



LET'S TRANSFORM

IKEA Social Entrepreneurship

In partnership with

Saahas Waste Management Pvt. Ltd.

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1 Let's Transform through ISE

One year milestone review

The New Year 2023 began on a high note for our three entrepreneurs who form the first cohort of our social inclusion programme- Lets Transform through IKEA Social Entrepreneurship (ISE). Saahas Zero Waste invited the three entrepreneurs and their respective teams to a two-day interactive workshop (January 6th and 7th). This meeting provided a good opportunity for us to also review our one-year journey together

Here is a quick recap of Let's Transform through ISE

The two-year project, a joint venture between ISE and Saahas Zero Waste is designed to implement a social inclusion programme with a focus on plastic waste. Resource Recovery and waste management has tremendous potential for entrepreneurs. There are already entrepreneurs working in various segments of resource recovery of plastic- collection of waste, sorting, aggregation and recycling.

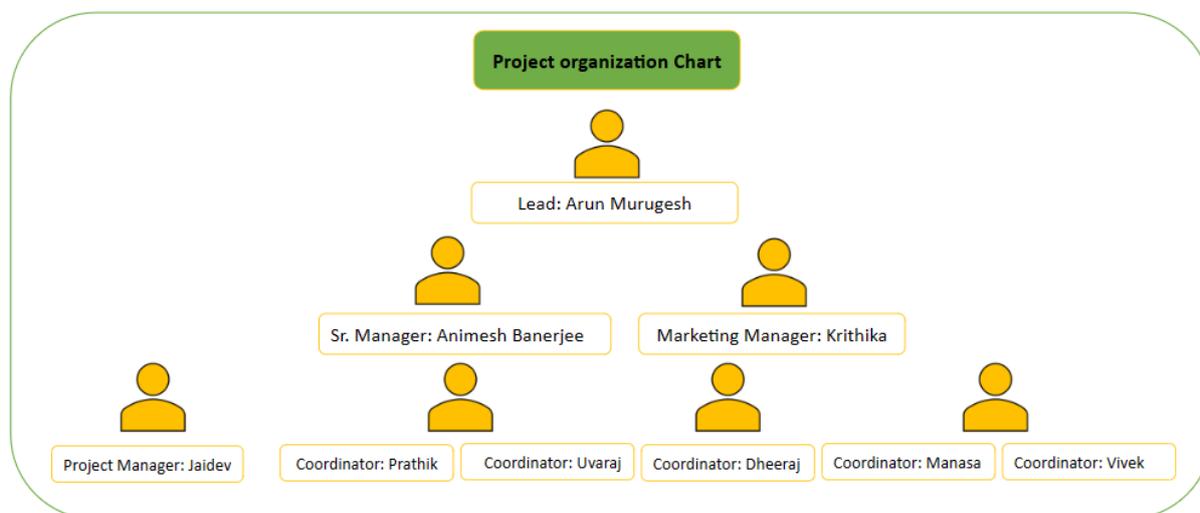
Most of these entrepreneurs working with plastic waste operate informally. The infrastructure through which they operate their business is rudimentary and does not comply with environmental and safety regulations. Also, they do not adhere to labour regulations.

Let's Transform is meant to move the needle and transition entrepreneurs to formal waste management systems. The plan is to develop and execute a framework that results in mainstreaming the informal sector. Access to minimum wages, social security and safe working conditions remains the core of this framework.

The project has a budget of 1.1 million Euros. This budget has been used to set up three Plastic Recovery Facilities (PRF) in the states of Karnataka and Tamil Nadu. Accordingly, 3 entrepreneurs were selected- 2 in Karnataka and 1 in Tamil Nadu, after a thorough screening process. Each facility has a capacity of processing 5 tonnes per day

2 Meet the team at Saahas Zero Waste executing the project

2.1 Project Organisation chart



One year milestone review Phase 1 (January –August 2022)

2.2 Search and selection of the entrepreneurs

Choosing the entrepreneurs is an important first step. The SZW team therefore worked on extensive selection criteria which ensured that we selected entrepreneurs who had both business acumen and commitment to environmental and social impact.

2.3 Selection process

1. Assessment based on criteria for selection
2. Background verification
3. Onboarding & MoU signing
4. Project Kick off

2.4 Criteria

Quantitative benchmark of the current business: Volume of waste managed, waste streams managed, years of experience, number of waste workers employed, size and facilities in the work area of the current setup, location of work, revenue model, existing infrastructure.

Domain knowledge of the waste sector: Holistic waste management operations (types of waste managed, transparency of data, traceable supply chain), ability to identify financial value of various plastic streams, local regulations and policies.

Mindset towards compliance: Alignment with environmental and labour compliances (No child labour, provision of social security benefits to employees, working hours, Health and Safety, Accommodation, Minimum wages, no open dumping and burning of waste, Complete resource recovery)

Entrepreneurship quality: Resilience, Integrity, Impact, Innovation, Humility, Teamwork

3 Meet our three selected entrepreneurs

3.1 Journey of Sharan Subbaiyah



Sharan is a young first-generation entrepreneur with an engineering degree. Post his graduation, he was serving the automobile industry but always had a knack for entrepreneurship. He quit his job and started working on ground with plastic waste and its management with a vision of having his own recycling facility. He started his journey in the plastic waste management industry in the name of '*Green Earth Industries*' at Mysore, working on collection, sorting and processing of waste before sending it off to recyclers.

The Mysore facility as seen above operated informally and did not have a well-defined process layout, compliant operations and minimum wages to workers.

Once on-boarded on the project, Sharan not only got the opportunity to establish a formal business, but also set an example for all the young entrepreneurs who want to explore the field of plastic waste management. Now, with the help of sophisticated instruments and machineries, there is efficient sorting and processing of waste. Not only is there better value realization with plastic waste, but all operations are now fully safe and compliant with all labour laws

3.2 Journey of Chanda Anand Anchan – Shri Siddhi Nagara Sthree Shakthi Group





Before Onboarding



After Onboarding

Chanda has pioneered waste management and women entrepreneurship in the city of Udupi. She initially started with door-to-door collection of unsegregated waste. Later, her efforts were recognized by the government and she was allotted specific wards for exclusive collection, and also a collection centre for segregation of waste. She worked with an all women SHG (Self Help Group) to help operate the 3000 sq ft collection centre. She also purchased a collection vehicle with support from the government for improved collection efficiencies.

We identified her as a project partner for the IKEA SI project and supported her with grants for infrastructure development in a 6000 sq ft facility, setting up a fully formal business. This facility initially supported 9 waste workers now going up to 20 and will be managing more than 100 MT of waste per month.

3.3 Journey of Ranjith Singh – Spreco Recycling OPC Ltd.



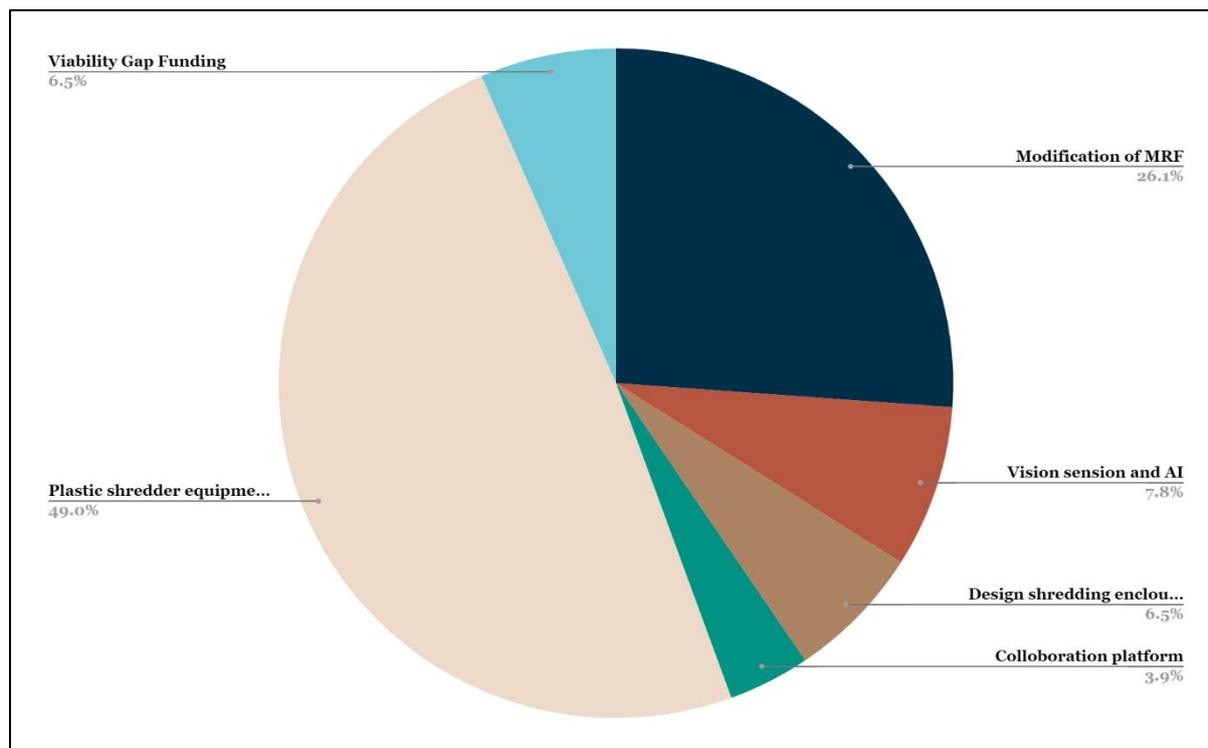


After Onboarding

Unlike the other two entrepreneurs, Ranjith Singh did not have any past experience in working with plastic waste. However, he had a keen interest in becoming an entrepreneur and had been trying out different businesses in the different sectors.

During his previous job, he was exposed to plastics and waste being generated in the automobile sector. He was very keen in finding some solution for the plastic waste generated. He tried to map the journey of plastic waste from the source to the end destination and how it can be used in a circular economy.

4 Budget allocation



S.no	Budget utilization	Allocated budget (in Lakhs, INR)	Detailed budget explanations
1.	Modification of MRF	40	Mezzanine, Baler, Conveyors, Fire extinguishers, CCTV, Office Furniture
2.	Plastic Shredder	75	Plastic Shredding machine
3.	Vision Sensing and AI	12	Detect the quality of the incoming waste through Artificial Intelligence and capturing device
4.	Design Shredder	10	Metal Detectors, Platform for shredder, and spares for shredder
5.	Collaboration Platform	6	An online platform to integrate different key stakeholders together and address the key issues in waste management
6.	Viability Gap Funding	10	The operational funding given to manage the gap in between.

4.1 Finalising the business Plan

- A business plan for PRF implementation and operation was discussed.
- It was initiated with a Profit and Loss sheet.

A profit and loss (P&L) sheet was calculated which included all the necessary parameters such as the rent, cost of manpower, cost of raw materials, selling price processed materials, logistics cost, electricity cost and etc. a gap funding was also provided in order to neutralize the losses for the first five months.

The initial operational expenses from the entrepreneur were also taken into calculation.

5 Setting up the infrastructure for the Plastic Recovery Facility (PRF)

- An ideal size required for the facility was identified as up to **10000 sq. ft** of space in order to accommodate the following equipment and infrastructure: Baler, shredder, mezzanine, conveyors and office space.
- A **plinth** for loading and unloading.
- **Industrial Zone or a non-residential area**
- Inbuilt Electricity capacity of **70 -120 HP**
- Also included was the space for the workers to stay in separate rooms within the facility.

6 Sourcing the waste

- Team SZW along with the entrepreneur was involved in an extensive mapping of the supply chain for rigid plastic waste (PET, PP, HDPE) in the location around the Plastic Recovery Facility.
- The sources of waste can be subdivided majorly into the **formal and informal** sector.
- The **formal sources** are bulk waste generators, municipalities and aggregators.
- The **informal sector** consists of scrap dealers, waste worker colonies and waste pickers.
- The PRF can source only from the formal sector in order to achieve **traceability**.
- The vendor network and end destination mapping were overviewed

6.1 What did we achieve through mapping?

- In each location the vendors have been mapped such that we can source around **2 to 5 tons** per day according to the requirement.
- Diversion of waste from **bulk waste generators** and **municipalities** is also concentrated but **diverting only the plastic waste** continues to be a challenge due to various issues.
- Since the plastic waste management industry operates in a cash and carry model, **cash flow** also raises concern.

7 Tech component for tracking and tracing

7.1 Tracer

- Tracer is a blockchain-based platform developed to maintain supply chain traceability of plastic waste. The traceability is followed with the help of a series of primary documents required for the transportation of waste between stakeholders.
- The tracer platform runs through the following stakeholders:
 - Sourcing vendor
 - Plastic Recovery Facility/Material Recovery Facility
 - Recycling industries
 - PRO
 - Brands
- Each stakeholder inputs specific, relevant data. Once all the data is collected, the documents are transferred to the next stakeholder in the pipeline.
- The development of the mobile version of this technology is in the final phase.

8 Approvals/Authorization from government bodies

- As a plastic waste pre-processing facility, the PRF needs to have the necessary approvals required for operating the facility.

- A No Objection Certificate (NOC) along with a trade license from the local government body has to be received once the location for the facility has been finalised.
- A factory registration is also required since the processed materials and inward raw materials quantity exceeds 5 tons.
- The state pollution control board will categorize the facility as white, green, orange or red according to the pollution levels generated.

S.no	Approvals	Bangalore (Status)	Chennai (Status)	Udupi (Status)
1.	NOC	Approved	Approved	Approved
2.	Trade License	Approved	Approved	Approved
3.	State Pollution Control Board	Applied	Applied	Approved (without shredder)
4.	Factories Registrations	Applied	Approved	Approved

9 Sharing initial experiences and learning

9.1 Sharan

How has your experience in working the formal sector been?

With formalization, I have brought in a lot of tracking and data capture in the company, and handling higher quantities, bringing in production systems. And understanding the social part in the business as well.

One important point to include is that the ergonomics, safety and hygiene of the workers is taken care well in the current facility than my previous facility. In believe in future, with all the systems incorporated will set as an example for the current waste management industries, and this may force the informal sector to transform.

Do you see light at the end of the tunnel?

Yes, I believe that if the company is process driven then we can achieve good heights.

9.2 Chanda

What is exciting for you about this project?

When I worked informally in the DWCC shed, I wanted to give facilities like ESI PF PPEs to all my workers due to financial issues, but I couldn't. When I got selected as the entrepreneur for this project, I got hope that through this project, I could help my workers and other SHGs.

Could you tell us about the experience of the workers now that they have moved from the informal to the formal sector?

Some of my workers were working in the informal waste management sector earlier and they had to go from house to house to collect waste. Now they are working in a factory. They are getting social security and health care benefits, and minimum wages also which they were not getting earlier. I want to give more and more facilities like giving scholarships to my workers' kids.

9.3 Ranjith

How has the transition to an entrepreneur been?

Previously when I was an employee it was mostly my role-based thinking and work was so narrow. Now getting on the ground as Business owner the exposure is vast and the learnings in terms of business skills (wherein we are managing it end to end starting from manpower handling, finances, marketing and business development) have been increasing on a daily basis.

What are the challenges with informal supply chains?

The price for the materials quoted from the informal sector seems a challenge and working in a formal sector requires higher fixed cost. The fixed cost for running the industry involves higher rent, minimum wages, safety PPE etc., which is not provided in the informal sector and this becomes one reason for higher material cost.

10 Coming together to address challenges

Our 3 entrepreneurs demonstrate a good level of diversity in terms of skills and domain knowledge. Over the next one year we will look towards intensive knowledge sharing that will take place between the three entrepreneurs.

Sharing related to team selection, processes, procurement of plastics and sale of materials to recyclers

11 Phase 2 (August 2022 – January 2023)

The plastic recovery facilities (PRF) have been successfully implemented at Bangalore, Chennai and Udupi. The operations in the PRF which include collection of plastic wastes, sorting, processing and dispatching them to the end destination has also started.

All three entrepreneurs face working capital problems. There is a gap between sourcing the raw material (segregated, unsorted waste), going through the processing facility at the PRF, and then finally sending it further to authorised recyclers or aggregators. The struggle is to have sufficient

funds in between the steps for the day-to-day operations. Formal operations in a well-equipped facility in an industrial set-up attracts a very high rent. They also have to compete with the informal sector which does not have such a high cost of operations. Because of this, the informal sector is able to sell the processed waste at a lower rate. It becomes challenging to find authorised end-destinations to sell.

Sharan also faces the challenge of a higher volume of unsaleable post-processing plastic. There is no market for this category of waste, and the industry as of now, has no viable solution for this.

Chanda's problems are two-phased – One is to finding good candidates for employees. Her challenge for sourcing raw material stem from the Self Help Groups (SHGs) which collect the segregated waste. They refuse to sell it to her as the informal sector is able to buy this from them at a higher price. As a formal business with a much higher operating cost, purchasing it at a competitive price is currently not viable for Chanda.

Ranjith was previously working in an MNC, he had a separate list of challenges in terms of understanding the material, analysing the market requirements, price fluctuation of the raw materials and finished goods and etc. Additionally, he was also facing multiple issues in finding the right facility with adequate electricity and storage space.

12 Visit from ISE Leaders

The highlight of December was undoubtedly the visit of ISE leaders -Åsa Skogström Feldt, Managing Director and Jeroen Wopereis, Finance and Investment Leader. They were joined by their colleagues Manoj Sharma from Inter IKEA Services India, Gurugram and Atul Krishna Kumar, Sustainability Business Partner at IKEA India.”. They visited the Plastic Recovery Facility run by Sharan. They were given a thorough tour of the facilities, with a walk-through of each step of processing. This was followed by a presentation of the financial aspects of each of the entrepreneurs, and also the outlook for next 6 months. They were also walked through the marketing and communication plan and the outlook for the same for the next 6 months.

Says Asa,

“IKEA Social Entrepreneurship is committed to making a positive impact on people and planet. Supporting social entrepreneurs working with waste management and social inclusion, we can help improve livelihoods for people from vulnerable and marginalised groups. In collaboration with Saahas Zero Waste, we’re exploring ways to improve incomes and conditions for waste workers and waste pickers in India, while developing opportunities for the transparent supply of recyclable material.”



13 The two-day workshop

We organised a 2-day workshop with all three entrepreneurs at our office for a review where there was sharing of learnings and concerns.

Agenda of the workshop

1. Understand the process flow in each PRF
2. Set a common process for all PRF
3. Review the documentation followed
4. Understanding of P&L
5. Material characterization at each PRF. There were many one-to-one interactions with the project leaders which cleared most of their understanding of the above topics. The supervisors and operators had hands-on experience in the facility and they had a wide

understanding about stocks, machine operations, rate of sorting, plastics with economic value.



14 WAY FORWARD

The top three challenges for the entrepreneurs currently are:

Working Capital – This is a common challenge faced by all the entrepreneurs, across cities.

Banks do not recognise the waste sector as a viable business, and do not give out short-term funds for the same. Hence, it is a daily struggle to fund daily operations.

Finding local waste workers – This is a problem more acutely faced by Sharan. The southern states of India are relatively better off economically compared to the north. Hence, many migrants come here in search of work and are easily recruited. They are desperately in need of work and are often exploited. We ensure at our facilities that they are provided at least minimum wages and comply with all labour laws. When these migrant workers do go back to their native towns, they carry back the knowledge they have gained, and this improves opportunities for the waste sector to grow in these areas too. However, the flip side is that these workers go back ‘en masse’ during the harvest season for two months. The substitutes they arrange for, are not trained and hence those two months are very difficult for Sharan to manage. Hence, we would like to see a good mix of local and migrant workers to keep the plant running smoothly.

Sourcing raw material – For optimum running of the facility, the right amount of raw material needs to come in at the right intervals. This is currently not streamlined.

We will continue to work with the entrepreneurs to find solutions for the above problems. Each city has its own unique challenges and opportunities, and we hope to find timely redressal of the problems in order to enable the entrepreneurs to run the business sustainably.

ANNEXURE

IKEA MARKETING CALENDAR

PERIOD – September 2021- November 2022

Project kick-off and Project Plan – September 2021

EVENT	DATE	DESCRIPTION	LINK / DOCUMENT
Round Table Discussion 1	16 th December, 2021	Workshop	 Roundtable1.outcomes.pdf
Round Table Discussion 2	9 th March 2022	Workshop	 Roundtable 2 Let's Transform- Report.pdf
Video Release	26 th March, 2022	From intent to action	https://www.youtube.com/watch?v=KxipizxkEQU
Video Release	11 th April, 2022	Why does Industry need to lead Social Inclusion? Keynote by Ankur Bisen, Management Consultant and Author	https://www.youtube.com/watch?v=cBuJRQWLn8
Workshop	3 rd July 2022	Let's transform	https://www.youtube.com/watch?v=BYWy6wo7vbw&t=604s
Round Table Discussion 3	22 nd July 2022	Workshop	
Plog Run	22 nd August, 2022	Event	Plog run invite https://www.instagram.com/p/ChR7swrvy1-/?igshid=ZDFmNTE4Nzc=

			Plog run video https://www.instagram.com/reel/ChpAxzLgZas/?igshid=Zjc2ZTc4Nzk=
Coffee with Kasa	22 nd August, 2022		https://www.instagram.com/reel/ChpAxzLgZas/?igshid=Zjc2ZTc4Nzk=
Press Coverage	11 th November, 2022		https://www.daijiworld.com/news/newsDisplay?newsID=1018927
Release of Circular Report	14 th November, 2022	Social Inclusion Metrics shared	https://t.ly/gmrh
Catch-up with our entrepreneurs	23 rd November, 2022		https://www.youtube.com/watch?v=8tbVl6wy_iY&t=14s
Blogs			Ranjith Singh https://www.linkedin.com/feed/update/urn:li:activity:6991370974583562240 Chanda https://www.linkedin.com/feed/update/urn:li:activity:6986304557182062593 Sharan https://www.linkedin.com/feed/update/urn:li:activity:6967698914250539008 Let's transform workshop 3 https://www.linkedin.com/feed/update/urn:li:activity:6958401002366529536
