



TVARAN

An Initiative by



Accelerating Women Entrepreneurs driving Climate Resilience



Foreword

At Cisco, we are embarked on a mission to fulfill our purpose - to power an inclusive future for all.

Within the framework of the India Cash Grant Program, the Cisco team is dedicated to closely monitoring social impact influencers, significant trends, and valuable data-driven insights. We recognize that the sustainable future we aspire to is one that must be inclusive, resilient, and regenerative, with climate change serving as the linchpin that, in many ways, binds it all together. Tvaran, our accelerator program for women entrepreneurs committed to climate action in partnership with Villgro, stands as a testament to this commitment.

In 2020, the *Center for Climate Change Research (CCCR)* in India spearheaded a research initiative on behalf of the *Ministry of Earth Sciences (MoES)* and compiled their findings into a report titled "Assessment of Climate Change over the Indian Region." This report reveals that the surface air temperature in India has risen by approximately 0.7°C from 1901 to 2018, while sea surface temperatures in the tropical Indian Ocean have increased by about 1°C from 1951 to 2015 clear

indicators of human-induced climate changes. This data point is just one of many recent findings that underscores the urgency of addressing climate change.

In addition to our climate focus, we also aimed to promote innovation and offer opportunities to women founders. According to a report by *DealStreetAsia*, startups founded by women received only 0.3% of India's total venture capital funding. Numerous articles highlight the gender-based funding gap, which we were determined to address through Tvaran.

We were truly impressed by the diversity of applications we received from across the country for this program. It was fascinating to observe the unique challenges each entrepreneur was tackling and the passion, knowledge, and dedication with which they crafted solutions.

A cornerstone of our project design philosophy is the invaluable thought leadership contributed by experienced professionals and domain experts at Cisco. Tvaran harnessed this expertise through mentorship connections and learning sessions. As a technology company, we understand the potential of digital technology and the role that data and emerging technologies can play in achieving precision, accuracy, efficiency,

and optimization. During Tvaran, we witnessed these attributes playing a pivotal role in shaping the strategies of each startup.

As we progress on our journey, we take immense pride in each of our cohort participants and their remarkable achievements, growth, and refinement throughout their engagement with the program. Together, we are gaining momentum towards a genuinely inclusive future for all.



- Mr. Harish Kirshnan
Managing Director & Chief Policy
Officer, Cisco India

TVARAN

A joint initiative by Cisco (India Cash Grant Program) and Villgro - TVARAN (meaning 'Acceleration') is a unique market access accelerator program for women entrepreneurs.

The objective of the program is to accelerate women entrepreneurs driving innovative solutions in the climate action sector by providing them access to markets & finance.

Launched in October 2022, the program conducted a dedicated outreach to identify women-led enterprises offering innovative solutions across sectors such as renewable energy, water and waste management, climate smart agriculture and overall eco-friendly businesses. From the 140 applications that were received, 11 unique startups were selected. These 11 startups were provided support for 4 weeks to help prepare their GTM plan with expert masterclasses & mentoring.

By March 2023, an expert Jury evaluated the startups on their business, readiness for the market, role of technology & impact to arrive at the first cohort of 7 startups.

During the acceleration period: April 2023 to September 2023, the startups were provided with the following support:

1. **Financial support of 20L**
per startup to implement their GTM plan
2. **Access to Cisco mentors**
for expert insights on technology and strategy
3. **Connections with relevant market partners/channel partners** *leveraging Villgro & Cisco's networks for commercialisation and scaling*
4. **Connections with investors & VCs**

In 6 months, startups have expanded to new geographies, reported an increase in revenue, raised investments from VCs, and launched a commercial pilot of their product with businesses & channel partners.

Program Theme:

Climate Action



Renewable Energy



Water & Waste Management



Climate Smart Agriculture



Overall Eco-Friendly Businesses

Program Objectives:



Identify and Scale women-led businesses mitigating climate change



Facilitate market partnerships for startups

Identifying Startups

140

APPLICATIONS
RECEIVED

86

QUALIFIED
AFTER PRELIMINARY
EVALUATION

11

SELECTED FOR GTM SUPPORT






The women entrepreneurs were supported for 4 weeks with expert master classes, weekly check ins to develop their GTM plan

7

STARTUPS CHOSEN FOR THE PROGRAM



7 most impactful startups were chosen for the program after a Jury pitch & due diligence

-  Waste to value
-  Climate-smart agriculture
-  Sustainable mobility

Seven Inspiring Startups



Climatesense Pvt Ltd (Farmers for Forests)

A hybrid social enterprise helping rural communities protect and increase India's forest cover to fight climate change and poverty at scale



Green Delight Innovations Pvt Ltd

Product company manufacturing eco friendly, biodegradable feminine hygiene products made from sustainable kenaf fiber



Green Grahi Solutions Pvt Ltd

An agri-biotech/climate-tech startup turning pre-consumer food waste streams into high quality insect feed & bio-fertiliser



KNP Arises

A marketplace powered to dispose of food waste (used cooking oil) to make a healthier and clean society



Swachha Eco Solutions

An integrated waste management organization working to collect, transport, aggregate and recycle waste plastic from Households and Industries



Bharat Krushi Seva

Tech based advisory platform driving mass adoption of Digital Agriculture by helping farmers reduce their total production cost and increase their quality yield



Mowo Fleet (JSS Mobility Innovations)

A tech-enabled women drivers' EV fleet for last mile commute and delivery services

Program Toolkit

Program support provided to startups to achieve their goals & scale



Grant support

Financial support of 18L were provided to each startup for market expansion & commercialisation activities



Technical Assistance

Financial support of 2L was provided to startups to help them bring in industry expertise for specific areas in piloting and market research



Market connections

12 market introductions were made to the startups to help them in commercialising their product



Access to Finance

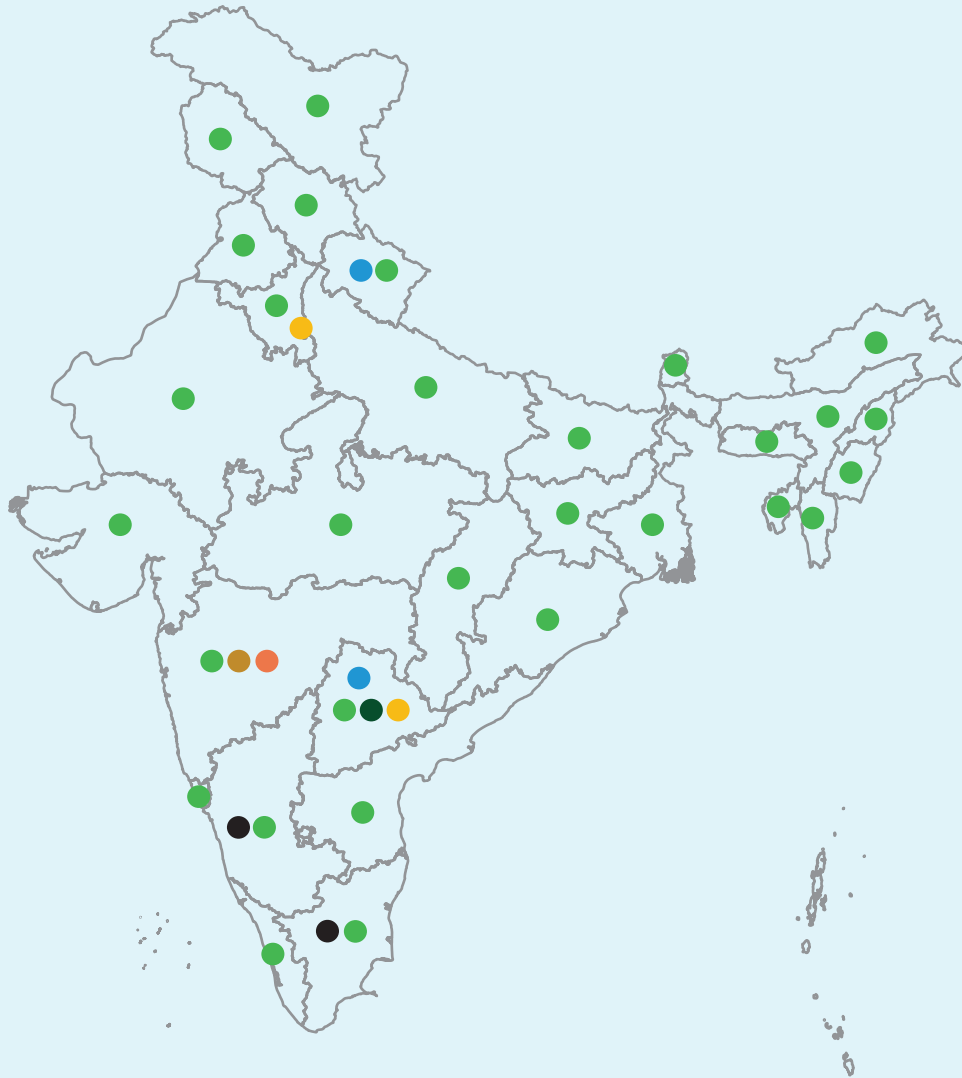
11 Connections with relevant investors & financial assistance for startups looking raise funds



Mentoring

Access to Subject matter experts from Cisco to provide enterprises with valuable insights into technology, markets and strategic expansion

Impact by Geography



- Mowo Fleet (JSS Mobility Innovations)
- Green Grahi Solutions Pvt Ltd
- Green Delight Innovations Pvt Ltd
- Climatesense Pvt Ltd (Farmers for Forests)
- Swachha Eco Solutions
- KNP Arises
- Bharat Krushi Seva

Impact by SDG

5	Gender Equality	5 GENDER EQUALITY 
11	Sustainable Cities & Communities	11 SUSTAINABLE CITIES AND COMMUNITIES 
12	Responsible Consumption & Production	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
13	Climate Action	13 CLIMATE ACTION 
14	Life below Water	14 LIFE BELOW WATER 
15	Life on Land	15 LIFE ON LAND 



TVARAN COHORT

Case studies



Bharat Krushi Seva

Climate Smart Agriculture



PROGRAM HIGHLIGHTS



Scaling of Services

Expanding operations to 2 new districts in Pune & Solapur



Product Enhancement

Pilot 2 new additional tech features with 100 farmers

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

Of 13.6 million farmers in the state of Maharashtra, 48.9% are marginal farmers and 29.5% are small farmers, with an average operational land holding of 1.34 hectares (ha).¹ According to the Economic survey of Maharashtra 2021, the biggest challenges faced by the small & marginal farmers are erratic rains, climate change, erosion & degradation of soil quality, high input cost and market uncertainties.

Solution

Bharat Krushi Seva is a tech-enabled mobile application providing real time data and insights to farmers on crop growth, soil moisture, weather patterns and other factors that impact crop health and productivity. The platform also provides a market place for farmers to procure agri inputs and sell their farm outputs at market prices.

¹ Economic Survey of Maharashtra 20-21; Maharashtra Agribusiness Network Project RRP IND 53264

Impact

400

new farmers onboarded
in 2 new districts

500

acres farm area converted
into climate smart practices

Contact

FOUNDERS



Sharayu Lande
Co-founder



Hemant Dhole Patil
Co-founder

WEBSITE





Climatesense (Farmers for Forests)

Climate Smart Agriculture



PROGRAM HIGHLIGHTS



Technology development for scaling

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

India ranked the second highest for the rate of deforestation after losing 668,400 hectares of forest cover in the last 30 years. The biggest contributor to increased deforestation is climate change, with 10 million hectares of land getting affected every year.² Moreover, one of the primary reasons why ecosystems like forests are being destroyed at an alarming rate is because the numerous services they provide like carbon sequestration, soil regeneration are not being correctly priced by our global economic systems.

Solution

Climatesense Pvt Limited (branded as *Farmers for Forests*) is on a mission to combat impact of climate change on environmental and human well-being by increasing India's natural and biodiverse forest cover. By leveraging the immense advances in geospatial and drone technology, Climatesense is implementing & monitoring Agroforestry projects. With the use of drones, satellite data and modifying open source AI algorithms the team quantifies carbon sequestered, biodiversity levels of the forests and agroforestry plantations which helps to put an accurate price on the ecosystem services that are being provided.

² India lost 668,400 ha of forest cover in the last 30 years | The Hindu Bureau | March 21, 2023

Impact

110

tribal women end beneficiary

500+

tribal community people trained on Climate Change, Forest Conservation, Carbon Credits and Cookstoves

Contact

FOUNDERS



Krutika Ravishanker
Executive Director



Anita Ravishanker
Director

WEBSITE





Green Grahi Solutions

Waste to Value



PROGRAM HIGHLIGHTS



Scaling production for commercialization:
Increasing plant production capacity by 30%



Pilots:
Mobilization of 3000 farmers to initiate farm trials

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

Every year, 30% of the food cultivated is wasted generating 4.4 GtCO₂e. Ironically, that wasted quantity is enough to feed 1.4 billion people, and is worth \$900 billion in economic value.³ Most of this food waste ends up in landfills, especially in the developing world, where it has adverse economic, environmental and social repercussions on local population and on the natural ecosystem.

Solution

As a circular economy company, GreenGrahi upcycles food residues into high quality specialty ingredients for animal and plant nutrition using insect bio-conversion processes. Using in-house developed climate controlled chambers - Climate cube - pre-treated organic residues from bulk generators are fed to insects, where they are converted to high quality protein, fats, and organic fertilizers with insects like Black soldier flies. These products are used by agriculture and livestock farmers to sustainably grow more food for humans.

³ Report on Food Wastage Footprint & Climate Change | Food and Agricultural Organisation of United nations | bb144e/1/11.15

Impact

30%

increase in production capacity

3000

farmers mobilized for farm trials

Contact

FOUNDERS



Shivali Sugand
Co-founder



Siddharth Sharma
Co-founder

WEBSITE





MOWO Fleet

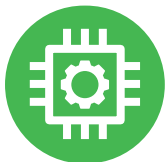
Sustainable Mobility



PROGRAM HIGHLIGHTS



Scaling Operations:
Increasing women drivers



Technology enhancement to launch B2C

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

According to the Ministry of Road Transportation and Highways, 2018, only 1% of the commercial licenses are held by women. There is a need to increase representation of women in this sector to prevent instances of violence and diminish safety for women travelers. Such driving opportunities, for as women driver-entrepreneurs, are in abundance with over 10 lakh more opportunities getting created by 2020.⁴

Solution

MOWO Fleet is a tech-enabled women drivers' fleet for last-mile commute and delivery services. Through their services, MOWO Fleet is redefining urban mobility by bringing women into the driver's seat more specifically by using electric 2 & 3 wheelers.

⁴ yourstory.com/herstory/2019/04/professional-women-drivers-mobility-employment

Impact

36

women drivers onboarded

60%

increase in income for the women drivers onboarded

Contact

FOUNDERS



Jai Bharathi
Founder

WEBSITE





GreenDelight Innovations

Waste to Value



PROGRAM HIGHLIGHTS



B2B Expansion: Commercial pilot with B2B/Corporate
> B2B commercial pilot partnership with ANZ bank, Bangalore



B2C Expansion:
Partnerships with 2 ecommerce platforms

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

Every year, around 12.3 billion used sanitary pads are dumped in landfills in India. Each of these non-organic sanitary pads is equivalent to four plastic bags, and it takes 250-800 years to decompose. And, some may never decompose at all.⁵

Solution

Green Delight Innovations Private Limited is trying to address the problem of plastic in sanitary pads. They produce sanitary pads that are completely made of plant fibers and are free from plastic. The product - Bliss pad - is made from Kenaf fiber (Pulichcha Keerai) which is 100% organic with a feathery softcover and high absorbency, as well as a leak-proof bottom sheet.

⁵ Sanitary pads take 250-800 years to decompose, which is pushing young Indians to opt for greener alternatives | Business insider India | Aug 25 2022

Impact

Increase in revenue by

55%

through ecommerce channels

100+

women micro entrepreneurs onboarded

Contact

FOUNDERS



Niveda Ravikumar
Co-founder



Gowtham Soundara
Rajan
Co-founder

WEBSITE





Swachha Eco Solutions

Waste to Value



PROGRAM HIGHLIGHTS



Certifications & pilot of new product Repolymix



Marketing to increase online and offline visibility

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

India generates around 3.4 million tonnes (MT) of plastic waste and only 30 percent of it is recycled. The rest of the plastic waste is sent to landfills or aquatic dumps. This impact is wide ranging, and affects communities and ecosystems. Over a five-year period, the plastic consumption in the country has risen at a compounded annual growth rate of 9.7 per cent to 14 MT in the financial year 2016-17 to 20 million tonnes in 2019-20.⁶

Solution

Swaccha Eco Solutions is an integrated waste management organization working to collect, transport, aggregate and recycle waste plastic from Households and Industries. Dry waste collected is segregated and processed to plastic granules, which are either used to create inhouse products/mixes or sold to vendors. They have recently launched Replolymix - a Low Value Plastic based mix for road construction.

⁶ India recycles only 30 per cent of 3.4 MT plastic waste generated annually | The Economic Times | 12 Jan 2023

Impact

55000

tonnes of plastic waste recycled

Contact

FOUNDERS



Victoria Dsouza
Co-founder



Rajesh Babu
Co-founder



Vinay Raghavan
Co-founder

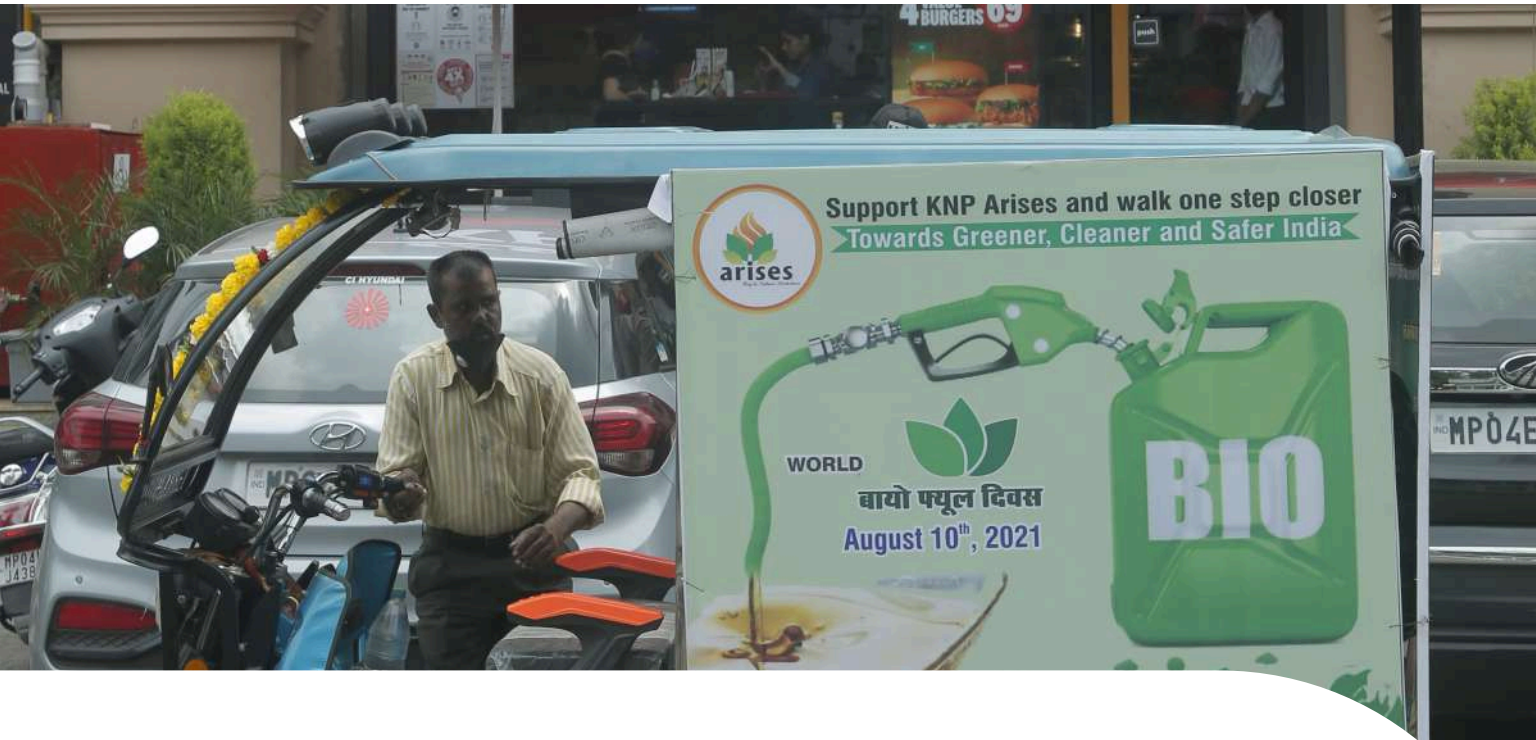
WEBSITE





KNP Arises

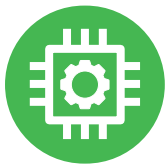
Waste to Value



PROGRAM HIGHLIGHTS



Scaling operations:
Expansion to South India



Technology enhancement for scaling

Note: The numbers presented in this report are self-reported by the enterprises and have not been subjected to an audit.

Problem

According to Food Safety and Standards Authority of India (FSSAI), Food business operators are supposed to discard vegetable oils after three times of frying or when its total polar compound (TPC) levels reach 25%. TPCs are associated with diseases such as atherosclerosis, hypertension, heart diseases, liver diseases, Alzheimer's and cancer. India generates 3 million metric tons of 'used cooking oil', but only a fraction of it goes toward biodiesel production.

Solution

KNP Arises Green Energy Pvt Ltd is building a marketplace for the disposal of used cooking oil. It then converts the used oil into biodiesel by providing a digital platform for hotels, restaurants, kitchens, industries and other food businesses to dispose of their used cooking oil in a traceable and effective manner.

Impact

30

tonnes of used cooking oil recycled (every month) to biofuel in new geography

250

vendors & outlets onboarded in South India

Contact

FOUNDERS



Kirti Vaishnav
Co-founder & CTO



Sushil Vaishnav
Co-founder & CEO

WEBSITE



Conclusion

Villgro has been privileged to have supported 7 women-led startups as part of this program. Villgro as a 20 year old incubator has understood that such startups, especially women led ones, need support with market connections and access to finance, and that has been the focus of our program.

Through this program we are supporting women led enterprises that are solving complex challenges related to climate change. Cisco has been a great partner for the program, and their support has played a key role in mentoring the startups in this cohort.

The program allows us to intersect 2 key priorities for Villgro - climate action and gender.

Villgro has ambitious goals for building livelihoods around climate resilient solutions and helping such enterprises succeed. We also know that women are very poorly represented in the workforce in India. An interesting observation about the participation of Indian women in the workforce has been the almost inverse relationship of female workforce participation with economic well-being.

While India has made steady economic progress from 1990 to today, women participation in the workforce has worsened from 34 percent to the current 25 percent (Periodic Labour Force Survey), a number which is above 50% globally.

Unlocking the full potential of women in our workforce could provide multiple times the return on initial investments made by the government and businesses.

We see an opportunity to do our part to build an ecosystem with the right partnerships that can make it easier for women led startups to succeed.

It's been really inspiring for us to see the kind of challenges the startups are tackling and for Villgro this is just the startling line. We would like to increase the scale of scope of such programs in the future with the attempt of supporting women entrepreneurs and helping them succeed and inspire many more women to join the workforce and be at the forefront of climate action.

- Villgro Innovations Foundation

Celebrating women leaders
innovating for good



Scan to learn more about the
TVARAN accelerator program