INVENT Programme
Empowering lives through Innovation
The Technology Development Board (TDB) has been financially supporting companies that intend to upscale and commercialize, the indigenous and imported technologies by providing soft loan, equity and sometimes grant. Two third of the funded companies launch their products in the market meeting competition of the cost, technology and other market dynamics. However, it was felt to foray into spaces wherein solutions to many socially-relevant problems using novel technological interventions and business models could be possible.

The opportunity has been devised through a programme called ‘Innovative Ventures and Technologies for Development (INVENT)’ wherein Department for International Development (DFID), India and TDB have joined hands. INVENT aims to provide innovation-led solutions to problems of healthcare, Agriculture, Water & Sanitation, Education, Green Energy, Housing etc. through such enterprises who work in these spaces. The programme has been successfully launched through Vilgro Innovations Foundation as the Lead Incubator and four Technology Business Incubators for identifying, mentoring, funding and helping them graduate.

This issue of TDB News provides glimpses of successes achieved under INVENT Programme through commitment and hardwork of all stakeholders. The feedback of readers of TDB News on various dimensions of the Invent programme as elaborated in the pages that follow will be very valuable and we look forward to the same.

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**Empowering lives through Innovation**

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(Disclaimer: Opinions expressed in editorial articles are those of the authors and not necessarily subscribed to, or endorsed by TDB or any other organization associated with the publication of TDB News.)

Cover Photo: [http://www.co.in/Read/Read](http://www.co.in/Read/Read)  
(Priva Innovations Pvt Ltd is an INVENT incubatee under SIC IT Kanpur. Priva's flagship product, 'Neeta' is an innovative school bag which can be converted to a desk thus addressing the lack of adequate infrastructure facilities in rural schools in India)

India has witnessed tremendous growth in last two decades yet some percentage of population faces socio-economic challenges. The Government of India has identified about 165 districts that need special handholding for the fruits of growth and development reaching them. Local entrepreneurship, technological interventions and in-situ business-models are being experimented for outreach to those in need.

The Technology Development Board (TDB) Government of India in partnership with Department for International Development (DFID), UK through its India Division have come together to initiate the “Innovative Ventures and Technologies for Development (INVENT)” programme.

INVENT programme is a platform to support inclusive innovative solutions, both technological and business-oriented that have positive social and economic impact on deprived strata of the society. Innovation-led entrepreneurship has the potential to reduce the disparity in social status through novel solutions, scalability, sustainability and affordability.

INVENT is addressing challenges and barriers across the inclusive innovation lifecycle, for the benefit of up to one million needy populace at the bottom of the economic pyramid in the eight Low Income States (LIS) of India i.e. Uttar Pradesh, Madhya Pradesh, Bihar, Chhattisgarh, Jharkhand, Rajasthan, Odisha and West Bengal to come out as entrepreneurs, producers, consumers, employees and suppliers.

Social enterprises in these states receive funding and incubation services to develop and scale innovative and sustainable solutions to healthcare, Agriculture, Education, Green energy, Affordable housing, Water and Sanitation. The entire process is aimed to support up to 160 entrepreneurs and make at least 50 of them investable in the next 5 years.
INVENT - Partners

Funding Agency
DFID, India has provided up to £5 million in form of technical assistance for a period of 5 years from 2014 till 2019.

The framework of the programme is primarily to lead to 50 ‘investment ready’ businesses in LIS over the period of the programme, alongside other social indicators as alternate outcomes.

Implementing Agency
Technology Development Board is coordinating and supervising the INVENT Program on behalf of Government of India.

Lead Incubator
Vilgro Innovations Foundation, Chennai (VIFC) has been designated as the Lead Incubator mandated to manage INVENT program. Vilgro has further identified & supported, along with DFID & TDB, four Technology Business Incubators operating in identified states of Odisha, Uttar Pradesh, Rajasthan and West Bengal.

As the Lead Incubator, Vilgro incubates, mentors, supports the enterprises participating in the program. It handholds innovative business ideas of seed / early stage enterprises that have the potential to benefit the poor in LIS while also being commercially viable.

INVENT - Governance Structure

Advisory Board
An Advisory Board has been formed to provide strategic advice and guidance to the programme team to help achieve the programme deliverables.

Program Steering Committee (PSC)
PSC is responsible for overall direction and implementation of the program. It has representation from TDB, DFID and Vilgro.

Program Management Unit (PMU)
TDB/ Vilgro PMU located at TDB office is handling the day-to-day management and administration of the programme.

Business Incubators
Four TBIIs have been selected and provided with technical and financial assistance for mentoring, networks, know how, templates etc., to make them successful at social enterprise incubation.

Based on capacity evaluation, such as fostering sustainable social enterprises ready for investors and other funders, following Business Incubators have been selected for implementation of INVENT Program:

i) IIT Kanpur, Kanpur
ii) Start-up Oasis, Jaipur,
iii) IIM Calcutta Innovation Park, Kolkata
iv) KIIT-TBI, Bhubaneswar

I am very happy to see the INVENT programme nurturing bright entrepreneurs in the low income states of India.

Karthik Krishnan
Private Sector Advisor
DFID India

Absolutely satisfying to see the INVENT programme bringing innovative solutions impacting lives of the people in a positive way.

Anjali Sablok
Deputy Programme Manager
DFID, India

INVENT Program has energized the social entrepreneurship ecosystem and is catalysing sustainable impact ventures.

Subhrangshu Sanyal, CEO, IM CIP

Low Income States in India have a dearth of incubators and entrepreneurs enables that catalyse social entrepreneurship. INVENT programme solves that by funding, mentoring and supporting social entrepreneurs and making them investible.

Paul Basil, Founder & CEO, Vilgro Innovations Foundation
INVENT Progress Report

The progress of INVENT programme is tracked using following milestones for each incubator:

- Ramp-up of incubation team size
- Number of inspiration events organized
- Number of incubatees inducted
- Number of mentor's on Board

![Performance Matrix of each Incubator](image)

**INVENT Impact**

Significant market opportunity exists to develop sustainable solutions to social and economic difficulties facing low-income communities at the bottom of the pyramid (BoP). Yet, providing relevant products and services to BoP markets is often complex and high risk.

There is a serious shortage of social venture incubators to provide the capacity-building and incubation support needed at idea/pilot/test stage, both in India as a whole and particularly in the low-income states.

- Grant financing is most needed at this stage, rather than equity or debt financing, because of the lower costs involved and the higher risks associated: investors are likely to incur significant transaction costs and are unlikely to identify appropriate exit strategies. The current dearth of grant financing limits the available pipeline for impact investing in India.

- The lack of such investment also limits India’s role as a global innovation hub. INVENT is a platform that facilitates more investment were available to test new ideas generated by India’s entrepreneurs.

Under the INVENT Program, up to September 2017, 19 enterprises have received the first tranche of funding support. This has provided employment to about 110 individuals with an encouraging gender balance. 65% of the individuals employed are men, while 35% are females are women.

As on December 31, 2017, a total of 7 INVENT incubatees received follow on funding from other sources. Cumulatively, the companies were able to raise around Rs 7.6 cr within this period. Around 10 additional companies have been identified with potential pipeline for follow-on funding in the next quarter.

**INVENT Social Incubation programme at IIT Kanpur**

INVENT Social Incubation programme at IIT Kanpur offers the most comprehensive support package to social enterprises where they are provided with initial funding followed by hand holding, diagnostics, mentoring that boosts their chances towards sustainability and scalability.

**The INVENT programme has channelized the entrepreneurial energies of the youth of Rajasthan towards solving the myriad problems ranging from dryland agriculture, water sufficiency, access to education and healthcare to building scalable business models around the traditional arts and crafts.**

**Mrutyunjay Swat, CEO, KIT-Technology Business Incubator**

![Mrutyunjay Swat, CEO, KIT-Technology Business Incubator](image)

**Abhijit Sathe, CEO INVENT at SIIC, IIT Kanpur**

![Abhijit Sathe, CEO INVENT at SIIC, IIT Kanpur](image)

**Chintan Bakshi, CEO, Startup Oasis**

![Chintan Bakshi, CEO, Startup Oasis](image)

**Mohammad Azhar, INVENT Programme Manager, Vilguro Innovations Foundation**

![Mohammad Azhar, INVENT Programme Manager, Vilguro Innovations Foundation](image)

**INVENT Programme - Events**

Under the INVENT Programme several inspirational, networking and capacity building events have been supported since its inception. “Pitch” by Vilguro has resulted in generation of accelerated investment to social entrepreneurs. Through the pipeline generated as part of these events around 14 companies were considered under the INVENT Program across the incubators.

Apart from this, several other timely events are conducted as part of INVENT like the B-Plan Competition, SOCIATION, by KIT Technology Business which attract a lot of young social entrepreneurs because of the interesting speaker sessions and competitions.
Diabetes is a chronic medical condition, that is, it can be curbed at the initial level by introducing lifestyle changes. Because of its higher fiber content, Brown rice and other complex carbohydrates, such as millet, steel-cut oats and legumes, take longer to digest. A longer digestion time prolongs sense of fullness and helps keep blood sugar levels within normal ranges. For this reason physicians recommend brown rice for better blood sugar control. Due to fibre coating over brown rice, most people find it difficult to adapt to its taste.

About the Product
RICE DESENSE is a rice variety specially developed with high resistant starch and dietary fibre linked with low GI Index. In this variety, even after polishing the rice fibre remains intact and tastes just like any other polished rice variety, while providing all benefits of rich fibre.

RICE DESIRE comes with certification for Dietary Fibre and Resistant Starch (> 12.0g/m Per 100gm). It influences the low GI index for diabetic patients which release slow and sustainable release of glucose into blood stream after every meal.

Social impact
Since this rice variety is a value added healthcare product it yields more income to the farmer’s than the conventional rice varieties; to the tune of Rs.17/ kg. Company is already offering free seed and buy back promise of the produce at rates higher than the market by 3/ Kg. Currently we enrolled 150 farmers at Odisha state under this initiative.

Meet the Innovator
Venkataramana M. completed Masters in Microbiology from Andhra University, Vishakapatnam and obtained Ph.D. degree in Biotechnology from Defence Food Research laboratory, Mysore University, Mysore. He has published more than 50 international peer reviewed publications and filed 13 patents at national and international level. He has more than 10 years of experience in development of immune therapeutics.

Meet the Innovator
Manas Nanda

Manas Nanda, Founder of BubbleNut Wash comes with a rich experience in research and credit analysis. Academically, he has a degree Business degree from University of Oxford and CIA from Virginia, US.

His dreams of creating a sustainable economy around forest products triggered him to initiate his efforts that led to setting of BubbleNutWash.

Social impact
By creating a market for eco-friendly detergents created from soapnuts harvested by farmers, rural families BubbleNut Wash has created a sustainable source of income and reduced cutting down of forests.

The enterprise has been working with more than 90 beneficiaries and has generated a total direct income of INR 2.5 lakhs in the last 12 months.
DECENTRIK TECHNOLOGIES
www.waah.biz

Drinking water is the bedrock on which human existence rests. Each day millions of on-the-go consumers feel the need of an affordable, yet hygienic drinking water option. The current needs of water while on the move are either addressed by expensive packaged water bottles and/or possibly unsafe plastic water pouches, water trolleys and tap water. The plastic waste generated is becoming a huge concern for the environment.

About the Product
Decentrik Technologies has developed a mobile water ATM (named ‘Waah!’) which dispenses 250ml of clean drinking water at just Rs. 2. A network of Smart Mobile & Fixed Water ATMs, placed at high footfall public places provide consumers-
- An affordable and accessible water solution
- Real time quality display and on the spot quality check of water being served.
- Recyclable paper glasses to avoid the plastic waste.
Company has already signed MoUs with Lucknow and Kanpur municipal corporations as well as HPCL, IOC for installation of water ATMs in locations under their control.

Social impact
The initiative not only addresses health aspects that are linked to access to clean drinking water, it also contributing to goals of Swachh Bharat Mission of Govt. of India.
43 Mobile units and 6 fixed unit have already been installed creating direct jobs created for 50 people.

Meet the Innovator
Vineet Vats

Headed by Vineet Vats, the company is working towards providing a simple and inexpensive solution to drinking water needs of the people on the move.

Vineet Vats is a social entrepreneur with 5+ years in Marketing of Industrial Automation Product. He is first time social entrepreneur, the captioned project is the source of his identity.

Wash water kiosk, due to its compact size can easily reach high density public places and provide pure drinking water/beverages at the lowest price in the market. The unit monitors the quality of water in real time through its software and sensors and in any case the quality of water goes against the standards, the unit is automatically shutdown.

PROMORPH SOLUTIONS
www.organic.in

Teacher absenteeism in government schools in rural India is a huge and well-documented phenomenon. Teacher absence is directly associated with student attendance, as well as negative deviations in academic performance. Since implementation of schemes like Mid Day Meal are linked to teacher attendance there is a need to find technological solutions that help monitor rural schools for various performance imperatives.

About the Product
EmpowerU is an Innovative Analytical Platform for Educational Monitoring & e-Governance. It leverages information and Communications Technology and Data Analytics to address the issue of quality of education in, and management of, government schools. The Mobile app works online as well as offline which makes it very effective even in rural areas with internet connectivity challenges. It is also equipped with GPS for location tracking of teachers while performing official activities. The analytical web application provides real time monitoring of thousands of schools and provides data in a consumable for Data Driven Decision making through centralised control room.

Social impact
Implemented in 5000 schools monitoring 7500 school teachers and 150,000 students every day. Teachers’ attendance rates have improved from around 58% to more than 90% in target area. Leave compliance and transparency improved. Mid Day Meal serving (critical for keeping school drop out rates in check) improved from around 77% to more than 90%.

Meet the Innovator
Onkar Prasad

Director at Promorph Solutions, Onkar Prasad has experience in data analysis/mining, building statistical models and financial risk management. He has completed Master in Industrial Engineering from IIT-Kanpur. He founded this company on March 2015, and got incubated at SIDBI, IIT Kanpur, received initial investment of 25 Lakhs through INVENT Program, implemented online attendance monitoring solution in more than 5000 Schools of Giridih District Jharkhand & Kendhmal District Odisha.
CATTLE METTLE

www.cattlemettle.com

Managing food and agri waste is an increasing global problem. As a matter of fact, in India alone, $10 Million of agri residue is burnt every year and millions of tons of urban waste goes unaccounted for.

India possess 30% of world’s cattle population and dairy sector and animal husbandry have become major source of man-made GHG emissions. Since milk is an important part of food basket, Governments across globe are calling upon innovations for sustainable dairy production.

About the Product
Kriminshi is a triple bottom line company venturing into cattle feed production from farm, forest and urban wastes with a bold mission to reduce GHG emissions in dairy sector.

Under Cattle Mettle aim to bring about cumulative changes across dairy farming domain and beyond. With an integrated growth of better dairy production, waste upcycling and employment opportunities, Cattle Mettle has been working to create impact in the dairy sector.

Meet the Innovator
Nikhil Bohra

Working as CEO, Nikhil Bohra is experienced in product development, operations and sales. He has completed Biotech Engineering from VIT University, Vellore. He is among Forbes 30 under 30, Class of 2018 and has won UNIDO’s award for innovative technologies in agribusiness for Cattle Mettle, August 26th, 2015, EXPO Milan; and Asia-Africa winner, for “Cattle Mettle”, at Global Social Venture Competition, 2015 - UC Berkeley, USA.

ONIGANIC FOOD PRODUCTS

www.organic.in

The organic food market in India is growing at 25-30 per cent, but the awareness about organic farming is still low in India. According to a study, in 2014, the size of the organic food market, which is highly unorganised, was $0.36 billion, and organic pulses and foodgrains took the lion’s share of the market. Training farmers to take up organic farming with marketing support can help enhance rural incomes in a big way.

About the Product
ONiganic Foods is a Leading Organic Foods Company based in West Bengal, India. ONiganic works across the value chain — Farming, Processing, R&D, Domestic sales in B2B and B2C categories. ONiganic’s vision is better livelihoods for farmers, health & wellness for consumers and a sustainable planet. ONiganic produces 50+ organic products, and has a supply chain that encompasses 300 farmers and 200+ hectares.

ONiganic has a pan India presence with in house production, packaging and distribution facilities at Nadia (West Bengal). Processing set up with adequate quality control measures has taken ONiganic a long way in terms of volumes.

Meet the Innovator
Ekta Jaju

Ekta Jaju is the brainchild behind this ONGANIC FOOD PRODUCTS. Her initial drive was about finding ways to help farmers get better prices for farm output as finding a just and reliable market for farm produce is often a challenge. The company focuses on identifying grains and pulses that can, if grown organically, fetch twice the normal market prices. Providing farmers with the necessary inputs and training to produce the required quality of produce is the strategy she has adopted at ONiganic.

Social impact
The enterprise has trained farmers in organic cultivation, input preparation, seed saving, and good post-harvest practices. It has organised farmers into a farmers’ produce company — ON Farm Fresh Innovation Producers Company Limited — supported by NABARD. It is also training farmers in ICT platform that can enhance productivity and efficiency.

Social impact
Currently, SC Network is connected to 90 clients and work with 60 radiologists, both distributed all over the country and are processing over 500 cases every day. Prominent clients of SC include Government of Karnataka, Bharat Scans, Aarthi Scans, Lakshmi Medical Centre, SRL Diagnostics and many other well known chains.
5C NETWORK

http://www.5cnetwork.com

Diagnosis is considered as 3/4ths of the remedy, and radiodiagnosis today is the most important and commonly required form of diagnosis for almost every sort of ailment. More than 50% of Deaths in non-metro cities are due to delayed diagnosis or diagnosis that did not happen due to unavailable facilities. To address this, SC Network is creating a unique radiology network: a collection of the best specialist radiologists along with superior technology to ensure fast, accurate and consistent radiodiagnosis reports.

About the Product

SC Network provides 24x7 radiologist support online so that clinicians and surgeons at hospitals can have an accurate interpretation of a patient’s images before deciding a patient’s line of treatment.

Hospitals are equipped with tools to send scans and associated patient information in a streamlined and fast manner and radiologists are equipped with cloud based analysis tools that allow them to view, manipulate and study images in greater detail, and write a detailed report using convenient tools that minimize their reporting time.

Social impact

Currently, SC Network is connected to 90 clients and work with 60 radiologists, both distributed all over the country and are processing over 500 cases every day. Prominent clients of SC include Government of Karnataka, Bharat Scans, Aarthi Scans, Lakshmi Medical Centre, SRL Diagnostics and many other well known chains.

For more on SC Network Pvt Ltd., please visit: https://www.youtube.com/watch?v=VfWt7Maj5GA&authuser=0

MULTIBHASHI

www.multibhashi.com

Soft skills are often the ultimate stumbling block that prevents a large number of individuals from achieving their full potential in various walks of professional life. This is especially the case with rural hinterland where access to training and capacity building opportunity is restricted. This effects the employability of many promising persons in the rapidly expanding services market.

About the Product

MultiBhashi is a Technology & Virtual-classroom driven Language Upskilling Platform for blue-collar & grey-collar workforce. It has the capability to deliver content to the remotest corners of India independent of network connectivity and handheld device specifications to empower users in Indian hinterland to come online using prevailing networks. The platform enables seamless content delivery in an interactive format in 10 Indic languages in a Blended format constituting self-paced learning as well as Virtual Human Tutor Support.

Social Impact

MultiBhashi has empowered key wage earners in various remote corners of India. On the one hand, the platform enables empowered women to adapt MultiBhashi as a bilingual teaching platform to disseminate soft-skills, linguistic upskilling, behavioral training & Personality development to guide rural students towards the path of merging with mainstream society.

Courses For Regional languages launching courses to learn Hindi, Tamil, Kannada from English in May 2018

Seed Funding Raised a seed round of funds from a Tier 1 Angel investor and a social impact fund.

Start

Start building the tech product in Aug 2016

Launched

Web App and full fledge version of Android App

Monetization

About TDB

The Government of India constituted the Technology Development Board (TDB) in September 1996. The mandate of the TDB is to provide financial assistance to the industrial concerns and other agencies attempting development and commercial application of indigenous technology or adapting imported technology for wider domestic application. The financial assistance from TDB is available in the form of loan or equity and/or in exceptional cases, grant. TDB accepts applications for financial assistance from all sectors of economy throughout the year. TDB has also participated in Venture Capital Funds to wider its scheme for spreading support to technology oriented projects. Further, it also provides support to incubators through its Seed Support Scheme.

About DFID

DFID is leading the UK government’s development partnership programme with 35 low income countries to help tens of millions in the low-income countries come out of poverty. India is a key strategic partner to the UK. Over the next 3 years DFID India will:

- Focus on the poorest people in 8 low income states (UP, MP, Bihar, Chhattisgarh, Jharkhand, Rajasthan, Orissa and West Bengal).
- Put women and girls at the heart of our work.
- Unlock the private sector’s potential to combat poverty.
- Develop a stronger partnership on global issues.

About Villgro

Villgro was founded in 2001 with the mission of incubating early-stage, innovative businesses and has since worked in discovering thousands of innovations and innovators, and incubated over 100 businesses. It was envisioned an organization that moves away from the traditional form of charity to a more sustainable approach where the poor and marginalised are stakeholders in their own growth.

Villgro does this by tirelessly growing an ecosystem that supports social entrepreneurs and helping them building impactful, scaleable businesses with the potential to change the way communities live and function.