





"AIM TO INNOVATE" NEWSLETTER

First Edition April 2021

Atal Tinkering Labs (ATLs)

Creating a million plus neoteric innovators of tomorrow, a culture of innovation and a problem solving mindset through thousands of Atal Tinkering Labs equipped with emerging technologies do-it-yourself kits in Grade VI-Grade XII school students

Atal Incubators (AICs)

Creating a vibrant ecosystem of World class Atal incubators fostering thousands of world class Startups nationwide in universities, research institutions and private sector

Atal Community Innovation Centers (ACICs)

Establishing and scaling community centric innovations, skill development and local job creation through a hub and spoke network of Atal Community Innovation Centers in Tier2, Tier3 cities and Rural India

Atal New India Challenges (ANICs)

Creating commercializable innovative products, processes and services with national socio-economic impact through New India challenges driven innovations in partnership with Ministries and industry

Applied Research and Innovation for Small enterprises Challenges (ARISE)

Creating and promoting early stage Make in India MSME innovations from advanced research ideas and prototypes in collaboration with Ministries and MSME sector

Mentor India -Mentors of Change network

Creating a vibrant community and network of voluntary accomplished Mentor India-Mentors of Change, value adding to budding student innovators, Startups and AIM initiatives

Strategic Partnerships

Creating a vibrant ecosystem of value adding, strategic domestic and global partnerships of AIM with academia, industry, civil society organisations from India and globally

AIM e-Newsletter

A collection of topical highlights of Atal Innovation Mission accomplishments, events on the horizon, sharing of best practices, AIM beneficiary success stories and Thought Leadership innovation related reflections

FOREWORD

The Atal Innovation Mission is a flagship initiative of the Government of India under the auspices of the NITI Aayog, to create and promote a vibrant ecosystem of innovation and entrepreneurship across the length and breadth of the country. AIM has adopted a holistic, umbrella innovation, organisational approach, to spur a nation of job creators not just job seekers through its various initiatives, spanning schools, universities, research institutions, industry, civil society organisations at district, state and national levels.

The AIM Innovation ecosystem has significantly expanded nationwide in a holistic manner over the last few years, due to the extraordinary commitment and efforts of all its stakeholders. Diversity of geography and areas of focus, Inclusivity of all irrespective of gender, background or abilities, Accessibility irrespective of location, and Sustainability / Scalability of its innovation initiatives have characterised AIM approaches to innovation and entrepreneurship to date.

As a result, at a school level AIM today has selected over 10000 Atal Tinkering Labs (ATLs) across 650+ districts with 7259 of them operational, providing over 3.5 million young schools students from Grade VI to Grade XII access to emerging technologies do-it-yourself kits, thereby enabling the acquisition of a problem solving innovative mindset, a game changing transformation from a rote learning mindset. Over 70% of these labs are in girls and co-ed schools, and over 70% in government and government aided schools.

At a university and institutions level, AIM has operationalised 68 Atal Incubators (AICs) spread over 25 states, fostering over 2000+ Startups. It is heartening to note that over 625 (33%+) are women led Startups / entrepreneurs

To stimulate Make in India innovations in areas relevant to national socio economic impact the AIM has selected 56 Atal New India (ANIC) and ARISE (Applied Research and Innovation for MSME industry Challenge) winners for product, process or service innovations in collaboration with various Ministries.

To spur and reap the benefits of Community Centric innovations in Rural India and Tier2, Tier3 cities, AIM has initiated establishment of around 20 Atal Community Innovation Centers addressing rural India, Tier2, Tier3 cities and Aspirational District community centric applications, skill development and job creation needs.

To spur mentorship and a partner based stakeholders approach, AIM has also established one of the largest voluntary Mentors of Change Mentor India network with over 5000+ mentors nationwide. Over 30+ Corporate and International partners, and strategic innovation collaborations with other stakeholders support its various initiatives. Innovation Collaborations with Australia, Sweden, Russia, Israel, Singapore, Denmark, USA, France have also been established adding further vibrancy to the innovation ecosystem.

The continuing story of AIM is actually the story of several thousands of budding innovators, Startups supported by our industry , academia , government partners, who believe in themselves and in their ability to transform the nation radically for the better leveraging science, technology, research and innovation to create socio-economic impact at a national level.

Every day we are indeed very fortunate to now witness in the AIM innovation ecosystem amazing and inspiring new stories of accomplishments, efforts, best practices, dare to try efforts and new initiatives from our students, incubators, Startups, challenge winners, mentors of change, corporate and NGO partners which are worth sharing and replicating across regions.

We are delighted therefore to launch the first "AIM to Innovate" e-newsletter which attempts to capture and share the continuing saga of the AIM story for the benefit of all its beneficiaries. The newsletter is a mixture of relevant AIM innovation ecosystem topics through its articles, links provided, sharing of best practices, glimpses of exciting events worth participating in on the horizon, inspirations from success stories and learnings of many, and innovation thought leadership reflections.

In short, it is your innovation stories coming alive through this "AIM to Innovate" newsletter.

I specially want to thank the ATL principals of various schools, ATL in charges, Mentors, AIC/ACIC Incubator / Startup CEOs and Managers, Industry partners, NGO partners and of course the budding student innovators and startup entrepreneurs for turbocharging the innovation movement in our country. This augurs tremendously well for the future. Without your active collaboration and proactive participation none of these initiatives would have taken off ground or scaled up. On behalf of AIM / Niti Aayog I am indeed very grateful for the same and convey our deepest appreciation of the same.

I also thank the ever energetic AIM team for their commitment, passion and efforts in constantly striving to achieve its ambitious goals and also for daring to believe in the same. The faith reposed by the Govt of India, Niti Aayog management and the Mission High Level Committee of AIM energises us every day and provides us the much needed relevant guidance.

With concerted synergies between the various stakeholders, India can verily aspire to be among the Global Top 10 most innovative countries of the world within then next 10 years leveraging its demographic dividend, fast growing economy and advanced affordable emerging technologies. Yes we can.

Our hope and belief is that the "AIM to Innovate" e-newsletter will trigger in our readers new reflections, new ideas, new insights, new foresights resulting in world class innovation with world class global socio-economic impact and create the Aatmanirbhar Bharat of our dreams.

As the great Swami Vivekananda so eloquently said "Arise, Awake and Stop Not till our Goals are reached". Let us all therefore Arise to the challenges and opportunities that beckon us in India and the world, let us Awaken our latent, inherent innovative capabilities and talent to address the same, and let us Stop Not till the Aatmanirbhar Bharat Goals of India are reached.

Happy Reading, Reflections and eagerly looking forward to your stories / contributions in the years ahead.

Sincerely R Ramanan

AIM Initiatives Nurturing Innovation and Entrepreneurship Nationwide



Thought Leaders' Reflections



Rajiv Kumar Vice Chairman, NITI Aayog

Hitting the Right Notes with the Health Budget

Health care has taken centre stage due to an unfortunate novel coronavirus pandemic that has devastated lives and livelihoods across the globe. Although India has performed relatively better in its COVID-19 management, even compared to countries with highly developed health systems, the impact of the outbreak on society and the economy is undeniable. Against this backdrop, the Union Budget 2021–22 was an eagerly awaited one and the announcements for the health sector, in particular, have been widely discussed.

Context of packages

It is important to view the Budget in the context of the various Aatmanirbhar Bharat Abhiyaan packages announced by the Government of India, which also include several short-term and longer-term measures to strengthen the health sector. Production-Linked Incentive schemes have been announced to boost domestic manufacture of pharmaceuticals and medical devices.

Mission COVID Suraksha has also been launched to promote the development and testing of indigenous vaccine candidates. At least 92 countries have approached India for a COVID-19 vaccine, thus bolstering the country's credentials as the vaccine hub of the world. Further, to ensure food and nutrition security for the poor and the vulnerable during the COVID-19 crisis, the Government of India launched the Pradhan Mantri Garib Kalyan Package for providing free foodgrains to 800 million beneficiaries.

To facilitate access to subsidised grains across the country, the 'One Nation One Ration Card' scheme has been enabled in 32 States/Union Territories covering 690 million beneficiaries.

With respect to the "padding" of the health Budget, with allocations for water, sanitation, nutrition and clean air, as pointed out by some commentators, it is important to appreciate that the presentation of a combined 'health and well-being' budget, which sets the tone for greater integration of these areas, is in fact a welcome step.

The National Health Policy (NHP), 2017, highlights the close links between health, water and sanitation. This year's Economic Survey too recognises that improvements in access to bare necessities such as water, sanitation and housing are strongly correlated with progress in health indicators.

Good water, vaccine coverage

The substantive allocation for the newly launched Jal Jeevan Mission (Urban) is especially commendable as access to adequate, good quality water supply has major positive externalities for the health sector. A report released by the Johns Hopkins Bloomberg School of Public Health in 2019 suggested that nearly one out of every 100 Indian children does not live to celebrate their fifth birthday on account of either diarrhoea or pneumonia. Suboptimal access to clean water and sanitation is directly linked to diseases such as diarrhoea, polio and malaria. Moreover, water contaminated with heavy metals such as arsenic increases the risk of developing heart ailments and cancer.

Another important public health-related announcement in Budget 2021 was the government's decision to expand the coverage of the pneumococcal vaccine across the country. Pneumococcal pneumonia is a major killer of children under the age of five years. Once universalised, this indigenously developed vaccine could save up to 50,000 lives annually. The Finance Minister has also made a special allocation of ₹35,000 crore for the COVID-19 vaccine in 2021–22, which could be increased if required. India has already delivered over eight million doses of the vaccine to health-care and frontline workers thus far — the fastest vaccination drive in the world.

The priority accorded to capital expenditure through the launch of the Pradhan Mantri - Atmanirbhar Swasth Bharat Yojana (PMANSBY), is also a much-need step. Capital expenditure has, historically, constituted only a small percentage of the overall health Budget, with the majority of funds going towards salaries and administrative costs. Further, PMANSBY lays emphasis on the health system being strengthened at all levels, including establishing integrated public health laboratories and institutes of virology. This is crucial as experts have repeatedly highlighted the need for enhancing disease surveillance and diagnostic capabilities to be better prepared for disease outbreaks. Additionally, the emphasis on expansion of health and wellness centres under PMANSBY, together with a ₹13,192 crore Finance Commission grant for strengthening the primary health system through local government bodies, is also noteworthy.

Another point of discussion in relation to the health Budget is the stagnant allocation for the Pradhan Mantri Jan Arogya Yojana (PM-JAY), a flagship scheme launched by the government in late 2018 as part of the Ayushman Bharat initiative. Despite being a relatively new scheme, the Economic Survey estimates a 20% decline in the infant mortality rate between 2015–16 and 2019–20 in States that adopted PM-JAY, compared to a 12% decline in States that did not. It is important, therefore, to persist with this highly ambitious scheme and accelerate its roll-out as the absorptive and governance capacity of States improve.

Promoting ayurveda

A less talked about aspect of the health Budget is the nearly 40% hike for the Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH). The pandemic has catalysed a behavioural shift in favour of preventive care, holistic health and wellness. There is considerable potential for promoting ayurveda and yoga as well as integrative health-care approaches in the post-COVID-19 scenario, especially for stress reduction and the management of chronic diseases.

States must act too

Undoubtedly the budgetary allocation for health needs to be ramped up over time. We also have to ensure adequate funds for critical and closely-linked sectors such as nutrition, water and sanitation. The onus of increasing health spending, however, does not lie with the Centre alone but also with the States also. In fact, as elucidated in the National Health Accounts 2017, 66% of spending on health care in India is done by States. It is imperative, therefore, that States increase expenditure on health to at least 8% of their budget by 2022 as recommended by the National Health Policy (NHP), 2017 and the Fifteenth Finance Commission.

The health sector has found a prominent place in the government's agenda over the last few years, with the implementation of a series of well-thought-out and carefully sequenced reforms. While much remains to be done, the Union Budget 2021–22 has laid a strong foundation to increase the resilience of the sector in the post-COVID-19 era and achieving Universal Health Coverage by 2030 as part of the Sustainable Development Goals agenda.

Rajiv Kumar is Vice Chairman, NITI Aayog and Urvashi Prasad is Public Policy Specialist, NITI Aayog. The views expressed are personal.



^{*}The article is co-authored by Urvashi Prasad, Public Policy Specialist, NITI Aayog.

Thought Leaders' Reflections



Amitabh Kant CEO, NITI Aayog

Preparing for a Post Pandemic Economy: from Sunset to Sunrise Areas of Growth

The COVID-19 pandemic has been extensively disruptive in terms of economic activity and loss of human lives across the globe. At the same time, this crisis as presented us with unique opportunities that can be leveraged to build back differently and innovatively. India's urban population will double in the next decade. More than half a billion people will live, work and travel in Indian cities.

This rapid growth will pose several social, economic and environmental challenges. India must take the lead to build new industries that will accelerate growth and create jobs. This transformation is feasible when we advance technology, foster innovation and become champions in emerging areas of global growth. Japan, South Korea, Taiwan and in recent times China focused on sunrise sectors, unleashed a wave of reforms and embraced innovation to grow on sustained basis for long time periods.

In India, the key to a disruptive transformation lies in five sunrise areas of growth. Firstly, the future lies in mobility that will be shared, connected and electric. Mobility is causing the biggest disruption of today. USA already has over 900 cars per 1000 persons while Europe has over 800.

In contrast, India has only around 20 cars per thousand people. This presents a unique opportunity-our low share of vehicles per capita can be turned into a huge advantage by switching to an affordable, accessible and clean mobility ecosystem. The average price of a lithium battery that was over US \$1000 in 2010 has fallen to a mere US \$137 per kilowatt-hour and will come down to less than \$100 in next three years. Such steeply falling lithium-ion battery pack prices have made high-mileage electric service vehicles cost competitive.

To support the EV segment, the government has already brought about numerous interventions, including a lower GST structure, tax deduction on interest for loans, and has supported procurement through the FAME II scheme. Two wheelers constitute over 70% of India's total vehicle population. In the 2W and 3W EV ecosystem, India has a massive opportunity to become the lowest cost global manufacturer of electric two wheelers and three wheelers.

Artificial Intelligence, 5G mobile network & Genomics

For long distance transportation, we need to focus on Green Hydrogen, which is increasingly being viewed as the next-generation energy carrier. New age technologies such as polymer membrane based electrolysers and advanced fuel cells such as solid-oxide fuel cells are pushing the envelope of the hydrogen economy. India has achieved immense success in enhancing contribution from renewable energy and reducing the solar prices to as low as Rs 1.99/kWh (\$2.7 cents). With these prices green power to produce green hydrogen is the future.

Secondly, we must focus on Advance Cell Chemistries. A recent study by NITI Aayog and Rocky Mountain Institute concluded that India's market for EV batteries alone could be as much as \$300 billion till 2030. With innovations in solid-state batteries reaching commercial promise, new age Lithium solid state batteries are challenging the hegemony of traditional liquid electrolyte based batteries. The government has provided a boost to the segment by announcing support through the production linked incentive scheme. There are disruptions which look beyond lithium such as sodium-ion, silicon based and zinc based batteries. India should take the lead in supporting the manufacturing and scale p of these new age chemistries which will advance battery storage.

The third area for rapid transformation is Artificial Intelligence (AI). Today, eight out of the top ten companies are tech and digital companies and the fastest growing jobs globally are those of artificial intelligence specialists and data scientists. An Accenture report "Rewire for Growth" forecasts that AI has the potential to boost India's annual growth by 1.3 percent points by 2035. This amounts to an addition of \$957 billion or 15 percent of gross GVA by 2035. India provides the size, scale and diversity of data that can fuel current generation AI algorithms using deep learning. Due to its mobile first usage, India has a unique digital footprint with one of the lowest data costs in the world and over 650 million internet users, one being added every 3 seconds.

We now need to move from being data rich to data intelligent by making available clean, structured and annotated data and work with the best AI researchers to find solutions to tuberculosis, cancer and enhanced agricultural productivity. An AI enabling policy environment supplemented by young, data hungry entrepreneurs and product managers is crucial to evolve as a global technology leader. We need to reorient our academic institutions into centers of excellence producing world class talent for data science, UI/UX design and AI scientists.

The fourth key area of transformation is the 5th generation mobile network technology which will radically transform the world of communication, mobile technologies and flow of data. 5G will make a paradigm shift, moving beyond the traditional cellular ecosystem to interconnect people, control devices and objects, and machines and ensure faster and better communications.

It is going to be a backbone for Industrial Revolution 4.0, AI, Blockchain and all the emerging technologies. India was substantially late in exploring 2G, 3G and 4G technologies. 5G will bring new capabilities that will create opportunities for people, businesses and society – the user experienced data rate will see a 10X jump, the spectrum efficiency will be 3X higher, the latency in milliseconds 10 times better and will connect 10 lakh devices for Km2 as compared to a mere 1 lakh in 4G. It will drive internet of things technology carrying huge amounts of data and enable a smarter and a more connected world.

If big data is the new oil in the digital era, then 5G is the set of pipes that will deliver it. Due to massive density across devices and connectivity across sectors, security will be a major concern. License conditions for 5G in India should therefore ensure that Indian companies get access to background IPR from global players on FRANDS terms. It is imperative that we create our own end-to-end 5G ecosystem so that we can address our critical security concerns.

The fifth key area is Genomics. Genomics aims to understand the structure of the genome including the mapping genes and sequencing the DNA. Recent findings in our genomic history and the sharply declining costs of genetic testing and analysis can transform the way public health is delivered in India. We need to set in motion a virtuous cycle of private investment in genetic testing, analysis counseling and therapy.

Last year, the government launched the IndiGen project, under which the full genomes of over 1,000 individuals are sequenced, and the data handed over to the individuals on a smart card. A national genomics platform is necessary to zero in on the major risk factors that individuals face. This can sharply help reduce the incidence of many diseases. The more genomes there are on the platform, the more useful it will be for finding solutions to diseases.

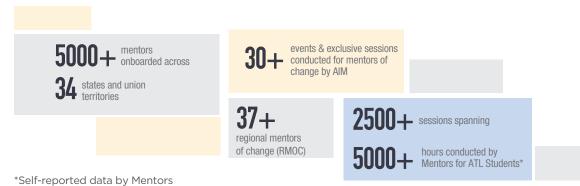
India has already unleashed bold and transformational reforms which will bolster our efforts in becoming a global champion and the manufacturing hub of the world. The production linked incentive schemes, reforms in labour laws, GST, corporate tax rationalization and an overall ease in doing business will give a fillip to India's growth. India must seize the opportunity in sunrise areas of growth - this would require size, scale, speed of action and a focus on technological disruption. India's ability to lead and globally drive these sunrise sectors of growth holds the key to our sustained growth, advancement and job creation.

The Atal Tinkering Labs (ATLs) program journey

Some Encouraging Numbers



The Mentorship across India

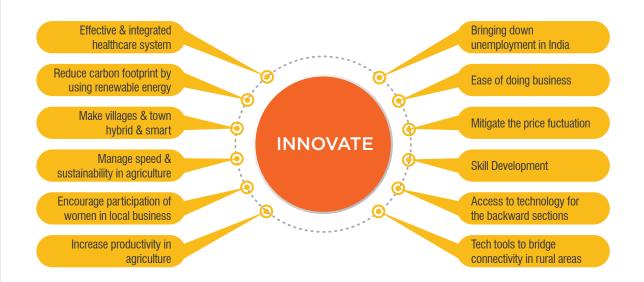


The ATL Marathon 2020

The ATL Marathon is a national level innovation challenge, where schools identify community problems of their choice and develop innovative solutions in the form of working prototypes.

The innovative solutions are recognized and presented at several national and international level platforms. Being launched in the year where COVID-19 brought the world to a standstill, this year's ATL Marathon will draw inspiration from Atmanirbhar Bharat and align itself with the 17 goals of "2030 Agenda for Sustainable Development" (SDG) adopted by all United Nation Member States. The submissions are closed and the result will be announced soon.

Problem Statements Solved by Students During the ATL Marathon 2020



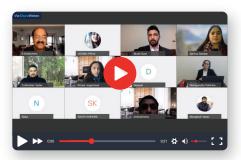
The YouTube Live Series

AIM is hosting a new YouTube live series with Students, Teachers, Mentors and Partners to talk about innovations during the pandemic Join us every Friday on AIM's official YouTube channel.



1. All about ATL Marathon -





3. How to Leverage the Various ATL Technologies for ATL Marathon -





2. Monitoring Outputs & Outcomes of ATL -





4. Interaction with ATL Marathon Alumni Students and Innovators -



MY ATL STORIES

My story as an ATL Student Innovator



Student Name - Ayush Ranjan
ATL School - Government Senior Secondary School, Rangpo

Winner of Pradhan Mantri Rashtriya Bal Puraskar for Innovation

Ayush Ranjan is a 15-year-old serial innovator from East Sikkim district, whose interest lies in software development. Till now, he has developed many award winning software for which he has been felicitated at the national level, including DigiSmart Bin, a garbage billing platform which bills on how much you throw; Auto LPG Refilling, in which along with a device made Wby him, one can place the LPG cylinder order before exhausting and thus save delivery time; and MushroomArc, under which he has made a Mushroom Artificial Intelligence (AI) Classifier which classifies edible and poisonous mushrooms, thus saving millions of lives around the globe.

Ayush Ranjan has been awarded the Pradhan Mantri Rashtriya Bal Puraskar 2021 for his excellence in the field of innovation.

My story as a Regional Teacher of Change (RToC)



Our Regional Teachers of Change are the best of the ATL-In charges who have taken the role of leading and mentoring ATL activity in their region. In this spotlight section we will be highlight the experience of one RToC every month. For this month we have Mr. V. K. Rajeev from Delhi Public School Numaligarh, Golaghat, Assam

As an RToC, what are your main responsibilities?

"I am responsible for the states of Assam and Arunachal Pradesh. I have around 112 ATLs under my supervision and I keeps in touch with all these ATLs and the ATL in-charge through Whatsapp and Microsoft Teams to promote tinkering spirit. I did this even during the lockdown!"

What motivates you about the ATL program?

My students were in the top teams of the ATL Marathon 2019 challenge, which led them to an opportunity of a 15-day Student Internship Program with IBM. Few of my students also got a chance to participate in the SIRIUS-AIM Innovation Program 3.0 under my supervision. Further, though I am TGT Science, to fulfil my duties as an RToC, I have augmented my knowledge base by gaining training on tGELF, Design thinking, Intellectual Property, and Rights. Learning and teaching new things keeps me motivated.

My story as a Regional Mentor of Change (RMoC)



Our Regional Mentors of Change are local mentor leaders who have so graciously taken the role of facilitation mentoring activity in their region. In this spotlight section we will be highlight the experience of one RMoC every month. For this month we have Mr. Kiran Kumar.

As a RMoC, what is your career background?

I am an innovation and product strategy & management professional with over 25 years of work experience. I have served in leadership, managerial and technical positions during my career. I come with a strong focus on innovation to address complex challenges, deliver concrete results, and make a high impact on the ground.

What motivates you about the MoC program?

This is a rewarding experience because - as a mentor and coach over the last 15+ years, I have been coaching and mentoring working professionals, school, and college students in the areas of innovation, design, product engineering, digital trends, and entrepreneurship, apart from conducting workshops in emerging technology areas such as IoT, Robotics, Data Analytics, AI, etc. at schools and colleges.

I also conducted a knowledge hub session recently which can be viewed here.

My Mentoring Story: Fundamentals of Design Thinking



Mentor Name - Achal KAUSHIK

ATL School - S D Public School

The interaction session was with class VI-IX students.

The idea was to interact and apprise them about the fundamentals of design thinking. The session started with interaction with the students to know about their activities. It was observed that many students from class VI have little knowledge about the process of design thinking. The session started with the open question: What is design in the design thinking? After taking their views, subsequently took one real-life example to make them understand the concept. After that, I took one activity to help them realise how for a complicated problem, they try thinking out of the box. They were asked to identify different issues around them that they would like to make changes for a better society.

They were given one example of walking through the steps of design thinking.

It was an excellent online session since lockdown. Students were excited as they were able to think independently to provide solutions.

ANNOUNCEMENTS

Application Open for Mentor of Change

Support India's future to live up to its potential. Hurry up & become a Mentor of Change!



Explore & Contribute



Congratulations to all our Top Mentors for the month of January 2021!



Congratulations to all our Top Mentors for the month of February 2021!



Got an **inspiring story** about your journey? Submit it here for the **ATL Wall of Fame.**

ADVENTURE 2020

Dear Mentors!

The year 2020 drastically changed the way the Mentor of Change community conducted its mentoring sessions. With zoom classes and remote mentoring, this change proved to be both an opportunity of learning and adventure.

Mentors can submit their adventure stories with the following guidelines:

Here is how

- ✓ Describe your mentoring adventure in 120 characters
- Post it on either Twitter, LinkedIn or Facebook
- ✓ Use hashtag #MoCAdventure2020
- Add at least 1 image of the mentoring session in your post
- Tag Atal Innovation Mission at
 - @AlMtoInnovate
 - @AIMToInnovate
 - (in @Atal Innovation Mission Official



The story by mentor that receives the most online traction will be recognised by Atal Innovation Mission for their special contribution to the mission.



The technology for 3D printing has been around for decades, but it has only begun to attract attention in the past few years. The concept initially appeared during the 1980s, when it was referred to as Rapid Prototyping.

QUICK LINKS



Log on to the MyATL Dashboard to submit your monthly reports and stand a chance to be the **#TeacherofChange** and **#ATLoftheMonth**

Become a mentor or nominate someone to join the movement by **filling this application.**



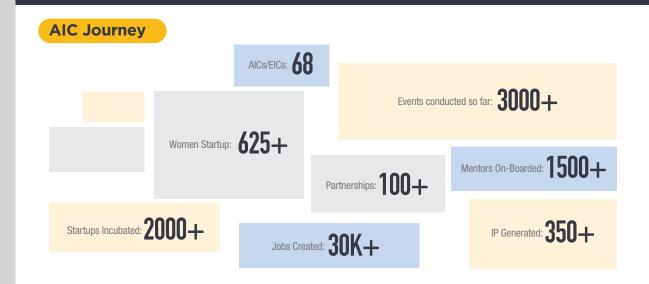


Got any queries? Submit your queries on the ATL Query Resolution Portal. **Submit here.**

Login to ATL InnoNet Portal to find Mentors & Schools in your region, report your sessions and discover many more interesting features. Click here.



ATAL INCUBATION CENTERS (AICs)



AIC Webinars - Knowledge Sharing Session













MY INNOVATION JOURNEY (MIJ)

1. Khadigi - AIC - Aartech

KhaDigi was conceptualized in 2015 when founder Umang Shridhar took part in a national-level competition - Design Sutra, which was organized by the Ministry of Textiles and National Institute of Fashion Technology (NIFT). In 2017, the idea blossomed to become a social startup with an aim to provide better livelihood and glory to khadi artisans, weavers, and craftsmen and create a direct dialogue between them and buyers. KhaDigi recognizes the challenges handloom craftsmen are facing and is implementing well-thought-out and strategic solutions to overcome these challenges. It is unwearying channeling its efforts to alleviate the Indian craft scenario.

Approach



Name - Umang Shridhar | Founder - Founder KhaDigi

KhaDigi identifies geographical clusters of traditional artisans and understands the problems and challenges they face. The organization then creates a model that understands their uniqueness and aligns with their needs, for instance, up-skilling

them to use advanced machinery. After skill training artisans, we work with the designers and help them in creating beautiful fabric made inline with the market relevance. The finished product is then pitched to corporates, designers, and consumers for orders. KhaDigi micromanages the entire production process right from procurement of raw material to, setting up looms, overseeing, quality control, and on-time delivery

Impact

So far KhaDigi has worked with over 1000 artisans from a wide variety of crafts such as hand spinning, handloom weaving, hand block printing and dyeing, and more. KhaDigi's intervention has helped the artisans in improving their monthly income with a significant rise of over 300 percent. The organization has been effective in providing artisans with a constant workflow of ten months in a year by forging business relations with corporate giants like Reliance Group, The Aditya Birla Group, and many reputed designers.

KhaDigi is working to achieve its aim of connecting with one million artisans by 2025 and enabling them with the latest technology of the time. The intention is to bring blockchain technology into play and create an ethical ledger. This will help in keeping a record of what is produced and what is required, providing proper verification and documentation to artisan, seller, and consumers. The organization also plans to expand globally and export Khadi products to other countries, forge partnerships with giant textile retailers like Zara and H&M, who are committed to sustainable fashion and UN SDGs 2030.

Achievement

- Forbes has recognized Founder Umang Shridhar as Honouree for its prestigious list of 30 under 30 Asia 2019 under the Social Entrepreneur category.
- Technology Development Board has recognized our startup as a top 15 startups led by women commercializing it successfully in 2018.
- Umang was also nominated for the prestigious list of WISE 100 by NatWest London in 2017.

2. START-UP SUCCESS STORY COEO LABS: AIC - CCAMP

Nitesh Jangir, Cofounder of CCAMP start-up, Coeo Labs is in the **Forbes India 30U30** for the year 2019. He is the only healthcare entrepreneur featured for this year. He also won **Rashtriya Swayamsiddh Vishesh Samman** in innovation & technology by JSPL Foundation.

Coeo Labs are one of the BIRAC - BIG startups, their first product developed is a portable and



mechanical medical device known as a CPAP (continuous positive airway pressure) called **Saans** to assist neonates in respiratory distress. They have featured in BBC Hindi for their low-cost & portable CPAP device Saans to support neonates with breathing difficulty in low resource settings.

The second product of Coeo Labs is **VAPCare**, a Ventilator Associated Pneumonia (VAP) preventive device which helps prevent patients on the ventilator from contracting infections, a common cause for ICU-related deaths. The device has been granted a utility patent in India, China as well as the US.





NIV market: current need gaps



InnAccel has 200+ installations of its current Saans Pro system in public/private hospitals across India (used in 1000+ patients)

Identified Gaps from InnAccel's clinical immersion

- Cost: Multiple devices required to deliver CPAP, HFNC, and BiPaP
- Skill intensiveness: Current standard of care are skill intensive, making them unsuitable for low resource settings
- No Homecare: Current systems are designed primarily for hospital settings, making homecare unviable
- Risk of Cross Infection: Current standard of care requires high physician's intervention (upto ~0.5 hours) and increases risk of cross-infections

INCUBATOR CEO SPEAK

AIC-AAU Incubator | Creating the "Job-creators" in North East Region of India

By - Dr. K. Karthikeyen

Chief Executive Officer, AIC-AAU Incubator

The AIC-Assam Agricultural University Incubator (AIC-AAU) was established as a not-for-profit company in September 2018 and is headquartered in Jorhat, Assam. The core focus sectors are horticulture, livestock, fisheries, food processing, soil conditioning, natural fiber, textile, medicinal and aromatic plants, digital agriculture, and small farm machinery, etc.

AIC-AAU, also popularly known as North East Agriculture Technology Entrepreneurs Hub (NEATEHUB), aims to be a leading Incubator for nurturing idea-stage and early-stage startup entrepreneurs in the area of agri-technology and allied sectors in the North East Region (NER) of India. Its primary mission is to provide world-class facilities for handholding and promotion of agri-businesses and entrepreneurship through collaborative and strategic partnerships that support innovative start-ups with seed capital assistance, business mentoring, commercialization of technologies, and provide ancillary services for entrepreneurs.

AIC-AAU is also a recognized Centre of Excellence and Knowledge Partner of the Department of Agriculture, Government of India. It is handholding the establishment of three startup incubators in the North East - one each in Arunachal Pradesh, Mizoram, and Tripura.

The entrepreneurial climate in NER is generally risk-averse and has, thus far, endured late entry and adoption of innovation-in-business, infusion of high-tech and deep-tech in food and social sectors in particular, and therefore, resulted in patchy industrial development. At AIC-AAU Incubator, our three principles represent the strong belief in the contribution we are making towards building an ambient ecosystem for startup entrepreneurs:

- Collaboration aimed at achieving mutually empowering goals
- Innovation aimed at maximizing reach
- Impact aimed at scalable and sustainable deliverables

These principles lead our actions, and are based on commitment, passion, enduring quality and impactful delivery model.

MY INCUBATOR STORY

AIC-BIMTECH

AIC-BIMTECH, based in Greater Noida, Uttar Pradesh, started its operations on January 20, 2018. Since then, it has on boarded 92 start-ups, created 376 jobs, conducted 114 events and 187 training workshops, in 3 years. Atal Incubation Centre- BIMTECH has a vision to nurture start-ups that not only create an economical, but also a social impact, on the ecosystem.

It runs three programs which focus on the different stages of a start-up, where they need support; Khoj for ideation, Gurukul for early revenue and Udaan for expansion. Each program is carefully customized and tweaked regularly to keep up with the current requirements of the startups. AIC-BIMTECH also offers co-living facility to the incubated startups, which provides them access to the residential infrastructure akin to the students of BIMTECH.

Another differentiating factor would be the focus on the partnerships created within the ecosystem. AIC-BIMTECH not only brings aboard partners from all spheres to provide support structure for the incubated startups, but there are many international partners in place for creating a market access network to broaden their horizon.

It also partners with academic institutes to encourage budding entrepreneurs and equip them with the right tools and mindset required for the tedious entrepreneurial journey.

It has also partnered with 81 organizations, both national and international, which has helped the incubator offer the incubatees \$82.7 million worth of free benefits when they are onboarded. The AIC-BIMTECH has assisted 11 of its start-ups to raise funds to the tune of \$92.9 million. Many of the incubate start-ups, like Trucksuvidha, LQI, Phoenix Robotics, Energinee Innovation, etc. have won awards, at regional and national levels. *In toto*, the start-ups incubated in AIC-BIMTECH have won a total of 14 awards till January 2021.



AIM IN THE NEWS

- 1. Atal Innovation Mission has partnered with Xynteo to implement "The Stages of Development (SoD) framework", a data-driven approach to evaluate the potential of rural communities and design solutions, best suited for rural areas.
- 2. Coimbatore-based Solavio Labs from AIC RAISE, a cleantech startup making cleaning robots for solar panels, has raised Rs 40 lakh in funding from Energia Ventures, a Canadian government set up startup accelerator. With this, the startup has raised Rs 2 crore in funding and has been backed by funds and commercial relationships from the Indian, Canadian and Middle East government bodies.
- 3. Six startups from EIC Amrita TBI raised external investments worth Rs. 174.3 Cr. in 2020.
 - Bitonic Technology Labs Rs 153.7 Cr from Light Speed Ventures, Silicon Valley
 - Intellicar Telematics- Rs 15 Cr (buyout) from TVS Motors.
 - Happy Locate Relocation Services- Rs 4.4 Cr from Inflection Point Ventures and VM Ventures.
 - Evlogia Eco Care- Rs. 1 Cr from HPCL
- 4. Bellatrix Aerospace and Azooka from IISc- SID won National Startup Awards
- 5. Three budding entrepreneurs of Assam have won cash prizes for their innovative ideas to do business in the agricultural sector in a contest organized by NEATEHUB (North-East Agriculture Technology Entrepreneurs Hub) Atal Incubation Centre within the Assam Agricultural University campus at Borbheta.
- 6. The Gujarat Technical University (GTU) startup has successfully implemented the interlocking tiles made by amalgamating municipal plastic waste and coal ash. These tiles have the capacity to withstand several tonnes even at high pressure and temperature.
- 7. Fourth Cohort of the AIM-iCrest training with 23 incubators had started on 17th February 2021. AIM-iCrest is a capacity building program which will support the core team of the AICs to develop niche skill sets required to support the startups in their journey. The program was launched in the month of June and till date, 45 AICs and EICs have been trained in the AIM iCREST program.
- 8. Mathworks has collaborated with AIM to provide access to tools such as MATLAB and Simulink to develop products and reach early-stage milestones faster.

ATAL COMMUNITY INNOVATION CENTERS (ACICs)

The Importance of Community Innovation Centers

Authored by R Ramanan

Mission Director - Atal Innovation Mission

The terrible COVID-19 crisis that has descended on the world with unimagined swiftness has starkly revealed the dire need for speedy actions in local communities and clusters to treat afflicted people and prevent wreaking further havoc countrywide in every nation of the world

With over 1.3+ billion people spread over 600000+ villages, 715+ districts, 8 densely populated Tier-1 cities and 66% of its population in Tier-2, Tier-3 cities, rural, hilly, coastal and tribal districts, the need for local self-sufficient resourceful communities in the un-served under-served regions has never been felt more to address the web of urgent diverse demands this crisis has created.

Even from a non Covid-19 context, there is an urgent requirement to expand and strengthen the presence, capabilities and resources of local community centres. These centres can be a very important focal points to ensure that the societal and economic needs of the village or a community of villages it serves are adequately understood, and continuously addressed to enable self sufficiency in various areas. These include healthcare, hygiene, education, skill development, entrepreneurship and job creation based on the unique local needs and environment of that particular community.

While the above challenges may seem greatly formidable, India also enjoys a demographic dividend of 65% of its population less than 35 years old, one of the fastest growing economies in the world, and access to advanced affordable echnology. These advantages can rapidly enable and deploy a digitally reimagined world of innovative community focused solutions and services.

There is thus a great opportunity to create a Hub and Spoke model of Community Innovation Centres in the unserved under-served regions of the country, with the Hubs developing relevant frugal technology driven solutions and innovative services addressing the needs of the local community, and replicating their implementations manifold through the Spoke Community Centers nationwide.

This is indeed possible with a focused approach and great synergies between central, state and district officials, the private sector and its over 3+ million NGOs committed to the economic and societal well being of the country.

Towards this end the Government of India's think tank Niti Aayog has launched through the Atal Innovation Mission, the selection and establishment of a network of Atal Community Innovation Centres (ACICs) in Tier-2, Tier-3 cities and rural India in a unique public private academic partnership mode.

Every ACIC established would get a grant of upto 2.5 crores from AIM with a matching or greater contribution from the applicant. The ACIC are encouraged to form value adding partnerships with the private sector, NGOs and local MSME industries. These ACICs that would develop as Hubs of Community innovations, solutions and services addressing the unique local needs of every community they are established in, be it agriculture, dairy, textiles, handicrafts. ACICs would leverage the resources, capabilities, CSR funds that their partners bring to the fore.

Relevant Innovations from one ACIC Hub will be shared and replicated with others speedily through the network of Hubs being created based on local needs. The ACICs would also host Advanced Tinkering Labs that can serve as a platform for learning new skills and entrepreneurial development in the local community of schools, colleges and technical institutes (ITIs).

Low cost solutions leveraging emerging affordable frugal technologies like 3D printing, robotics, internet of things and micro electronics is imperative in a digitally evolving world. The ACICs are planned to be linked synergistically with other innovation and entrepreneurial initiatives of AIM including Atal Incubation Centres, Atal New India Challenges and Applied Research and Innovation for Medium and small enterprises.

With the government enabling over 300+ million of rural Indians to online banking and payment systems, Aadhar enabling a plethora of unique identification solutions, web and mobile applications extending national and global reach, and satellite, fibre and potentially 5G technologies making their advent, Community Innovation Centres can usher in a new world of grassroot, locally relevant innovations and the explosive development of rural enterprises.

The Hub Community Innovation Centres can also synergize with the network of GOI established Common service centres (CSC) in spurring local entrepreneurs.

Community centres have indeed played a pivotal role in the growth and advancement of many an advanced economy, and in developing a more equitable, self sufficient, decentralised ecosystem in the remotest parts of their country, with active participation of the private sector and local industries.

Enabling and evolving a vibrant self sufficient high quality yet affordable ecosystem of education, healthcare, hygiene and job creation of every village of India is a must in the years ahead. Engaging with and developing vibrant Community Innovation centres can usher in a dynamically new quality of life and purpose.

The combined will and efforts of government, academia and industry is key to realise this aspiration for our country while also setting an example for the rest of the world.

Congratulations to the operationalized ACIC Winners

Name of the Host Institution/ Organization	State	City/District
BML Munjal University	Haryana	Gurgaon
Chaitanya Bharathi Institute of Technology	Telangana	Ranga Reddy
Chandigarh Engineering College	Punjab	Mohali
Indian Institute of Technology (Indian School of Mines), Dhanbad	Jharkhand	Dhanbad
Kalasalingam Academy of Research and Education	Tamil Nadu	Virudhunagar
Koneru Lakshmaiah Education foundation	Andhra Pradesh	Guntur
Meerut Institute of Engineering and Technology, Meerut	Uttar Pradesh	Meerut
Vivekananda Global University (a unit of Bagaria Education Trust)	Rajasthan	Jaipur



ATAL NEW INDIA CHALLENGES & APPLIED RESEARCH AND INNOVATION IN SMALL ENTERPRISES (ANIC-ARISE CHALLENGES)

Powering Aatmanirbhar Bharat through Challenges driven Innovation

Authored by R Ramanan

Mission Director - Atal Innovation Mission

An ongoing pandemic of unprecedented proportions, Covid-19 has impacted lives and livelihoods across the globe. Even as the best minds in the world race towards finding preventive and curative solutions to combat and curb the spread of the novel coronavirus, the current crisis has been an eye-opener to several opportunities that have presented themselves during this time.

To this end, Hon'ble Prime Minister Shri Narendra Modi made a clarion call for an Aatmanirbhar Bharat, or a self-reliant India, that would be a source of local ingenuity creating global impact. He has exhorted fellow citizens to utilize this time of crisis to be vocal for local creating solutions that can go global too.

The Hon PM has eloquently identified five pillars on which Aatmanirbhar Bharat would stand and on which a New India could pole-vault to an era of sustainable economic prosperity and societal good, bridging the economic as well as digital divides between the haves and the have-nots.

To make these pillars truly powerful and resilient, designed to withstand any onslaughts of potential new crises, it is imperative to identify the challenges and thereby the opportunities for creating technology driven process, product and service innovations. This would incentivize a massive upsurge of world-class startups and entrepreneurs, that would create new livelihoods across the length and breadth of the country.

Central to this, is the need for an extensive collaboration between ministries, corporate industry, academia, and governments at the village, district, state and central levels to spur innovations with national socio-economic impact. Such synergies have indeed gained momentum with the Covid-19 crisis and need to be further capitalized on.

Let's examine the five pillars through the lens of innovation and entrepreneurship.

We begin with the pillar of demographic dividend. With over 65% of our country under 35 years of age, more than 1.4 million schools and 10,500 engineering and related institutions, a whopping 39,000 colleges and universities, India enjoys a demographic dividend like no other in the world.

It is imperative that we enable the channelization of this youthful energy towards nation-building activities by focusing on developing vocational, technical and managerial skills, while fostering a culture of innovation and entrepreneurship at the school, university and industry levels.

Innovative ways of leveraging emerging digital technologies can create and promote such ecosystems. This presents a huge opportunity for hundreds of innovative Edtech startups to build and leverage wireless, 5G communication, mobile AR/VR, and AI technologies to power the same.

Existing government initiatives—such as Atal Tinkering Labs and AI curricula at school levels, incubators and innovation cells at university levels, and fostering startups and vocational training in emerging new areas—must also be accelerated to strengthen this pillar.

Second is the pillar of infrastructure. India has over 715 districts, more than 8000 small town and cities and 600,000+ villages. Undisputedly, innovation and entrepreneurship will be key to ensuring the development of both physical as well as digital infrastructure across all these regions in the country. The nation needs smart villages and several hundred smart cities to become active hubs of livelihood enablement, innovation, and job creation. Smart water management, transportation, energy management, and housing present tremendous opportunities for innovations and startups.

This is vital to prevent a lopsided development of our economy and an unsustainable urban migration to a handful of tier-1 cities. The pillar of infrastructure would also require construction of digital highways, which would ensure that innovations reach every common citizen be it in education, healthcare, housing, or job enablement. This presents a glorious opportunity for young creative entrepreneurs to tap into and create growing organizations with global impact.

For the third pillar, demand, India has the perfect environment. It has over 1.3 billion people, a youthful population, a growing middle class, one of the fastest-growing economies of the world, and affordable, available advanced technology to reimagine new solutions to existing and emerging consumer needs.

An ideal situation for thousands of startups and companies to capitalize on and fulfil pent-up demand for new solutions and consumer- or citizen-centric services in every vertical— agriculture, healthcare, education, water management, clean and renewable energy, affordable housing, defence, space, transportation, or retail.

The pillar of demand presents an unprecedented opportunity for Make in India in every industry. There has been an increasing number of challenges launched by various ministries—Meity, AIM (Atal New India Challenges and ARISE Challenges), DBT BIRAC (biotech challenges)—as well as Covid-19 challenges for preventive assistive solutions, spurring a remarkable slew of innovative solutions.

The recent announcements of private sector participation for innovations in the space and defence sectors open up a flood of new opportunities for the MSME industry. Any solution developed for 1.3 billion people can also be a possible solution for the 7+ billion people on the planet. "Vocal for Local" is a great opportunity and a clarion call to "Go Global" for the enterprising Indian entrepreneur.

Fulfilling this demand would also mean a great opportunity to partner with global companies, thus enabling a more resilient Make in India. The recently launched Bharat App Innovation Challenge by MeitY, MyGov, and Atal Innovation Mission is a welcome step to identify and create world-class apps that can be used by the rest of the world too.

Next, we come to the pillar of technology. The remarkable growth of the fast-growing 180 billion USD IT/ITES and biotech industry in India over the past decade has shown the world India's scientific, engineering and technological prowess and capabilities. The best multinationals of the world are leveraging Indian talent and rushing to set up large R&D hubs in India. Aatmanirbhar Bharat has now turned the gaze of this world-class innovative talent inwards, to create products and services for the Indian market at par with other countries.

Catalysing this stupendous potential are affordable, accessible, advanced IR 4.0 technologies, including 3D printing, IOT, AR/VR, biotech, cognitive computing, Al/Blockchain, to name a few. With one of the fastest-growing startup ecosystems—over 40,000 startups and 400 incubators—India can surely position itself as one of the leading innovative nations of the world.

Final, is the pillar of socio-economic growth. With 22% of its population still below the poverty line, 44% of its economy still agri-based, many districts still combating unacceptable percentages of infant mortality and maternal mortality, and only a mere 13% of women entrepreneurs, India needs to ensure that rapid economic progress encompasses societal progress.

The time is ripe for micro-finance and rural-financing schemes to spur great innovations and entrepreneurial initiatives on the socio-economic front. It is crucial to ensure gender equality, address economic disparity and equal opportunities for differently abled communities.

Fast-growing economies such as ours also need to be extremely wary of climate change-related issues. Therefore, it is important that the Sustainable Development Goals remain the overarching objective of every organization.

The Atal New India Challenges and Applied Research and Innovation for small Enterprises (ARISE) in collaboration with over ten ministries of the Government of India, the indo Denmark AIM-ICDK Global Water Challenge, the Indo Australia AIM-iACE Challenge on Circular Economy Challenge, the Indo-Swedish AIM UNNATI Healthcare and Electric Mobility Challenge, the iDEX challenges with Defence and several challenges with provate sector participation all provide important source of innovations that are not only applicable locally but have the potential to have global impact.

Aatmanirbhar Bharat provides a truly watershed moment in our history to ignite the innovative entrepreneurial spirit of New India by focusing on strengthening the above pillars through Challenges driven Innovations, which will ensure an unprecedented wave of long-deserved growth, prosperity and well-being that can serve the interests of the rest of the world as well.

Collaboration between AIM and MSME & Startups Forum- Bharat



CONGRATULATIONS TO THE ANIC WINNERS

S. No.	Startup Name	State	City
1	Agringenium Innovations Pvt. Ltd.	Karnataka	Bangalore Rural
2	Pristech Technologies	Karnataka	Bangalore
3	Meladath Auto Components Pvt. Ltd.	Karnataka	Bangalore
4	Bioprime Agrisolutions Pvt. Ltd.	Maharastra	Pune
5	Barrix Agro Sciences Pvt. Ltd.	Karnataka	Bangalore
6	Small Spark Concepts Technologies Pvt. Ltd.	Maharastra	Nashik
7	Regeno Ventures Pvt Ltd	Tamilnadu	Coimbatore
8	Rf Wave Technologies Pvt. Ltd.	Tamilnadu	Tindivanam
9	Wide Need	Gujarat	Ahmedabad
10	Ingo Electric	Karnataka	Bangalore
11	Rut3	Maharashtra	Pune
12	Vyoda Pvt. Ltd.	Karnataka	Mysore
13	Foundation For Environmental Monitoring	Karnataka	Bangalore
14	Recity Network Pvt. Ltd.	Maharashtra	Mumbai
15	Grus Ecosciences	Karnataka	Bangalore
16	Sirab Technologies Transportation Pvt. Ltd.	Tamil Nadu	Chennai
17	Tycheejuno Speciality Tyres Pvt. Ltd.	Andhra Pradesh	Chittoor
18	Pixy Electric Cars Pvt. Ltd.	Maharashtra	Pune
19	Shellios Technolabs Pvt Ltd	Delhi	New Delhi
20	Intello Labs Pvt. Ltd.	Karnataka	Bangalore
21	Trithi Robotics Pvt. Ltd.	Karnataka	Bangalore
22	Sharon Agrotech	Kerala	Wayanad
23	Suyoga Software Solutions Pvt. Ltd.	Karnataka	Bangalore
24	Proximal Soilsens Technologies Pvt. Ltd.	Maharashtra	Mumbai
25	Padmasri Oil Filters, Mumbai	Maharastra	Mumbai
26	Nopo Nanotechnologies India Pvt. Ltd.	Karnataka	Bangalore
27	Tejas Translational Technologies Pvt. Ltd.	Tamil Nadu	Kanyakumari
28	Renaissance Technology Pvt. Ltd.	Delhi	Delhi
29	Matisoft Cyber Security Labs	Delhi	Delhi

CELEBRATING INTERNATIONAL WOMEN'S DAY

AIM celebrates girl innovators and women enterprenuers during the month of March.











ACKNOWLEDGING ATAL TION MISSION'S **ARTNERS**

Government Partnerships

INDIA



























Multilateral Collaborations







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ACKNOWLEDGING ATAL INNOVATION MISSION'S CORE TEAM



Our vibrant & enthusiastic AIM team.

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