lakh.

2. Kerala Startup Fund Of Fund

The Kerala Startup Fund of Fund is another initiative by the state government to support local startups. The government invests in SEBI registered ventre capital funds in India. The government here acts as a limdite partner in the fund and provides capital to the VC funds with an predicament of investing in Kerala based startups. The Kerala Startup Fund of Fund was established by the state government in 2017 and includes startups such as— Open, Clootrack, BestDoc among others.
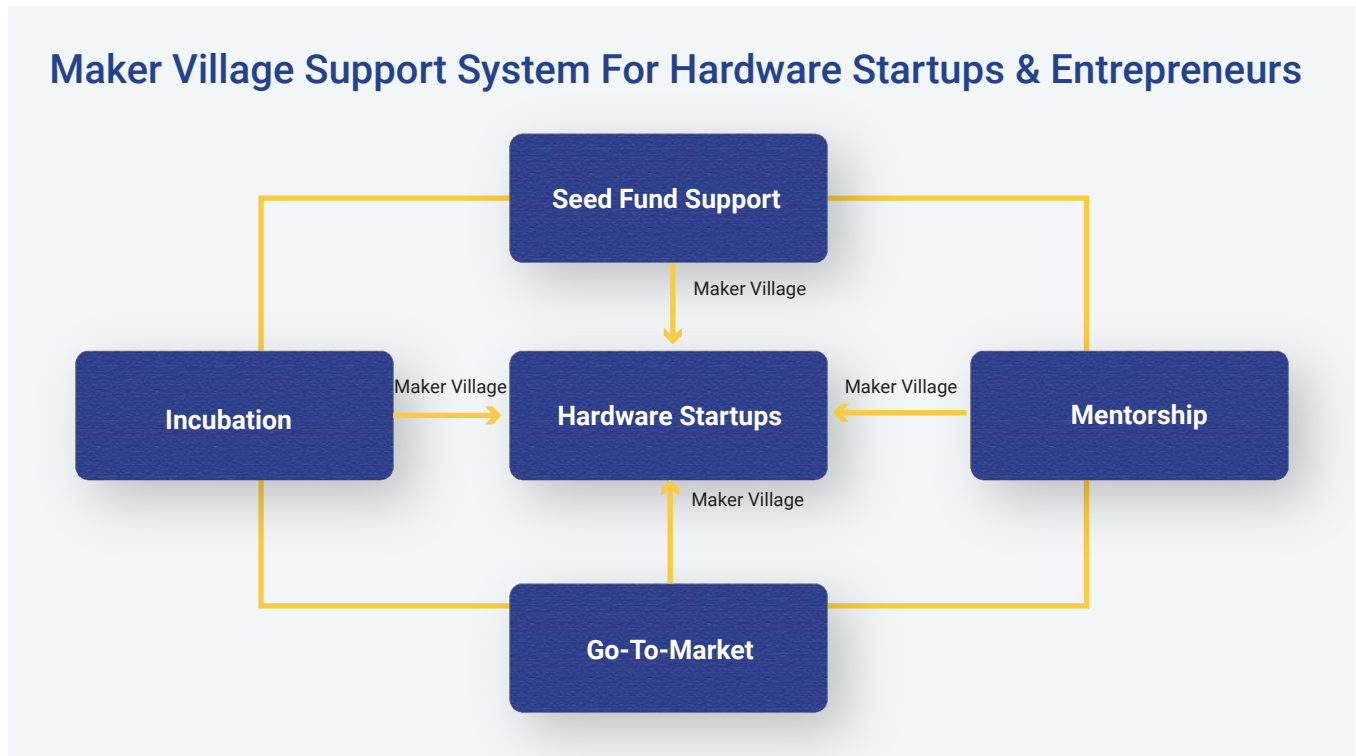
Eligibility Criteria

A SEBI registered alternative investment fund (AIF) who is willing to onboard the Kerala startup mission as a limited partner in their fund corpus.

Notable investors associated with the scheme include— Unicorn India Ventures and SEA Fund.

3. The Maker Village: A Joint Initiative By MeitY And IIITM-Kerala

The Maker Village intends to promote hardware-focussed innovation and set up labs and centres that focus on current trends and emerging disruptive technologies to bring India to the forefront of innovation in these areas. So far, the Maker Village has incubated more than 60 hardware- and IoT-focused startups and processed more than 636 applications from startups and aspiring entrepreneurs.

Maker Village Support System For Hardware Startups & Entrepreneurs

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                    ┌─────────────────┐
                    │ Seed Fund Support│
                    └─────────────────┘
                            │ Maker Village
                            ▼
┌────────────┐  Maker Village  ┌──────────────────┐  Maker Village  ┌────────────┐
│ Incubation │ ──────────────▶ │ Hardware Startups │ ◀────────────── │ Mentorship │
└────────────┘                 └──────────────────┘                 └────────────┘
                            ▲ Maker Village
                    ┌─────────────────┐
                    │  Go-To-Market   │
                    └─────────────────┘
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Source: KSUM, Inc42

The Maker Village fosters innovation in hardware and IoT fields by running two programmes for aspiring entrepreneurs and active startups. Here are the details of these initiatives.

The NIDHI-PRAYAS Programme

This pre-incubation programme helps young entrepreneurs explore their creative ideas in the hardware and IoT space without worrying about business failures. Besides coworking space, incubation and mentorship, the scheme offers an innovation grant up to INR 10 Lakh.

Benefits Of The NIDHI-PRAYAS Programme

INR 10 Lakh
Prototype grant

Mentorship
For young entrepreneurs

Coworking space
for business operations

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Up to 2017, Kerala used to meet more than 5% of India's total demand for electronics goods, with the estimated consumption worth $2.8 Bn annually, an interim report on the state's hardware ecosystem said. Solidifying the state's claim to be a lucrative market for both B2B and B2C electronics products.

Incubation Programmes

The core objective of the Maker Village is to derive, design and develop. The incubation of aspiring entrepreneurs/idea-stage startups plays a vital role in enabling the early stage investor ecosystem for the hardware startups in the country.

Incubation Programmes Under The Maker Village

Yentrepreneur: The Young Entrepreneur Pre Incubation Program

Idea: The Ideation Program

Proto: The Prototype Development Program

Commerce: The Product Commercialisation Program

Scaleup: The Pre-Acceleration Program

4. Innovation Grant

This unique scheme caters to both aspiring entrepreneurs and early stage startups. The framework aims to promote a culture of innovation and entrepreneurship among young minds and help tech startups that are at a very early stage.

Eligibility Criteria

Any student studying in Kerala (eligible for the Idea grant only)

An individual innovator based in Kerala (eligible for the Idea grant only)

A legally registered startup with access to KSUM's unique ID (for Idea/Productisation/Scaleup grant)

Advantages

Idea Grant: This is primarily meant for startups/students ready with a prototype or a minimum viable product (MVP). Those eligible can avail up to INR 2 Lakh to develop the MVP or the final product

Productisation Grant: A grant worth INR 7 Lakh to assist an early stage startup in its go-to-market strategy

Scaleup Grant: A grant of INR 12 Lakh to help early stage startups scale up their sales and customer acquisition

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Mentoring And Academic Support

Adequate exposure to new-age technology, startup work culture and the nitty-gritty of entrepreneurship can help students develop an entrepreneurial mindset early in their life. Apart from providing the required skill set to start up and run a new business, these initiatives also play a pivotal role in creating tomorrow's corporate leaders and innovators.

Interestingly, all 15 Kerala-based startups interviewed for this report agreed to open up more avenues for collaboration so that university students can work with existing startups, especially in areas like technology, product management and sales.

Currently, the Kerala government runs more than thirty initiatives to create better interaction among startups, investors and students. These programmes target aspiring startups and young entrepreneurs and cover many aspects of the ecosystem, ranging from technology hackathons to startup pitching. This section takes a quick look at a selected few and the value they generate.

1. Innovation and Entrepreneurship Development Centres (IEDCs)

A flagship initiative of KSUM, IEDCs work as the initial launch pad for studentpreneurs, giving them access to cutting-edge technology, world-class infrastructure, high-quality mentorship, early risk capital and global exposure.

Eligibility Criteria

Any academic institution with a built-up area of 500-1,000 sq. ft, a minimum enrolment of students, dedicated faculty co-ordinator/s and basic infrastructure, including the availability of computers, internet connectivity, lab and more, can operate as an IEDC.

Value Creation

375 IEDCs operating across the state

4K+ student innovators/entrepreneurs trained

$200K+ Idea grant facilitated

7K+ ideas supported

100+ student startups created

2. IDEA Fest

IDEA Fest connects student innovators/aspiring entrepreneurs to investors, mentors and incubators who can help them transform their ideas into meaningful business models. KSUM supports this initiative by providing an Idea grant up to INR 2 Lakh besides mentoring, product development and incubation support.

Eligibility Criteria

Only student innovators working on ideation, concept design, proof of concept and MVPs can apply.

Student innovators who earlier got the Idea grant will not be eligible if they present the same idea/product/team/.

Company registration is not mandatory during the application phase.

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Value Creation

200+ student-founded startups funded

Up to INR 2 Lakh grant awarded to deserving students

15 weeks of boot camp to help startups build their ideas into prototypes

3. WhyHack

This quarterly hackathon organised by KSUM is held with community partners and aims to solve critical issues with the help of technology.

Eligibility Criteria

Students/aspiring entrepreneurs with an idea or a prototype can join this event.

Pre-incubation stage startups are also eligible.

Value Creation

Use cases/applications on cybersecurity, fintech, big data and cloud computing

WhyHack-InnovatHER, a women's edition of the hackathon, helps them break down the barriers in the technology entrepreneurship frontier.

4. Fail Fast Or Succeed

Fail Fast Or Succeed is a virtual incubation program targeted towards women entrepreneurs in the state. It is a twelve-week intensive virtual incubation programme for women-led or startup businesses working on technology that affects women. The shortlisted startups will go through intensive knowledge workshops and mentoring sessions to help them grow. The startups that have graduated have access to funding and network connections.

Eligibility Criteria

Tech entrepreneurs/startups may be led by women or work on women-themed products/services/ solutions with a scalable business model.

Women co-founders should own the majority of the company.

Startups in various stages, such as ideation/POC/MVP/Prototype/Market ready/seed, are eligible to apply.

Value Creation

Funding Support: Shortlisted startups will have access to KSUM's productisation grant

R&D Support: Selected startups will have access to research and development support/ access

Mentoring: Startups who have been selected can avail one on one mentoring session with the registered mentors in KSUMs ecosystem.

Knowledge Workshops: Exclusive workshops to enhance core skills such as— presentation skills, pitching refinements, GTM plans, product commercialisation.

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Go-To-Market Support

Foundational support related to early stage venture capital, incubation and mentoring helps entrepreneurs get their projects off the ground. But the most critical phase in the business lifecycle is the go-to-market part, when startups launch their products/services at scale for their target consumers.

1. Government-As-A-Marketplace

The government-as-a-marketplace is a first-of-its-kind initiative where the departments of the Kerala state government can procure products and services from local startups. The scheme's main objective is to bridge the demand-supply gap, establish a seamless supply chain and open the market to keep the Kerala startups viable. This scheme is formalised under the Kerala State IT Policy 2017.

The Impact Of Government-As-A-Marketplace

80 government departments participated to spearhead the new concept

175+ work orders generated

$1.6 Mn worth of work orders processed

90 startups onboarded

Eligibility Criteria

Registered startups with access to KSUM's unique IDs

2. Rent Subsidy

Workplace capacity and infrastructure are vital in acquiring human capital, especially when a startup is looking to scale up. Therefore, KSUM provides subsidised office space to registered startups at government-run IT parks and corporate towers. This is yet another example of the state government's proactive strategy to support entrepreneurship and innovation.

The Impact Of The Rent Subsidy Scheme

76+ startups benefited from this scheme

Operating costs come down for early stage startups

Helping early stage startups to establish a permanent foothold in terms of office infrastructure

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Only DIPP-registered startups are eligible.

Startups must have business operations in Kerala and at least 70% of its employees should be domiciles of Kerala.

A startup must clock an annual revenue of INR 50 Lakh or more or should have raised equity funding of INR 1.5 Cr or more from external sources

The maximum period of assistance is three years, for which a startup needs to register YoY revenue growth of 50% or more.

3. Cross Sell By KSUM: Corporate Innovation By Startups

Facilitating greater startup-to-corporate exchange can play a pivotal role in boosting sales for B2B tech startups. With initiatives like the product showcase, industry challenges and reverse pitching. The Kerala Startup Mission has made it easier for startup to collaborate and create with the sate's corporate ecosystem.

The Impact Of Cross Sell By KSUM

70+ corporates engaged

250+ startups participated

$1.3 Mn worth of business facilitated

$2.6 Mn worth corporate investment

Product Showcase

The product showcase is a platform-cum-event where innovative porudtcs from the Kerala startup ecosystem are showcased to the domestic and international business corporations.

Industry Challenges

A digital platform by KSUM which enables the corporates from India and around the world to publish their problem statements which then can be viewed and accepted by relevant Kerala based startups.

Reverse Pitching

A physical event organised by the Kerala Startup Mission where the participating corporates pitch their problem statements/requirements to the local startups.

4. International Exchange Program

As part of the Youth Entrepreneurship Development Program, the Kerala Startup Mission encourages startups to participate in various startup events around the world. KSUM assists startups by providing delegated visits and travel assistance as reimbursement for startups attending similar events. The program's offerings are divided into two parts— Exposure Program for Startups and Support for Startups attending National Programs/ Conferences

Exposure Program For Startups

First Travel: One startup member has 90% support. This includes round-trip airfare and visa fees. If two founders travel, 50 percent of travel and visa support is provided.

Second Travel: One startup member will receive 70% travel support. This includes round-trip airfare and visa fees. If two founders travel, each will receive 40% of travel and visa support.

Third Travel: 50% travel support for one member from the startup. This includes to and fro travel and visa charges. If two founders are travelling 30% of travel and visa support.

Fourth Travel & Further Travels: One startup member will receive 25% travel support. This includes round-trip airfare and visa fees.

Support For Startups Attending National Programs/ Conferences

First Travel & Second Travel: The startup provides complete support (100%) for a maximum of two members. This includes travel to and from.

Third Travel: One startup member will receive complete travel support. This includes travel to and from. OR, if two founders are travelling, 50% travel support.

Fourth Travel and for further travels: One startup member will receive 50% travel support. This includes travel to and from.

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Innovation And Entrepreneurship Development Centres (IEDCs)

Among the numerous schemes and programmes implemented by the Kerala Startup Mission (KSUM), the innovation and entrepreneurship development centres (IEDCs) remain a flagship initiative. These work as studentpreneurs' launch pad, ensuring access to cutting-edge technology, world-class infrastructure, high-quality mentorship, early risk capital and global exposure.

IEDCs stand out from the rest of the KSUM initiatives as they introduce new-age concepts of technology and entrepreneurship early on, thus incorporating the purpose and value of 'starting up' in the formal education system. These programmes come under three distinct but inter-related verticals – innovation, technology and entrepreneurship – which play a vital role in future-proofing the economy against volatility.

Today, the Indian government has also accepted a direct correlation between the growth of district-level GDP (aka, GDDP) and the incorporation of startups/new businesses. According to the Economic Survey, 2019, a 10% rise in the number of companies in a district yields a 1.8% increase in GDDP. It further solidifies that entrepreneurship at district level can be the most efficient wealth creation tool for the state in the coming years.
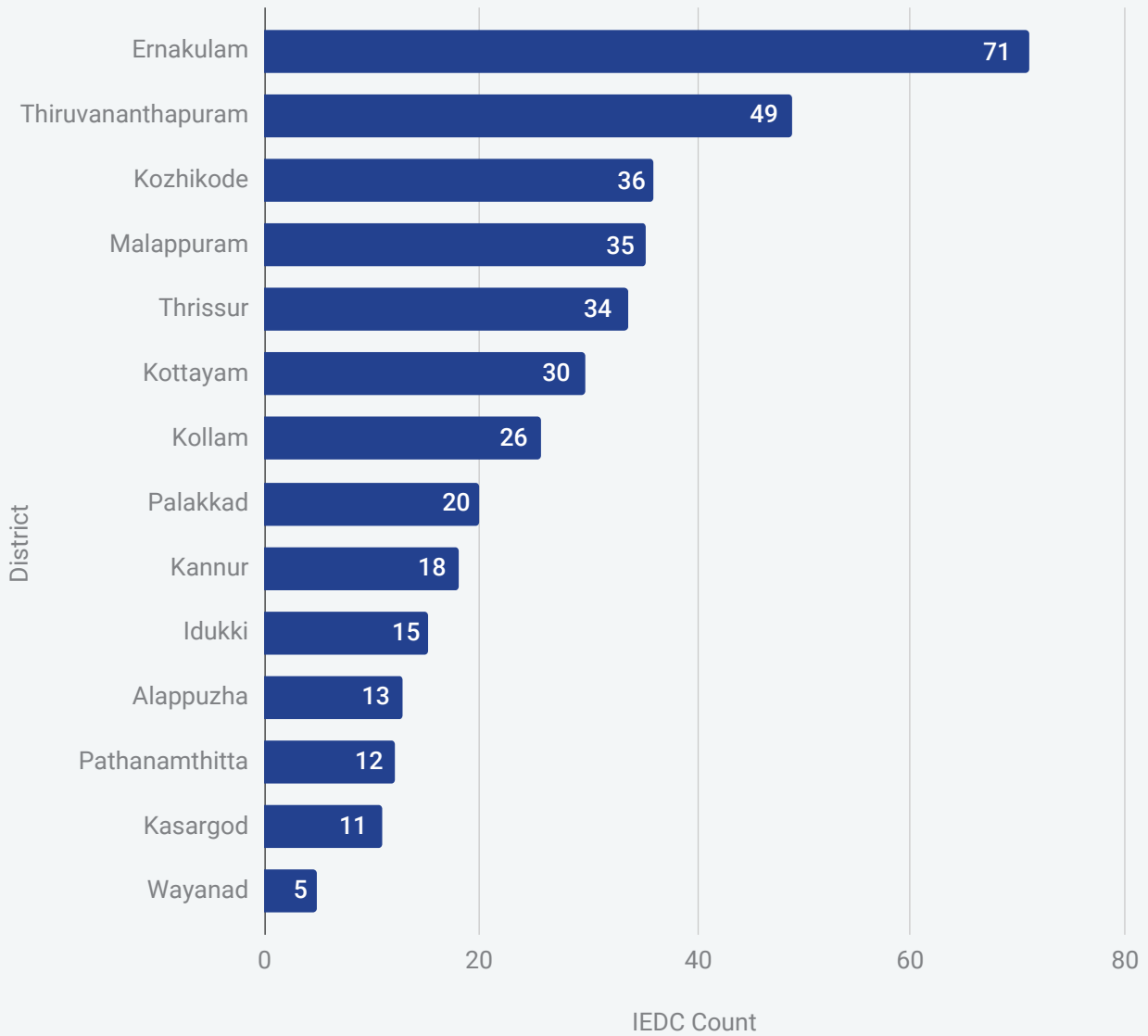
The Mission

To create the IEDCs as an innovation platform and develop future founders by promoting innovation, technology and business learning among the student community across Kerala.

How IEDCs Promote Entrepreneurship And Innovation Among Students

- Creates awareness and interest among faculties and students through workshops and hackathons

- Motivates, supports and mentors students for the identification, development and commercialisation of their innovative ideas

- Develops a platform for young minds to help build their skills and provide exposure to top technology trends

- Provides exposure to technology and entrepreneurship through internships and job opportunities in relevant sectors

- Imparts technology and management training to students and faculties for developing innovative product/s and solution/s

- Sets up specialisation hubs for promoting the culture of entrepreneurship among student communities.

- Organises business plan competitions/innovation and startup boot camps/hackathons with the active involvement of industry experts

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Get To Know The 375 Active IEDCs In Kerala

Together, Ernakulam and Thiruvananthapuram host 32% of the state's IEDCs

District	IEDC Count
Ernakulam	71
Thiruvananthapuram	49
Kozhikode	36
Malappuram	35
Thrissur	34
Kottayam	30
Kollam	26
Palakkad	20
Kannur	18
Idukki	15
Alappuzha	13
Pathanamthitta	12
Kasargod	11
Wayanad	5

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Startup Name	Founding Year	IEDC Name
Verdatum A.I.	2017	Rajagiri School Of Engineering & Technology
THINK DYNAMICS	2019	Tkm College Of Engineering
ronicz	2018	Mahaguru Institute Of Technology
GADS.	2020	Government Engineering College Bartonhill
ECOLOOP360	2018	Government Engineering College Bartonhill
Alpharogue	2020	Government Engineering College Bartonhill
Iraaloom	2019	Mohandas College Of Engineering & Technology
Data360	2010	Mohandas College Of Engineering & Technology
Synod bioscience	2010	Mohandas College Of Engineering & Technology
HelloInfinity	2012	Mohandas College Of Engineering & Technology
HEYLYX HUMBOLDT	2018	Mohandas College Of Engineering & Technology
TRYASRA	2018	Marian Engineering College
DESINTOX Technologies	2017	Government Engineering College Thrissur

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Startup Name	Founding Year	IEDC Name
ESTRO TECH ROBOTICS	2020	Government Engineering College Thrissur
TutAR	2015	St. Joseph'S College Of Engineering And Technology, Palai
Aidrone	2018	Mar Baselios College Of Engineering And Technology
TATOS	2020	Mar Baselios College Of Engineering And Technology
G'Xtron Innovations	2018	Federal Institute Of Science And Technology (Fisat)
Créatif Associates	2020	Government Polytechnic College Koovapady
XCUBATED	2018	College Of Engineering Chengannur
ASTREK INNOVATIONS	2017	Department Of Management Studies, Kannur University
TECHTERN	2018	Department Of Management Studies, Kannur University
NAWE ROBOTICS	2020	NIT Calicut
Edu-HorM	2020	Royal College Of Engineering & Technology
Qnayds	2021	Government Engineering College Thrissur

Source: KSUM

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List Of Startups Benefited From IEDCs & Other KSUM Schemes

Startup	Headquarters	Sector	Founder/s
askerbot	Ernakulam/Kochi	Enterprisetech	Sanju Mathew
GENROBOTICS	Thiruvananthapuram	Deeptech	Prince Mamman
SASTRA ROBOTICS	Ernakulam/Kochi	Deeptech	Aronin P
STRAVA	Thiruvananthapuram	Deeptech	Jancy Jose
agrima	Ernakulam/Kochi	Deeptech	Arun Ravi Mohammed
ENTRI	Ernakulam/Kochi	Edtech	Hisamuddin
	Ernakulam/Kochi	Ecomerce	Pradeep P S
bumberry	Ernakulam/Kochi	Ecommerce	Kutti Krishnan
Navalt	Ernakulam/Kochi	EV	Sandith Thandasherry
XShip	Ernakulam/Kochi	Enterprisetech (SaaS)	Sandith Thandasherry
TRANZMEO	Ernakulam/Kochi	Enterprisetech (SaaS)	Safil Sunny
TutorComp	Ernakulam/Kochi	Edtech	Shery S Kurian
CONCEPTBYTES	Ernakulam/Kochi	Enterprisetech (SaaS)	Anand Subhash
accubits	Thiruvananthapuram	Deeptech	Aharsh Ms
GENPRO RESEARCH	Thiruvananthapuram	Healthtech	Anoop P Ambika

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Startup	Headquarters	Sector	Founder/s
finahub	Ernakulam/Kochi	eKYC	Rajesh Sukumaran
inntot	Ernakulam/Kochi	Deeptech	Inntot Technologies Pvt Ltd
Clootrack	Ernakulam/Kochi	Enterprisetech	Shameel Abdulla
WESTGHATS Technologies	Thiruvananthapuram	Enterprisetech	Jyothis Indirabhai S
RIOD	Ernakulam/Kochi	Deeptech/IoT	Akhil Joy
Finline	Ernakulam/Kochi	Fintech	Hari Sasi
Zappyhire	Ernakulam/Kochi	Enterprisetech	Jyothis KS
rapidor	Ernakulam/Kochi	Enterprisetech	Thomson Skariah
EyeROV	Ernakulam/Kochi	Deeptech	Johns T Mathai
Drinn | Helping Hearts Live Healthy	Ernakulam/Kochi	Healthtech	Nishath Faisal
VERTEIL	Ernakulam/Kochi	Enterprisetech	Jerrin Jos
BestDoc	Ernakulam/Kochi	Healthtech	Afsal Salu
VehicleST	Ernakulam/Kochi	Transportation Tech	Alvin George
buildnext	Ernakulam/Kochi	Real Estate Tech	Gopikrishnan V
open	Ernakulam/Kochi	Fintech	Deena Jacob
VOODY	Thiruvananthapuram	Enterprisetech	Anoop Ambika

Inc42

Startup	Headquarters	Sector	Founder/s
hyreo	Enterprisetech	Enterprisetech	Arun Satyan
TROIS INFOTECH	Enterprisetech	Enterprisetech	Trois Infotech Private Limited
EWIRE YOUR VIRTUAL BANK!	Fintech	Fintech	Udayabhanu D
appfabs	Enterprisetech	Enterprisetech	Rejah Rehim
NAVA	Agritech	Agritech	Charles Vijay Varghese
evelabs	Healthtech	Healthtech	Vishnu M S
Cloodot	Enterprisetech	Enterprisetech	Cloodot Pvt Ltd
FeatherDyn	Deeptech	Deeptech	Rajeev Chandrasekharan
RIAFY	Enterprisetech	Enterprisetech	Benny Xavier
CARESTACK	Healthtech	Healthtech	Abilash Krishna, Mark Huzyak
SurveySparrow	Enterprisetech	Enterprisetech	Shihab Muhammed, Subin Sebastian

Source: KSUM, Inc42

Inc42

List Of 29 Startups To Look Out For In Kerala

Accubits

Revolutionising Enterprise-Grade AI, Blockchain

accubits

Founded in 2012 by Ditto PS and Jithin VG, Accubits is a full-service software development startup that offers integrated consulting and technology solutions to governments and enterprises across the globe.

Its AI-driven solutions include intelligent conversational tools, CRMs, real-time video and image analytics systems and automated licence plate readers (ALPRs), among others. It also provides blockchain-related developments such as custom DApps, smart contracts, crypto tokens, integrated blockchain services and ICO platforms.

Accubits was among the first set of startups incubated by KSUM. "The support we received from the Kerala government has helped us expand our operations multifold," said Aharsh MS, the company's chief marketing officer.

In 2020, Accubits announced its flagship project called CHAINSAT, a low earth-orbit satellite, to develop an enterprise-grade blockchain ledger. This, the company claims, can enable a secure transactional network for next-generation financial and IoT systems. The satellite is slated to launch this year.

So far, the startup has set up offices in Australia, Canada, Switzerland, the UAE, Hong Kong, Singapore and Indonesia. It claims to have delivered more than 600 projects for 200+ clients worldwide and also catered to homegrown behemoths such as Reliance Petroleum and Larsen & Toubro. It is also working closely with the Kerala health department to bring blockchain applications to healthcare space.

Founders
Ditto PS, Jithin VG

Founded In
2012

Headquarters
Virginia, USA

Website
https://accubits.com

#02

Beagle Security

Improved Vulnerability Testing To Prevent Cyber Mayhem

According to CheckPoint, cyberattacks worldwide increased by 50% in 2021 compared to the previous year due to the rapid adoption of digital technologies during the pandemic. And this notorious trend continues even today, putting customers and companies at risk of data thefts and financial losses.

Consequently, Beagle Security has developed a host of SaaS-based web application testing tools to help businesses identify vulnerabilities before hackers can exploit them. These penetration tools are used to discover security loopholes that might be difficult to find using manual analysis.

With Beagle's solutions, companies can automate web app testing and improve testing efficiency. Businesses can schedule their testing every week to find new vulnerabilities and fix them immediately. All major industry segments such as fintech, ecommerce, healthcare and education find these tools most effective to strengthen their organisations' security against cyberattacks, the company says.

The startup has served more than 1,500 clients across 90 countries, conducted 27K+ tests and found more than 6.7 Lakh vulnerabilities. According to Rehim, as many as five new clients, primarily from the US, the UK, Australia, the EU and the Middle East, approach the platform every month. Some of its key clients include digital banking app Jupiter, US-based video analytics platform Wobot.ai and London-based telecommunication provider TravelWifi.

Beagle Security

Founders
Rejah Rehim, Prathap Chandran

Founded In
2016

Headquarters
Thiruvananthapuram

Website
https://beaglesecurity.com/

#03

BestDoc

Empowering Healthcare, Enhancing
Patient Experience

BestDoc

Modern healthcare calls for ease of access, seamless experience for all stakeholders and, most importantly, patient-centricity. That is why Afsal Salu and Fayaz Bin Abdu started BestDoc in 2016, an end-to-end patient relationship management (PRM) platform aiming to personalise every patient's experience and thus improve the healthcare ecosystem.

The SaaS platform offers a suite of intelligent solutions to help medical entities/healthcare teams seamlessly manage their patients. These include configuring a patient programme, personalising contact methods and analysing health data quickly and efficiently on a single platform using an analytics dashboard.

While patients can conveniently book their appointments via multiple communication channels, including SMS, WhatsApp or the startup's website and mobile app, the platform sends automated reminders regarding their appointments. It allows them to reschedule/cancel on the channel of their choice. Communications are enabled in multiple vernacular languages to ensure large-scale inclusivity. Medical units can also use BestDoc's intelligent queue management tool to get real-time updates on patients in case of no-shows or late arrivals.

BestDoc claims to have served more than 200 hospitals and 3 Mn patients in India and the Middle East. Its cofounder and CEO Afsal Salu said, "On an average, our hospital partners have experienced a 15% reduction in front-office costs and a 20% increase in OPD revenue.

Founders
Afsal Salu, Fayaz Bin Abdu

Founded In
2016

Headquarters
Kochi

Website
https://bestdocapp.com

Total Funding
$2.1 Mn

Major Investors
Arkam Ventures, Accel India, SEA Fund

#04

BuildNext

Next-Age Building Solutions

buildnext

Owning a residential unit in a housing-hungry community can be challenging, especially when potential owners have limited budgets. But Kochi-based BuildNext has a solution in its kitty for every construction hassle. Powered by new-age technology, this forward-thinking builder optimises costs, brings down resource wastage and finds great deals on material, machinery and labour.

BuildNext's project management tools monitor construction at every stage to keep tabs on work progress and wastage. It also leverages market data to streamline supply chains, a critical measure for sticking to construction deadlines. Customers can also track the progress in real time through updated project snapshots featured on its mobile app.

People can choose to build a house if they own the land or select ready-to-move-in homes and customise those with help from BuildNext. The startup also provides walkthroughs/virtual tours for an immersive view of their dream homes. It currently has VR-enabled centres across Kerala and Hyderabad and plans to scale in other parts of the country.

Although BuildNext primarily operates in the B2C space, it is also foraying into the B2B segment to partner with developers and help them execute construction projects.

Founders
Gopikrishnan V, Finaz Naha

Founded In
2015

Headquarters
Kochi

Website
https://buildnext.in

#05

CareStack

Dental Practice Management Gets A New Shine

CARESTACK

CareStack, a state-of-the-art, cloud-based technology platform, was launched in 2015 to simplify dental practice management, focus on improved patient outcomes and help grow dentistry businesses. It offers a comprehensive bouquet of solutions to manage all software programmes and daily operations, including appointments, medical procedures and treatments, payments, insurance claims, patient communication, data analysis, financial reporting and more, from a single location.

The startup is the brainchild of Dr Mark Huzyak, who realised that none of the existing systems could keep up with the needs of his growing group practice. Therefore, he joined hands with Abilash Krishna and worked together to create a company that fundamentally transformed the way dentists work and manage their practices. Based out of Thiruvananthapuram & Florida in the US, CareStack is expanding its operations in Thiruvananthapuram, Kochi and Pune. They have so far raised $60 mn and are rapidly expanding to serve 10,000+ dental offices and 30 million patients over the next five years.

The cofounders claim that the vertical SaaS company enables a 32% improvement in collection efficiency, a 47% reduction in no-shows and a 60% rise in case acceptances. The dental practice management platform has 2K providers on board, 5 Mn secure patient records in place and partnered with Darby Dental, Change Healthcare and CardConnect, an award-winning credit card payment integration system. CareStack currently employs more than 300 people and is growing rapidly in terms of revenue, customer base and employee strength.

Founders
Abilash Krishna,
Dr Mark Huzyak

Founded In
2015

Headquarters
Celebration, Florida, US

Website
https://carestack.com/

Total Funding
$74.1 Mn

Major Investors
Accel, F-Prime Capital,
Steadview Capital,
Eight Roads Ventures

#06

Clootrack

Reducing Customer Churn Through Data Analytics

Clootrack

In an overcrowded and supercompetitive market, customer churn hurts businesses the most in terms of product value and customer acquisition cost. To counter the long-reaching aftermath of customer churn, Clootrack has developed a customer experience analytics platform using cutting-edge AI and converts real-time customer data into granular, actionable insights.

Clootrack gathers customer data from a host of channels such as social media, ecommerce platforms, blog comments and peer-review forums. It also fetches data from a company's internal sources, including NPS feedback (net promoter score indicates customer loyalty and satisfaction with the brand/company), CRM tickets, email feedback, customer surveys and more. The startup aggregates these diverse conversations and analyses the same to help brands understand why their customer experience is not up to the mark and what strategies need to be followed to meet customer demands. According to the startup, this helps brands reduce customer churn by 88%.

To help drive Clootrack's growth, KSUM introduced the company to the Malabar Angel Network (MAN), one of the prominent angel investor groups in the region. In 2019, the startup raised $500K in a seed round from MAN and the Indian Angel Network among other marquee investors. Last year, it also raised $4 Mn in Series A funding.

Currently, Clootrack caters to more than 150 brands globally from diverse industry segments ranging from banking and finance and utility services to retail, D2C brands, tourism and hospitality, auto/transportation and more. Zendesk, Freshdesk, eBay and Google Data Studio are some of the startup's key clients.

Founders
Shameel Abdulla, Subbakrishna Rao

Founded In
2017

Headquarters
Virginia, USA

Website
https://www.clootrack.com

Total Funding
$4.5 Mn

Major Investors
Malabar Angel Network, Indian Angel Network, Unicorn India Ventures, IAN Fund

#07

Code of Duty

Improving Every Shopper's Journey With Business Automation

COD.

Customer experience is a critical component of a consumer's purchase journey. Hence, brands must work on a smooth outcome at every touchpoint to ensure customer loyalty and sustainable growth. Launched in 2018 by Sanju Mathew and Benjamin Abraham, Code Of Duty has developed its flagship product Askerbot that uses IVR, SMS and advanced analytics tools to help businesses manage campaigns, operations and customer services.

Brands can use Askerbot's campaign performance monitoring (CPM) tool for efficient delivery scheduling as it notifies customers of incoming packages and confirms their availability to receive orders. This improves first-attempt delivery rates by more than 70% and helps reduce RTOs (return to origin), the startup claims.

Askerbot also automates customer feedback and surveys via calls and SMS, helping brands to better understand customer demand, make data-driven decisions and cut down on costs and human resources in the process. The CPM tool claims to send up to 100 calls in a second for quick and efficient operations. Among its key clients are ecommerce behemoths like Myntra and the Lazada Group.

Founders
Sanju Mathew,
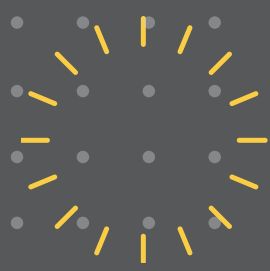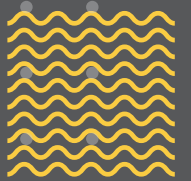Benjamin Abraham

Founded In
2018

Headquarters
Thiruvananthapuram

Website
https://www.codty.com

#08

ConceptBytes

AI Reinforcing Surveillance Systems

Founded by Anand Subhash in 2011, ConceptBytes' SaaS-based Smart Surveillance enables remote health monitoring of CCTV, NVR, DVR and centralised video management systems to ensure that system availability, foolproof backup and other related components are in perfect working condition. The startup uses Edge AI (a hybrid of Edge computing and artificial intelligence) that quickly identifies the issues hindering the efficiency of surveillance systems and generates actionable insights for enterprises to take timely action. These reports are deployed to companies via the web or through the mobile app.

The startup currently holds five product patents and three grants. It also bagged the Forbes-Microsoft AI Award 2.0 for the Best Emerging AI Start-up in 2020.

Founders
Anand Subhash

Founded In
2011

Headquarters
Thiruvananthapuram

Website
www.conceptbytes.com

Entri

Turning Jobseekers Into Job-Ready Professionals

ENTRI

Young Indians are at a critical juncture right now. Less than 50% of the Indian graduates were employable in 2021 and the gap is likely to widen by 2030 as fewer students will master the right level of learning needed for skill-based hiring. Set up in 2017 by Mohammed Hisamuddin and Rahul Ramesh, Kochi-based Entri aims to address this pain point as it provides jobseekers with most relevant learning tools, including mock/adaptive tests, flashcards, video lessons and more in multiple vernacular languages.

The company initially started its journey in Kerala in 2015 and released a learning guide for those writing the IIT-JEE exams. But two years later, it changed tack and decided to help students preparing for the Kerala PSC examination. The edtech startup currently provides more than 500 courses in Malayalam, Tamil, Kannada, Telugu, Hindi, Marathi, Bengali, and Odia, among other languages.

The platform covers a number of pre-employment tests and upskilling domains, including RRB exams, UGC NET, IELTS, digital marketing, sales training, spoken English and an aptitude test for placement exams. It has also launched a programme called Entri Gold, providing personalised guidance to applicants.

Entri claimed a 100% rise in user base in March 2020, crossing 3 Mn in the wake of the pandemic. Earlier this year, it claimed to have more than 8 Mn registered users and 250K+ paid subscribers, of whom 25K cracked government job exams.

Founders
Mohammed Hisamuddin, Rahul Ramesh

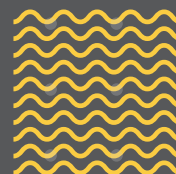## Founded In
2017

Headquarters
Kochi

Website
https://entri.app

Total Funding
$10.1 Mn

Major Investors
Omidyar Network India, Innospark Ventures

#10

EyeROV

Building & Scaling Marine Robots

EyeROV

Two individuals passionate about building hardware and robotics and possessing more than five years of experience in the segment — Johns T Mathai and Kannappa Palaniappan P — decided to begin their journey into the startup ecosystem in 2015.

During his stint at the previous job, Palaniappan travelled on ships quite frequently. During one such expedition, his team had to investigate the ship's hull — the bottom section of the ship. This brought to the fore the difficulty of finding a diver on such short notice. This led to the duo searching for solutions to ease such problems and EyeROV was born.

Incorporated in 2016, the startup provides an underwater drone that works as a remote-operated vehicle for fast and efficient inspection underwater, Tuna. Powered by dual HD cameras, the ROV has the ability to navigate up to 100 metres underwater and give real-time HD video images.

Incubated under the electronic hardware incubator Maker Village, the startup got access to a team of reputed mentors and advisors that included ex-DRDO and ex-Navy officials. It took EyeROV almost two years to build Tuna and soon after it received its first order of the product from the Defence Research and Development Organisation (DRDO)'s Naval Physical and Oceanographic Laboratory (NPOL).

Founders
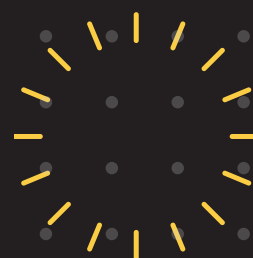Johns T Mathai and Kannappa Palaniappan P

Founded In
2016

Headquarters
Kochi

Website
https://www.eyerov.com/

Total Funding
$70K

#11

Farmers Fresh Zone

Building A Network Of 20K+ Farmers To Ensure Better Livelihood

Your health, Our satisfaction
www.farmersfz.com

Indian farmers often struggle to earn the minimum subsistence income due to the lack of agricultural inputs, funding crunch and a broken supply chain leading to unviable pricing. To improve this scenario and help local farmers, Pradeep PS has set up a D2C marketplace called Farmers Fresh Zone (FFZ) that sources fresh produce from its farmer partners and makes doorstep delivery to customers.

Using tech-driven tools, FFZ analyses local consumption patterns and past sales data to predict demand and maintain a steady supply for a large consumer base. At present, the startup delivers fresh fruits and vegetables in Kochi, Thrissur,Thiruvananthapuram, Kottayam and Coimbatore.

The agritech platform encourages its farmers to follow good agricultural practices to ensure that the products are safe-to-eat and pesticide-free. It also provides food provenance to build trust among buyers who can track each product back to its source.

So far, the startup claims to have served more than 170K users, created 200+ jobs and helped more than 2,000 farming families raise their income by 15%. It aims to scale its offerings pan-India and help more than 20K Indian farmers become profitable in the next three years.

Founders
Pradeep PS

Founded In
2016

Headquarters
Kochi

Website
www.farmersfz.com

Total Funding
$1.2 Mn

Major Investors
Indian Angel Network,
Malabar Angels,
Native Angels Network

#12

Finahub

Leveraging Tech For Implementation of Aadhar & eKYC Service

Founded in 2012 by Ajith George and Rajesh Sukumaran, Finahub Technology Solution is a software technology solutions company that provides technology solutions to financial market players in India.

The startup helps its customers easily integrate Aadhar enabled services using its tech solutions. The product, Finavault is an Aadhaar Datavault solution that secures storage of Aadhaar data of employees or customers in accordance with UIDAI guidelines. Finavault can be deployed on cloud or as an on premise solution. The startup also offers an onboarding service that utilises Aadhaar enabled technologies such as Aadhaare KYC and Aadhaar eSign for implementing paperless account opening service. The startup's product Aadhaar E-KYC solution enables hassle free and efficient eKYC service implementation.

Some of its customers include The Federal Bank, Muthoot Finance, Kotak Mahindra Prime and Karnataka Bank.

Founders
Ajith George,
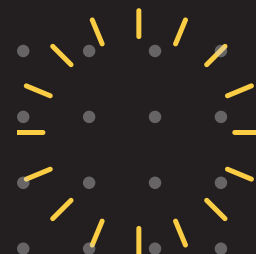Rajesh Sukumaran

Founded In
2012

Headquarters
Kochi

Website
https://www.finahub.com/

#13

Featherdyn

Fulfilling India's Drone Ambitions

FeatherDyn

The homegrown drone industry is all set to get a boost, given the government's recent mandates regarding this sector. But nearly half a decade ago, a team of veteran aerospace engineers realised the potential of long-distance UAVs (unmanned aerial vehicle) in critical areas like surveillance, utility monitoring, marine logistics and disaster relief. So, Featherdyn was set up in 2018 by drone enthusiasts Rajeev Chandrasekharan, Akhil Gopalan and Navaneetha Krishnan.

The outcome: The Kochi-based startup now manufactures semi-autonomous, fixed-wing UAVs with vertical take-off and landing (VTOL) that can travel up to 100 km with a payload of 1 kg.

Better still, these UAVs feature innovative collision avoidance systems. Their electric propulsion systems are tailor-made for long-range and difficult weather conditions. And finally, the drones come loaded with efficient communication systems and advanced sensors, making them both robust and reliable. There are provisions for real-time monitoring with live long-distance data transfer, and critical information can be extracted after processing sensor data.

Featherdyn made good use of the Fab Labs and Super Fab Labs workshops to develop its prototypes and leveraged the industry connections extended by the Maker Village to push growth. The networking was fruitful and helped the startup bag a major client — the Indian army. It also won the Defence India Startup Challenge that focusses on Innovations for Defence Excellence (iDEX). Featherdyn has also worked with the Indian Navy and built indigenous solutions.

Founders
Rajeev Chandrasekharan, Akhil Gopalan, Navaneetha Krishnan

Founded In
2018

Headquarters
Kochi

Website
http://featherdyn.com/

#14

Genpro

Accelerating Clinical Research With Advanced AI

GENPRO RESEARCH

Founded by Anoop Ambika in 2016, Genpro specialises in clinical research services and offers a host of solutions for clinical data management, regulatory medical writing, biostatistical programming and real world evidence (RWE) generation.

It also offers strategic consulting in areas like early-stage studies, data submissions and regulatory submissions. The startup aims to accelerate research in different branches of epidemiology by focussing on data documentation and RWE — analyses based on real-world medical data that helps researchers develop guidelines and make clinical decisions.

Genpro claims to have codeveloped an AI-based data extraction, authoring and reporting platform called MaiA with one of the world's leading pharma companies. The semi-automated platform helps increase research efficiency by instantly summarising medical literature reviews and reducing the manual workload of medical writers and analysts by 50-70%. Using this platform, researchers around the world can search, review and publish scientific and medical documents without taking too long.

The company's team of statisticians, statistical programmers and clinical data scientists come from the US, the EU, New Zealand and India. To date, it has served 20 clients and helped develop 200 clinical studies.
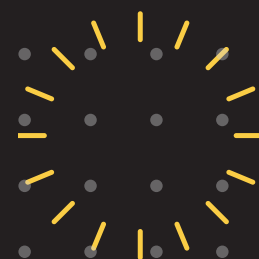
Founders
Anoop Ambika

Founded In
2016

Headquarters
Massachusetts, USA

Website
www.genproresearch.com

#15

Genrobotics

A Robo To End Manual Scavenging

GENROBOTICS ®

Inspired by Marvel Comics' superhero Iron Man, four students from the MES College of Engineering built a 14 ft robot suit. But soon enough, the four focussed on one of the biggest health hazards plaguing India as thousands died due to accidents while cleaning sewers and septic tanks. Although manual scavenging is legally prohibited in the country, it is intermittently reported from many states and a tech solution was required to address this pain point.

In came Bandicoot, India's first manhole-cleaning robot and the startup's flagship product. The prototype was created with help from KSUM and the Kerala Water Authority. The full-featured robot is powered with a live camera to view its surroundings, sensors to track the presence of deadly gases and an improved fire safety system to avoid fire hazards due to gases present in manholes. The bucket unit can carry waste up to 125 kg per cycle. It features a user-friendly interface and an in-built tutorial for sanitation workers' self-training.

By 2021, the startup had many achievements under its belt. It deployed more than 30 Bandicoot units to as many as 10 states, joined hands with Tata Brabo Robotics for mass production and signed an MoU with Dubai Municipality for its different automation needs.

Founders
Vimal Govind MK, Rashid K, Nikhil NP, Arun George

Founded In
2015

Headquarters
Thiruvananthapuram

Website
https://www.genrobotics.org/

Total Funding
$377.3K

Major Investors
Unicorn India Ventures, SEA Fund & Mahindra Group chairman Anand Mahindra

#16

Inntot

Broadcast Tech Gets An Edge

inntot

Launched in 2014, this KSUM fund-of-fund portfolio startup develops high-performing but cost-effective IP solutions for digital radio receivers and covers various standards, including DRM-AM and FM, DAB and DAB+, HD-Radio and ISDB-T.

The SDR (software-defined radio) tech startup was set up by former Wipro employees Prasanth Thankappan and Rajith Nair. Its software solutions aim to negate the use of specialised hardware chipsets to bring down the cost of digital radio receivers for original equipment manufacturers (OEM) of major carmakers.

The company also caters to consumer electronics OEMs and smartphone manufacturers. But its biggest client is the automobile sector, including big names like Faurecia-owned car navigation unit Clarion (formerly owned by Hitachi) and South Korean chipmaker Telechips.

Backed by Unicorn India Venture, the startup owns four patents, two in India and two in the US. It also won many awards, including the National Award 2021 from the Technology Development Board, the Government of India, the NXP India Tech Startup Challenge 2022 and more.

Founders
Prasanth Thankappan, Rajith Nair

Founded In
2014

Headquarters
Kochi

Website
https://www.inntot.com/

Total Funding
Undisclosed

Major Investors
Unicorn India Venture

#17

NavAlt

Charting A Green Course With Solar Vessels

Navalt

Inland waterways across India cover a navigable length of 14,500 km, but not even half of it sees mechanised transportation. However, this trend has changed in recent years as water transportation has taken the renewable route and gone solar to marry widespread mobility with sustainability. Sandith Thandasherry, Phillippe Pallu and Frederic Meniere were early movers in this space as they launched Navalt Solar & Electric Boats in 2013, a company that designs and develops solar-powered boats and ferries.

Promoting clean energy, the company launched India's first zero-emission ferry, Aditya, in 2017. Three years later, it had transported more than 1.10 Lakh passengers and covered 70K km, without relying on a single drop of fossil fuel. In the process, the startup saved the Kerala State Water Transport Department (KSWTD) 100K litres of diesel, worth about INR 75 Lakh. The solar ferry, operated by KSWTD, broke even in 2019, boosting prospects for cheap and green services in Kerala and elsewhere.

With the vision to make water transportation more efficient and eco-friendly by reducing energy and resource usage, the company is now working on clean and customised solutions for workboats, and cargo vessels.

Founders
Sandith Thandasherry, Phillippe Pallu, Frederic Meniere

Founded In
2012

Headquarters
Kochi

Website
https://navaltboats.com/

#18

NAVA

Developed The Coconut-Tapper Robo For Hassle-Free Collection

Agritech startups across India primarily focus on helping farmers by addressing production and marketing issues. NAVA is no exception, but there is a difference. This Kochi-based startup has developed Saper, a device that uses AI and solar power to emulate the activities of a human 'tapper' and extracts the sap from coconut palm trees, leaving zero carbon footprint.

This is no mean feat, given that farmers have to scale the tall trees several times a day to get the fresh sap out. In contrast, Saper requires just two visits, one for installation and the other for dismantling, thus reducing the chances of accidents or fatal falls. A single Saper can be used for a hectare of land and the extract from multiple trees is gathered at the ground level. Plus, the precision robotic cutting optimises the yield and hence, the profits.

After scientific extraction, the coconut inflorescence is stored into contamination-free collection tanks and then processed to produce a variety of agri products such as coco sugar and coco honey, jaggery and coconut cider vinegar. Most have seen rapid global demand due to their rich mineral content. For instance, coco sugar itself has a $1.3 Bn global market and counting.

NAVA was incubated in the Maker Village under MeitY and won the National Startup Award 2020 by Startup India in the agriculture productivity domain. It also received the Idea Day Grant from KSUM and Ankur Grant from the BPCL.

The startup claims that Saper is the world's first coconut sap-tapping robot and consequently, it has patents in 28 countries, which are major coconut producers. Additionally, it has reached nine out of the 17 sustainable development goals promoted by the UN.

Founders
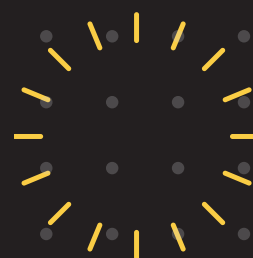Charles Vijay Varghese

Founded In
2017

Headquarters
Kochi

Website
www.navainnovation.com

Total Funding
$40K

#19

Rapidor

Automation Solutions For Indian SMEs

rapidor®

Indian SMEs generate about 30% of the country's GDP through local and global trade. But despite this sector's significant contribution, it has remained unorganised and missed out on many business opportunities. To help small and medium enterprises streamline their business operations via a single operating window, Pawan Kumar, Prabu Chanduru and Thomson Skariah Thayil set up a B2B trade and transaction platform called Rapidor in 2015.

The platform allows SMEs to automate and manage every aspect of the trade, from order tracking, processing and procurement to invoice raising, payment collection and getting customer feedback. These solutions help improve operational transparency, reduce manual intervention and increase efficiencies. Businesses can also monitor sales performances and gain insights into optimising revenues and profits.

The platform can be seamlessly integrated with the ERP software via APIs, and companies can centrally manage sales and streamline cash flows using Rapidor's smart interface.

In 2019, the Kochi-based startup received a grant of INR 12 Lakh from KSUM, which was used to meet its expansion goals. Today, more than 95% of the startup's revenue comes from SME clients from Rajasthan, J&K, Madhya Pradesh and Delhi-NCR. Globally, it has helped SMEs from Singapore, Mexico and the Middle East.

Founders
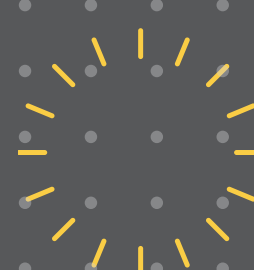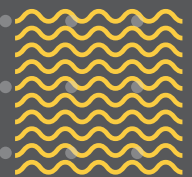Pawan Kumar, Prabu Chanduru, Thomson Skariah Thayil

Founded In
2015

Headquarters
Kochi

Website
www.rapidor.co

#20

Riafy

AI Driving App Craze

Set up in 2013 by six friends (all of them are engineering graduates), Riafy is a SaaS platform that creates intelligent AI experiences for local and global enterprises. The startup initially targeted the B2C market but soon pivoted to the B2B space and started working on pioneering technologies.

It has developed RIA, a contextual smart search engine capable of identifying patterns from data sets. This helps the company optimise user experience across all its products as these are developed based on specific user interests. In simple terms, RIA can predict the content that is likely to go viral and the 'happiness' level of users consuming that content. Apps made by Riafy rank among the top 1% globally.

The Kochi-based company was the first Indian developer to be featured at Google I/O for five consecutive years since 2015 for its recipe app called Cookbook. It was also the first cooking app to clock 5 mn downloads and the first of its category to be showcased on Android TV. It was also the first Indian company to be awarded the Editor's Choice & Top Developer Badge by Google for its commitment to launching high-quality and innovative apps.

The startup was incubated under KSUM and worked for industry behemoths such as Google, Apple, Sony, Siemens and Samsung. Their consumer-facing products created by Riafy are used by 36 Mn people speaking 27 languages across 160 countries.

Founders
John Mathew, Joseph Babu, Benny Xavier, Benoy Joseph, Neeraj Manoharan, KV Sreenath
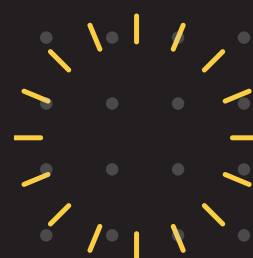
Founded In
2013

Headquarters
Kochi

Website
https://riafy.me/tech/

Total Funding
Bootstrapped

Riod Logic

Prepping Manufacturers For The IIoT Boom

RIOD™
RUGGED INTERNET OF DEVICES

With IR 4.0 making a rapid foray by optimising the digital ecosystem and introducing connected technologies, next-gen manufacturers require state-of-the-art, future-ready solutions. In sync with today's demand, Riod Logic provides a wide range of IIoT-ready (industrial internet of things) products and services and takes care of the entire product lifecycle, from concept and design to development and post-production management.

The startup's in-house R&D team develops the hardware to monitor, control and analyse various KPIs for seamless sensing and connectivity. Its product portfolio includes EV-charging systems, IoT sensors, temperature and humidity trackers and other advanced devices.

According to founder Akhil Joy, Riod has sold more than 300 devices in the EV charging space, its key focus area, besides catering to the energy industry and agriculture. However, most of its revenue comes from developing customised products for the U.S. and the EU clients.
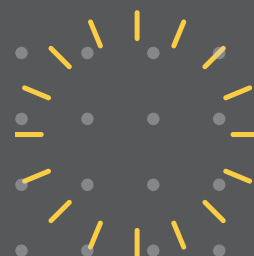
Founders
Akhil Joy

Founded In
2018

Headquarters
Kochi

Website
www.riod.in

#22

Sastra

Robo-Testing Hardware Functionality

Robotics have been here for ages, thanks to the automation evolution. But with new-age technology coming in, there has been a surge in demand for more sophisticated solutions to increase efficiency and reduce time-to-market.

Sastra began its journey a decade ago when its three founders developed a robotic system for speedy, hassle-free functionality testing of previously non-automated applications. Today, it develops a wide variety of scalable robotic solutions for testing and caters to automotive, aviation, medtech, banking/fintech, smart gadgets and consumer electronics sectors. The startup's flagship product is QUACO and its many variations for more sophisticated performance evaluation. It also offers lab-as-a-service and facilitates remote testing for its clients. All its solutions are part of a cloud-native system so that data can be researched, analysed, collated and shared with client networks.

Incubated at the Maker Village, the startup was able to expedite the process of building its prototypes by leveraging the Fab Labs workshops, grants, funds and industry connections. In 2019, an MoU signed with US-based Lockheed Martin helped it tap into global markets.

In an earlier conversation with Inc42, founder Aronin P. said, "At Sastra, we believe that the coexistence of humans and intelligent machines is the next step of evolution. We are confident that we will be able to drive this revolution."

Founders
Akhil A, Achu Wilson, Aronin P

Founded In
2013

Headquarters
Kochi

Website
https://sastrarobotics.com/

Total Funding
$185K

#23

Strava

Creating, Cyberproofing Spacetech Apps For Robust Ops

India saw the rapid adoption of a digital ecosystem in the wake of the pandemic as businesses and individuals needed the tech lift to survive the Covid crisis. But the time crunch left too many vulnerabilities out in the open, and the country may become one of the biggest victims of cyberattacks in the next two years. This can get scarier if hackers hit a central power/oil grid a la the audacious ransomware attack on the Colonial Pipeline.

However, India has robust defenders like Strava, Kerala's first-ever spacetech startup that offers cybersecurity solutions through its Cyber Labs unit to protect spacetech users and centralised systems.

Set up in 2014 by Jancy Jose and mentored by KSUM, the company develops large-scale 3D maps and IR 4.0 spacetech applications for government and private entities. At the core of its spacetech offerings lies Cyber Monkey, a cloud-based geospatial intelligence system that provides reliable location intelligence by analysing spatial data. This played a significant role in the state's emergency flood rescue operations, making disaster rescues quick and efficient.

But Strava's core expertise has a broader and more crucial aspect that mandates robust cybersecurity measures. Its geospatial intelligence system, data analysis and data visualisation are linked to the centralised intelligent command and operation centres for smart cities, smart navigation, traffic audit, urban planning and more. Hence, the startup is doing a holistic job of developing, running and protecting its core business and winning accolades in the process.

Strava was recognised as the Next-generation Innovation Startup of the Year 2019 at the CES, Las Vegas, and received the Best Cyber Security Supporters Award from Kerala Police in 2018. It has recently signed an MoU with the IBM Weather Company to ensure all stakeholders can make informed decisions using its weather data analytics.
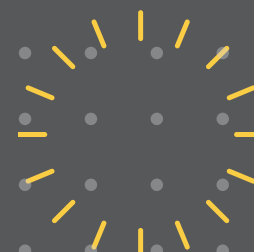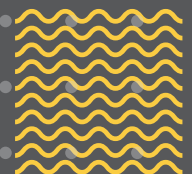
Founders
Jancy Jose

Founded In
2014

Headquarters
Thiruvananthapuram

Website
https://stravatechnologies.in/

#24

SurveySparrow

Killer Surveys Help Engagement Come Alive

SurveySparrow

SurveySparrow is an omnichannel experience management platform, but it does a lot more than just conducting customer surveys. What started with a simple question – why we don't like surveys – led founder and CEO Shihab Mohammed to create an engaging feedback tool that takes the 'boring' part away from the predictable queries. Popular messenger WhatsApp's chat interface further inspired the startup to keep the forms as conversational and intuitive as possible, guaranteeing 40% more response rates as the first-ever 'chat' survey went live.

Cloud-based and fully automated, the platform offers a dashboard for B2B clients to import contacts and create their custom lists. The startup works with global brands such as GrantThornton, Godrej, Honda, Opera and Xerox and claims to have surveyed 1 Lakh+ customers in 149+ countries in 86+ languages. SurveySparrow was one of the first startups to be incubated in 2017 as part of the KSUM project. It has won many awards, including the G2's Fastest-Growing Products Award for three consecutive times.

Founders
Shihab Muhammed, Subin Sebastian

Founded In
2017

Headquarters
Walnut (California), The US

Website
https//surveysparrow.com

Total Funding
$1.4 Mn

Major Investors
Prime Venture Partners

#25

Tranzmeo

Pipeline Monitoring Made Smart

TRANZMEO

In the era of Industry 4.0, companies driven by cutting-edge technology abound as tech differentiation drives innovation, operational efficiency and growth. But it also makes businesses vulnerable to all types of technical malfunctions and malicious attacks. That's why Safil Sunny has set up Tranzmeo, which uses AI, ML and IIoT (industrial internet of things) devices to detect anomalies better and faster and helps enterprises with forensic solutions.

The startup is currently working on thefts and pilferage hindering the pipeline operations of oil and gas companies while minimising their carbon footprints and augmenting safety and regulatory compliances. It has developed a comprehensive solution called T-Connect OneView to refine anomaly detection in pipelines and scaled up its installations across 4,000 km of hydrocarbon pipelines.

Tranzmeo raised pre-seed funding from Hindustan Petroleum and tied up with the National Institute of Technology (Calicut) under the KSUM project to develop cutting-edge, cross-functional technologies in photonics, edge computing and artificial intelligence.

Founders
Safil Sunny

Founded In
2017

Headquarters
Kakkanad

Website
https://tranzmeo.com/

Total Funding
$187K

Major Investors
Hindustan Petroleum

#26

Trois

One Tech Enabler, Many Capabilities

TROIS INFOTECH

Today, businesses find it necessary to adopt disruptive tech to stay ahead of the competition, but many lack in-house expertise to set up such systems and solutions. As a result, a new breed of tech enablers like Trois came up with customised solutions, taking care of project designing and development, implementation and strategic consultation.

Set up in 2018 by three startup enthusiasts, the company offers solutions across diverse domains, including ecommerce, e-governance, hospitality, FMCG and the utility space, with the help of business feasibility analysis, operations management and business development tools.

Currently, Trois is working on more than 10 different projects, but its core expertise lies in three major areas — surveillance, cleantech and telecommunication.

In the first case, the startup uses AI/ML and deep learning applications to enable real-time alerts on violations and thus ensure public safety. In the cleantech sector, it is working on a waste tracking and management system to help individuals, corporate houses and governments implement sustainable waste management. Finally, it helps telcos choose the most efficient GIS programmes to optimise their operations.

Founders
Jitesh T, Nandakumar Edakkad, Regil Raghavan

Founded In
2018

Headquarters
Thiruvananthapuram

Website
https://trois.in/

#27

TutorComp

Going Places With Global Curricula

TutorComp

Edtech startups (and remote learning) in India have seen a significant uptick since the outbreak of the pandemic. According to IBEF, the edtech market is expected to reach $4 Bn by 2025 at a CAGR of 39.8%.

But when Shery Kurian founded TutorComp in 2011, its mission was not about convenience or safety. Instead, the founder wanted to bridge the gap between lessons 'learnt' and the lessons 'understood' and expand globally so that students worldwide would get the taste of best-practice education services.

The platform has onboarded more than 750 global educators who leverage its tech capabilities such as voice chat and shared digital whiteboard to interact with students and offer one-on-one tutoring lessons on varied topics.

TutorComp has a presence in 22 countries such as the US, India and Australia. Based on their specific requirements, students can choose from a diverse range of curricula, including International Baccalaureate (IB), national curricula of the US and Australia, Indian courses developed by the CBSE and the ICSE and many more. In addition, it provides a customised learning plan based on each student's performance and learning ability.

The recent demand for online education was also reflected in TutorComp's journey. The startup announced its partnership with the Dubai government in 2021 to provide a VoIP-enabled online tutoring platform to boost online learning in the emirate.
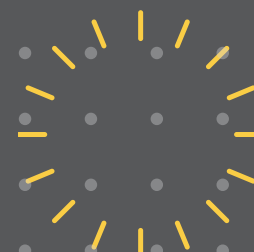
Founders
Shery Kurian

Founded In
2011

Headquarters
Illinois, USA

Website
https://www.tutorcomp.com

#28

XShip

Redefining Maritime Energy Management

XShip™

Headquartered in Kochi, XShip is a marine data-driven energy management system aiming to improve vessel performance and reduce costs. The company caters to B2B and B2G clients and provides comprehensive cloud solutions to track a ship's performance under varying conditions of speed, load and weather and take corrective measures.

This system of theirs uses a powerful algorithm that they developed based on data from over 1,000 ships. Some of the leading shipowners like MSC, PIL, MTM use their services.

Mentored by KSUM, the startup was awarded monetary (seed loan and scale-up grant) and non-monetary support (networking opportunities) from the beginning of its journey.

Founders
Sandith Thandasherry

Founded In
2018

Headquarters
Kochi

Website
https://xship.in/index.php

Total Funding
$1 Mn

Major Investors
Undisclosed

ZappyHire

Hiring Made Easy With AI

Zappyhire

Attracting and retaining the right talent are critical for business success, but it is easier said than done. In fact, a McKinsey report says that nearly one-third of the senior executives think that finding good employees is a significant challenge.

However, Kochi-based smart recruitment platform ZappyHire has an end-to-end solution in place that helps enterprises screen applications, engage with potential hires, interview them and onboard successful candidates faster and without bias.

The platform has automated the screening process. It gains insights from each resume and instantly ranks applications from hundreds of people. Its video interview solution also eliminates human efforts in scheduling/rescheduling interviews, analyses the candidate behaviour on camera and gives employees a personal traits report. Further, ZappyHire's AI assessment tools enable companies to measure a candidate's job skills using gamification. In simple terms, it provides a gamified environment that simulates real workplace scenarios to help companies find the best fit.

The startup claims that using its bouquet of AI solutions reduces the hiring time up to 69% and boosts candidate conversion rate by 76%. It claims to have helped more than 1,600 recruiters until now, including the Federal Bank, KSUM, Indus Motor and others.

According to ZappyHire's cofounder Jyothis KS, the platform is currently working closely with the Kerala government on the Kerala Knowledge Economy Mission (KKEM) that aims to hire 20 Lakh people over the next five years.
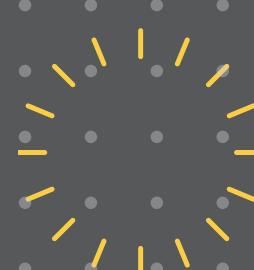
Founders
Jyothis KS, Deepu Xavier

Founded In
2018

Headquarters
Kochi

Website
https://www.zappyhire.com/

Emerging Trends And Upcoming Initiatives From The Kerala Government

The Indian startup ecosystem has come a long way since 2014. As of now, the total amount of venture capital invested in Indian startups stands at more than $126 Bn, and the number of unicorns (startups valued at $1 Bn or more) has touched 100, indicating the exponential growth of the country's startup ecosystem.

Today, India is the third-largest startup ecosystem globally, going by the total number of startups and the unicorn count. Initiatives by the central and state government have played a pivotal role in creating a sustainable ecosystem that promotes the culture of innovation and entrepreneurship at the grassroots.

As the number of operational startups increases, so does the competition to acquire customers. So, state governments need to play an active role in critical areas like GTM (go-to-market) support, fostering local talent for high-growth companies and providing greater global exposure to hardware and IoT/IIoT/IoE startups to create sustainable businesses at the grassroots.

The information and insights in this section have been formulated based on interactions with Kerala-based startup founders and secondary research.

How Kerala Government Can Play A Crucial Role To Enable The Future Of State Startups

The Government's Role In Go-To-Market

The most critical stage for any venture is the go-to-market phase, especially when the product/service hits the target market for the first time. A startup can leapfrog from a new entrant to a potential market disruptor if the GTM strategy is implemented right.

With B2G (business-to-government), rent subsidy and innovation grants in place, the Kerala state government is already ahead of its peers in supporting startups beyond incubation. However, the startup founders interviewed for insights firmly believe that KSUM should play an active role in facilitating more public-private collaborations with domestic and international enterprises.

Fostering Local Talent For Startups

Hiring the right people is one of the most crucial success factors for any business opting for hypergrowth. However, most professionals keen to work with startups are located across cities like Bengaluru, Delhi NCR, Chennai and Mumbai. Hence, the founders interviewed have expressed grave concerns regarding talent shortage in technology, sales and marketing.

The current student-oriented government initiatives such as WhyHack, IEDCs, innovation grants and others that KSUM is running can play a pivotal role in solving this problem. Also, student-startup exchange programmes, including KSUM-certified internships for local university students, can be implemented at Kerala-based startups. This may act as a catalyst and help create startup-relevant skills among the students hailing from the state.

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Wider Global Exposure For Hardware Startups

Kerala is home to many innovative hardware startups, ranging from sustainable transportation tech solutions like electric-powered boats to healthtech innovations like automated IV-fluid devices. The state is a new-age research and development (R&D) hub focussing on hardware, IoT and other related areas. Initiatives such as the Maker Village, patent grant and innovation grant have driven this success, enabling entrepreneurs to pursue innovative ideas and turn those into sustainable business models.

Given that the domestic market is yet to witness the same level of traction as the software-oriented consumer internet products and services, it is essential for the hardware startups operating in the state to have a platform where they can discover and interact with international clients. This can lead to strategic partnerships with European and Asian countries such as The Netherlands, Finland, Japan and others.

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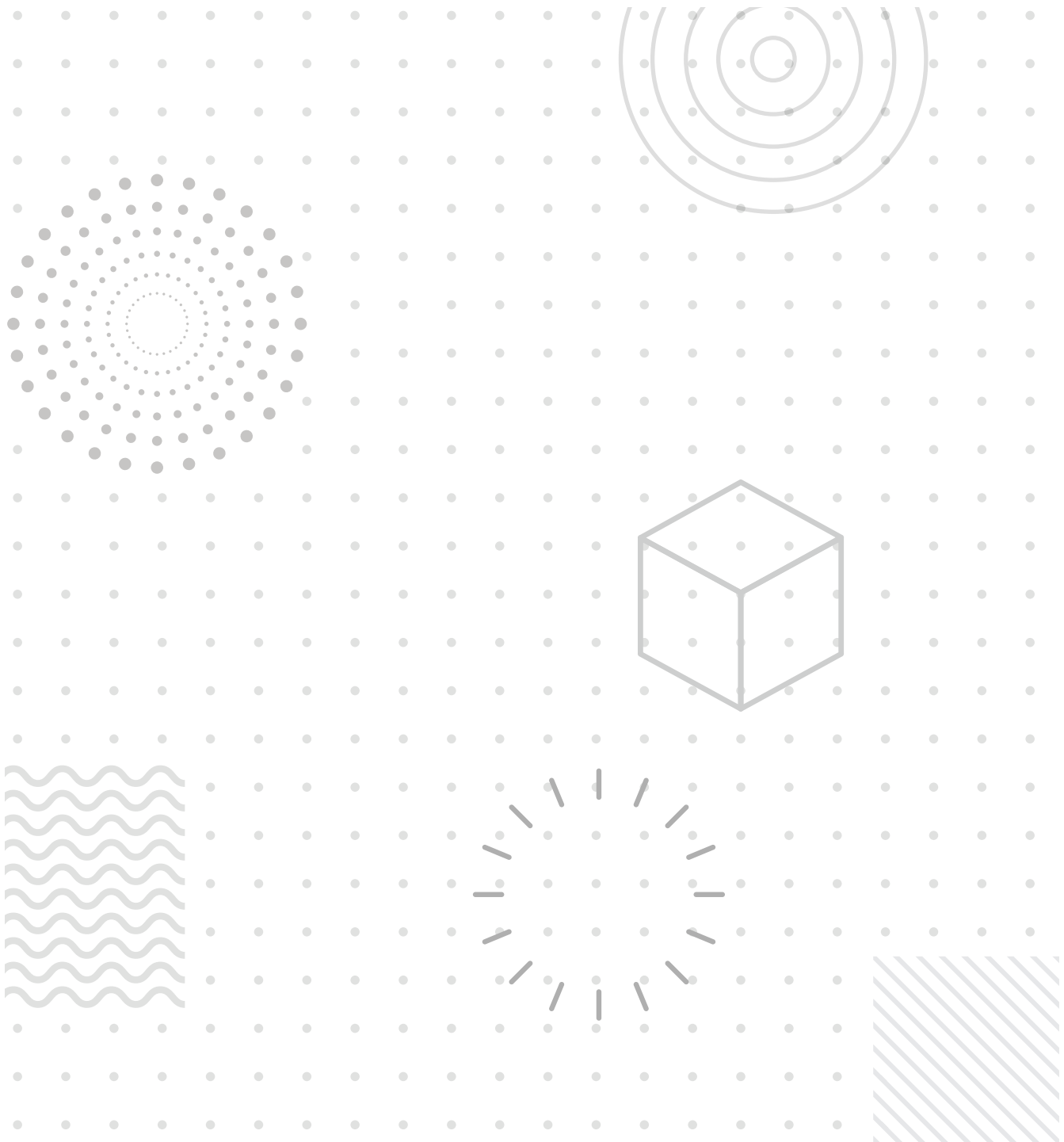
Decoding KSUM's Handbook For The Future

Now focusing on the goals for 2022 and further, KSUM has plans and ambitions to excel in three key areas, around which the Top 10 priority list is centered around.

- On a national level, the state-of-the-art machines available at Fablabs can be marketed to make Kerala the premier destination for design prototyping. Internationally, look up to other successful startup accelerators and how they operate, bringing in a truly global presence to KSUM through collaborations with reputed establishments and institutes to provide market and investor access to its local startups.

- Helping mature startups to scale up to be thriving enterprises through relevant workshops and mentor networks.

- An overhaul of the current workings of KSUM to increase the efficiency and effectiveness of how Kerala government can better impact the current ecosystem. This includes the remodel of fund distribution of grants among startups, focusing on women's entrepreneurial activities and support, and improved corporate liaisons to name a few.

Laying Groundwork

Kerala Startup Mission has been instrumental in the growth of a thriving startup ecosystem by synchronizing various components . Startups in Kerala have been pushing their boundaries as they concentrate more on upcoming technology and seek out answers to issues in novel ways.Due to Kerala's extensive support infrastructure the state makes an excellent foundation for businesses involved in advanced manufacturing and robotics. KSUM has worked extensively in promoting advanced robotics and manufacturing in the state. Setting up of Maker Village, an MSME Cluster dispersed around the state, a network of fablabs, and IoT labs are among the various steps undertaken. Startups can scale their manufacturing operations with the assistance of the state's industrial and electronics clusters which have seen rapid modernisation in the past years.

The State has given special focus in nurturing skilled talents in various sub sectors through modernized education policy and advanced curriculum from the grassroot levels . Innovation and Entrepreneurship Development Centres (IEDC) that foster entrepreneurship and creativity   intended to give young minds the opportunity to form an entrepreneurial mindset at a young age and to arm them with the tools they need to overcome the difficulties of starting a new business.The Kerala Startup Mission has initiated a number of programs like Startup Awareness and Leadership Training (SALT),Local Entrepreneurship Advancement Programme (LEAP), Back to School, Electronics at School etc that has helped to introduce students to Artificial Intelligence, blockchain, 3-D printing, virtual reality, and coding. Talent has entered the sub-sector thanks to initiatives like Digital University, Future Technologies Lab, Digital Hub, Design Incubator, BlockChain academy,ICT academy,ASAP etc.With a variety of devoted institutions and a supply of scientific talent, Kerala has created a network of scientific infrastructure.

These organizations create a number of ideas and inventions. Kerala Startup Mission seeks to turn research findings into profitable businesses by establishing connections between research institutions ,startups and corporations through its Research Innovation Network-Kerala (RINK) platform. These initiatives by the State have resulted in the state producing talents and ventures in these sub sectors

that can compete with international level competition.The focus given in upskilling and reskilling talent through initiatives including Digital University, Kerala BlockChain Academy, Fail Fast or Succeed , School of Products, and Super Fab Labs have provided startups with a pool of skilled talent to hire from, as well as provide training to potential founders.

With the support offered by KSUM and the state government many startups have been able to expand internationally as well as in the domestic market. KSUM has been able to aid many businesses to test services and products in the Indian market, whether it be by functioning as an incubator, offering networking chances with industry and state government, or providing the appropriate financial support for grants. Even amidst the pandemic infused economic downturn   the state has seen a rise in the number of startups and entrepreneurship activities, a testament to the work put in by KSUM.

With the focus of the nation now on entrepreneurs that have established KSUM is on track to assist startups and budding entrepreneurs in realizing their goals of going global.

Top Priorities

1. Kerala: A destination for Design & Prototyping

With the expertise in developing one of the finest Startup Ecosystem Kerala Startup Mission may create programs and schemes that could bring in the following to the Hardware Ecosystem:

- Partner with industry leaders to create a vibrant workforce with high potential capabilities in design and prototyping.

- A single window to connect existing /newly trained 3D designers, Prototyping centers, and Industry requirements may be created. Testing, certification facilities (Focusing on DFM designers), supply chains, and manufacturing centers may be onboarded.

- Regional partners in each state to increase the consumption base

- Policy Interventions: Recognition and grading framework for Makerspaces in Kerala

- Host Global Center of Excellence (GCoEs) for several manufacturing companies that provide for more robust ecosystem and R&D

- Brand as Technology Hubs by consolidating the resources in maker space and fablabs across the State, technology hubs.   For Eg: 3D Printing Hub in Kochi

2. Global Visibility Program for Startups

KSUM's aim is to become the premier design prototyping destination for Indian startups. From a global perspective, KSUM can learn a lot by getting into the same league and collaborations as other successful international startup ecosystem supporters, such as the Israeli start-up ecosystem. This will expose startup to a number of international business and development opportunities with a number of global Malayali professionals who are constantly seeking to connect.

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3. Scale-up program for Successful Startups

The Scale-up Programme named Fail Fast to Succeed (FFS) comes up with the message that either you fail fast to come up with a new solid idea or to succeed fast to achieve the startup goals. FFS IS a comprehensive program for startups to help them scale to enterprises with a combination of specialized mentoring, access to markets, funding readiness, strategic partnerships, etc. KSUM also proposes to conduct small cohorts at each stage for the startups primarily focusing on the scale-up startups.

4. Focus on Women in Startup Ecosystem

KSUM will run activities in emerging technology at the school & college level to create a pool of girls with a skill set that can be leveraged by the existing/upcoming startups and also provide awareness in entrepreneurship at a lower level.Specialized incubators & sector-based accelerators will be built with inclusive women space to support women entrepreneurs and startups working on the women-centric themes to start & scale. This will be supported by customized programs run to support highly qualified students/graduates from IEDC/ external, women freelancers, women in technology ventures, asset-light businesses, and MSMEs to attract them to the startup ecosystem and women cell creation in all the IEDCs & incubators to facilitate women founders, freelancers, students, professionals, etc. will be made a priority.

More women's participation as speakers & participants will be ensured in the events of the ecosystem. This will even out the in-room diversity and create role models to motivate others to come forward. Investor education in line with promoting women inclusion will be a focus.

5. Medical Innovation and Cancer Research

Being the need of the hour, KSUM has identified healthcare as a focus area in our five-year roadmap. We have planned various initiatives to develop Kerala as a biomedical hub, where startups develop healthcare solutions for early diagnosis, better accessibility to affordable healthcare, care delivery optimization and maximization of resource utilization. Building a co-creation ecosystem will help startups to survive several valleys of death in the medical device and technology development cycle.

6. Technology Commercialization

Kerala Startup Mission takes initiative to promote the early adoption of research from research labs in enterprises by startups and MSMES. KSUM has designed an innovative alliance of Research institutions, Startups and Corporates under the name " Research Innovation Network-Kerala -(RINK)" and developed a technology platform with the support of C-DAC Kerala to augment this alliance for technology commercialization. KSUM expects that this digital platform will ensure active involvement of industry in the entire cycle of research and thereby ensure access to real-time industry inputs and validation.

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7. Corporate Innovation Network

CoIN (Corporate Innovation Network) is a cohort-based Open Innovation program by KSUM to create a mechanism of bringing outside innovation to corporations. This program will be a network of corporates collaborating with a cohort of startups to build a joint solution (product) for corporates and industry needs.

CoIN helps corporations to reach their goals faster and at lower costs. With the help of CoIN established corporation can avail the following benefits:

- Get access to the startup network of both KSUM and its partners and benefit from a network of corporates who are part of CoIN. An international network of mentors, industry leaders and technical experts, leveraging the experience and expertise of KSUM to manage the whole Open Innovation program will also be available.

CoIN Program - High-Level Structure

The whole cohort will be on the basis of problem statements/focus areas of corporations. Throughout the cohort, startups will be developing/co-creating solutions with corporate experts. KSUM will pool in all the resources from the corporates/external ecosystem for this cohort.

Phase 1 - Cohort Launch	The new cohort with the corporate will be announced and startup application will be invited by KSUM.
Phase 2 - Application Closure	KSUM will close the application invitation process once the deadline is crossed and start shortlisting the applications with corporate experts.
Phase 3 - Business Pitch by shortlisted startups & Final Selection	Shortlisted startups will be invited for a presentation in front of a panel from KSUM and corporate. From this, final startups for the cohort will be selected.
Phase 4 - Application Closure	A 3month/6month cohort will be kicked off with the selected startups. Cohort Activities would be Problem statement/challenges mapping, Solution concept building, Product Iteration/development, Go To Market, Alumni Support, Mentor Matchmaking, Bootcamps.
Phase 5 - Application Closure	On the final cohort graduation day, startups will exhibit their developed solution/product to the clients, partners of the corporate and also the stakeholder network of KSUM.

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8. Better opitimisation of the government funds

KSUM has an annual budget layout of about INR 20 Cr for startup funding projects, which will be either directly invested to startups or through channel partners or through strategic investments. The risk & return of each funding structure is different. A thought of re-probing how to optimize the current funding structure arose so that a larger number of startups could be supported and benefited from this project. The ecosystem is gradually transforming, more scaling up startups are being created and trooping to the growth stage, it has become one of the top 10 priorities for KSUM for the next 5 years to focus on.

Prospects

Grants: Identifying potential innovations, translating them into commercial products and building scalable enterprises will be significant in developing socio-economic impact in Kerala's startup ecosystem. Below elements can create a greater number of quality startups with technology/business process innovations, newer technologies, repeated scalable sales models, with higher business valuations and social impact:

- Create a large pool of innovation pipeline with easy access to funds

- Redesigning the Innovation Grant with a bigger quantum of funds with fast releases.

- Closely knitting with incubators & accelerators for mentorship, monitoring, market access and/ or equity participation.

- Redesigning research grant and scale-up grant to plough back KSUM returns in the future.

Interest Subsidy for debt financing: The fund optimization for debt financing can be better leveraged to a large portfolio of startups (maybe 20-30 times of its actual fund allocation of KSUM) through strategic partnering with State Govt. supported Banks/ FIs/PSUs/NBFCs etc, which eventually reduce their risk for investing in the startups.

- Re-designing the current model of KSUM Seed Loan by partnering with NBFC, Financial Institutions or Banks to provide 2-3% interest subsidies to provide collateral-free startup loans

The Alternative Investment Fund (Fund of Fund)/Equity

- Kerala needs more pre-series investment opportunities for investible startups to jump to the next level of funding and hence more Angel Investors, VCs, PE funds to build a congenial and self-growing investment ecosystem for unicorns.

- KSUM shall look for providing matching grants for their Investments to Kerala Startups, introducing innovative Co-investment models apart from FoF, and introducing policy incentives to funding stakeholders.

The overall startup funding ecosystem of Kerala has to be self-driven by the government, research organizations, funding institutions, sector-specific angel investors, venture capitalists and PE funds etc; which eventually creates a growth track for the high growth startups. Flexible funding/investment policies, easy funding access, spreading equity deep, serial exits, re-investing returns, funding incentives, access to global fund advisory boards etc are few things to be envisaged for startups and the investors to shoot for the moon.

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9. Innovation in Governance - Bringing disruptive technologies to Government and Bringing Government issues to Startup led Solutions.

Innovation is the key to finding solutions to complex problems and for a State like Kerala, innovation is critical in delivering effective solutions to the citizens as well as the Department. Most of the Government Departments in Kerala are now digitized. A constant scan has to be done for leading-edge digital solutions that can be deployed to meet the diverse needs of the Government and the needs of the citizens it caters to. In order to keep the Government staying ahead of the curve, it is necessary to ensure such a mechanism is built into public-sector entity governance.

Kerala Startup Mission has been bridging the gap between the startups and the Government. The key interventions needed are:

Knowledge and awareness among the employees: Creating awareness among the Government officials on Emerging technologies, best practices in data handling, privacy, sophisticated data analysis etc.

Encouraging public procurement from Startups: Encouraging PSUs, Corporations, Boards and all the Government entities to engage with startups using disruptive technologies by relying more on the existing schemes like:

- Direct Procurement Scheme (Upto Rs 20 Lakhs)

- Identifying Solutions from Startups based on Government Requirements

- Relaxations for startups while participating in Tenders.

Setting up Innovation Zones: An inter-departmental body that works closely with the startup to identify solutions for the issues and challenges faced by the Department. This model has been successfully implemented in KSEB and KWA.

Startup Product- Department Requirement matchmaking: Creating avenues for Startups and Departments to interact with each other and thereby identifying the best effective solutions.

Regular Technology Audits: Thorough and continual evaluation of the entire Technology infrastructure of every Government department to be done. Audit may highlight how the existing infrastructure is used, existing security risks and any violation industry-specific laws relating to IT etc

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Upcoming Programmes By Kerala For State Startups

Innovators Premier League (IPL 2.0)

Innovators Premier League 2.0 (IPL) is an initiative of the Kerala Startup Mission (KSUM) to bring out the best talents from the Kerala Innovation Hubs. IPL 2.0 aims to bring awareness and sensitisation of IEDC & its activities among students, build a competitive and entrepreneurial mindset among innovators, and create a pipeline of startups.

Rink Technology Conclave

Bringing together Research innovations in the rink platform under a common roof to exhibit their products. Thus creating a platform for researchers to network with startups, technocrats, mentors, corporates, industries and government officials and investors.

Big Demo Day

A virtual exhibition for selected Startups in the cross-sell platform. Startups can display their products in front of ecosystem stakeholders and live interactions between startups and various stakeholders will also be made possible. The 7th edition of Big Demo day focuses on the agritech sector. The event is scheduled to take place on 6th July 2022.

Huddle Global

Huddle Global offers a platform for start-ups to showcase their products and interact with a clutch of technology and industry leaders, on ways to move ahead in the ever growing tech world in the most informal way. Thereby creating deep interactions and positive vibes on the beaches of the most beautiful tourism destination in the country "Kovalam". Since 2018, billed as one of Asia's largest start-up ecosystem congregations and India's biggest networking platform for entrepreneurs the big-ticket brainstorming event, organized by the Kerala Startup Mission (KSUM), focuses on business, investment, and partnership opportunities for start-ups in a world that is in a robust path of recovery after the global pandemic.

The event provides a stage for a meeting of globally known start-up founders, mentors, investors, industry leaders, and representatives of government departments, to deliberate a whole range of issues relating to the start-up ecosystem with a global perspective. The conclave primarily look into the scope of entrepreneurial opportunities across the world and explore the availability of financial and technical backing for start-ups to accelerate their growth and reach. The event features keynote sessions, leadership talks, tech talks, start-up demo, and other business-oriented activities. The Chief guest for this upcoming event will be the honoruable Chief Minister of Kerala— Shri Pinarayi Vijayan

A start-up   expo featuring both global and Kerala-based start-ups would also be organized along with pitch sessions and dedicated mentoring sessions, which would be led by top mentors from the industry.Panel discussion with corporate leaders to understand the startup collaboration opportunity with corporates and leveraging startup technology solutions to solve corporate challenges along with tech talks from the Industry leaders add to an array of events that make up the summit. Pitching opportunity   with corporates, networking arena for participant's networking, mentor speed dating

and investor cafe, business deal and corporate/strategic investment announcements, innovation challenges with corporates masterclasses and workshops by corporates/investors, Investor Open pitches ,Innovator's Hackathon are all highlights that make Huddle Kerala an unique amalgamation of events that stays true to the motto of KSUM" Dream it,do it". The event is scheduled to be hosted on 15 & 16th December 2022.

Seeding Kerala

Seeding Kerala', is a unique annual event being organized by Kerala Startup Mission (KSUM) since 2016. It brings together the HNI network of Kerala and investors around India to showcase opportunities to invest in the best startups from Kerala and other parts of India. The past editions of the Seeding Kerala summit, startups have seen over Rs. 70 crore (INR 700 million) in investments from the participating VCs, HNIs, and angel investors.

Seeding Kerala is designed with the intent of:

- Seeding investors in the Kerala ecosystem

- Seeding startup investment culture among the HNIs in Kerala

- Seeding investments into the startups

Started in the year 2016 by KSUM, the seeding KeralaSummit has helped entrepreneurs turn good ideas into great businesses with ample networking and investment opportunities among a pool of cream angel investors from all over India. The summit is part of the Kerala government's plan to accelerate a thriving innovation ecosystem. It seeks to connect innovative startups with those who matter in the investment landscape and with potential partners for early-stage investment and support. The summit is also designed for prospective investors and HNIs from Kerala, to educate and empower them to create an Angel Investor Community in the State.

KSUM helps startups with risk capital, incubation support, expert mentoring and business network. The summit has been one of the many initiatives undertaken by KSUM in its quest to create a vibrant startup ecosystem in the state to foster the growth of innovation-led technology entrepreneurship.

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Methodology

All information on venture capital investment in Kerala-based startups is based on transactions recorded in Inc42 and KSUM's databases between the calendar years 2014 and H1 2022. The analysis of startup investments in Kerala is based on 109 startup funding deals as a sample set.

Upwards of thirty startups based in Kerala were interviewed for primary information required for the profiling of these startup under the section titled— "List Of 29 Startups To Look Out For In Kerala". Information related to government schemes and programns related to startups were directly sourced from KSUM officials.

Key terminologies used:

Seed Stage: Startup raising capital at seed or angel round.

Growth Stage: Startup raising capital at Series A or B round.

Late Stage: Startup raising capital at Series C or above round.

Bridge Funding: Any transitionary funding round (primarily Pre Series A and B)

Unicorn: A startup valued at $1 Bn or above

Enterprisetech: A startup sector which is an amalgamation of SaaS, and other software based enterprise services.

Deeptech: Startup offering advanced technology (Robotics/RPA, Internet of Things, AI/ML development and Blockchain/Web3) based hardware or software products.

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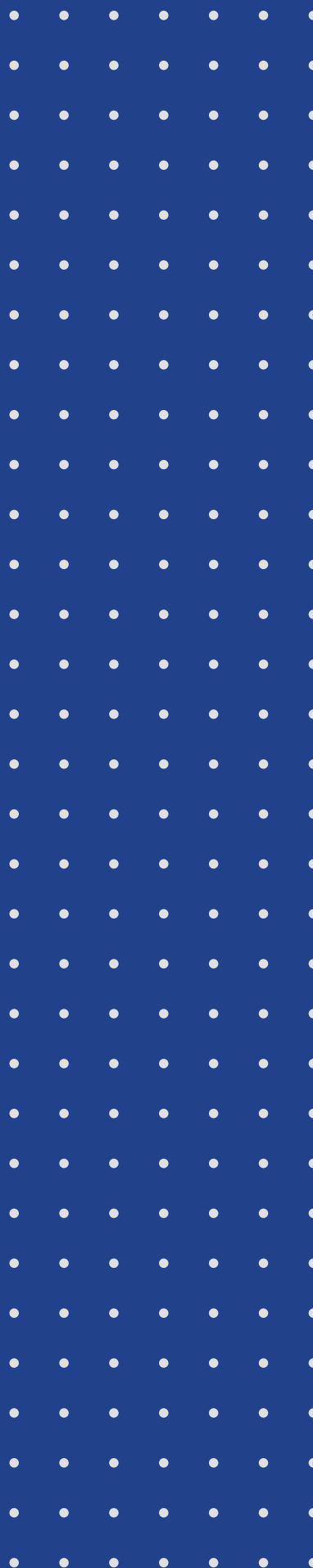
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