

Country	India					
Population	536,450					
Title of policy or practice	E-Cool Mandi					
Subtitle (optional)	Decentralized cold room run by women preventing vendor distress					
URL video	https://drive.google.com/drive/u/3/folders/1AWM86FTW4u17UFYSOF0gpAPR_8LXsOwp					
Category	03 – S&EE		SDGs		2 – 5 – 10	
Year of start	2021		Year of end		ongoing	
Actors involvement	Municipal departments	Public institutions	NGOs CSOs	Research centers	Private sectors	International bodies
	2	Many	2	1	many	3
Budget	€991,050 over three years					
Brief description	<p>Every year in India 34% fruits and 44.6% vegetables are wasted (Doubling Farmers' Income Committee Report, Govt. of India, 2018) and the lion's share of the same is due to inadequate, decentralized cold storage facilities. Gaps in the storage chain have also lead to distress sale by farmers, lower incomes (as 80% of farmers are marginal), long waiting period in scorching heat, food contamination, increased water, soil and energy consumption for growing the same amount of food and increased Greenhouse gas emission. The COVID pandemic further increased the loss due to reduced consumer demand. Rourkela city has come up with the idea of installing solar energy based decentralised cold storage facilities at various market locations. The Pilot has been done at VSS market, Chhend (one of the largest residential colonies in Asia), where vendors can store their produce at a minimal cost of 0.31 Euro/kg. Focusing on women empowerment, the vegetable bank is run by Maa Tarini Self Help Group (a society of 15 women members), who monitor the mobile application and web page for buying and selling purposes with the support from Koel Fresh, a startup venture from the city. In this regard an IEC program titled "Cold room Ambassadors" has been conducted. Five cold storages in five major markets of the city catering to around 1650 vendors and half a million population are in process. A dedicated market for women vendors named as "Shakti Bazar" has been established at Koel Nagar, facilitating farmer to market linkage.</p>					
Innovation	<p>Social and economic inequalities:</p> <ul style="list-style-type: none"> It is solving an unmet need for vulnerable stakeholders (Tibal vendors and farmers) by leveraging the power of technology and communities, results in the reduction of distress selling. Women federation who typically do not have sustainable and meaningful livelihood options are the drivers of these solutions. <p>Rapid Urbanisation :</p> <ul style="list-style-type: none"> Senior citizens and physically challenged citizens of Rourkela now have the option to order and receive commodities (fruits and vegetables) at their doorstep by using Mobile app/webpage. The business model of providing cooling as a service is both unique and scalable and through IoT(Internet of Things) can be further optimized. Spread of Non-communicable diseases: This system of food selling results in the reduction of NCDs like Typhoid, cholera, jaundice etc. <p>Climate change :</p> <ul style="list-style-type: none"> This system focuses on green technologies: solar, electrical vehicles not just provides operational cost advantage, but also reduces the overall energy consumption. Around 8-9 nos of EV deployed in the city for distribution of items to consumer. One cold room on solar panels of 5 MT reduce 1000kg of CO2 emission likewise at 150-200 MT capacity it reduces around 30-40 tons of CO2 emission. 					

	<p>Post Covid-19 recovery: COVID pandemic has increased the loss due to reduced consumer demand. After the implementation of the cold room, small and marginal vendors, residing in Rourkela saw 10%-30% increase in their sell.</p>
<p>Impact</p>	<p>Social impact:</p> <ul style="list-style-type: none"> ● Small and marginal vendors (especially women vendors) residing in Rourkela saw a reduction in distressed selling of their commodities. This has unlocked their potential to sell more, expand their customer base and subsequently produce better commodities. This has directly impacted their financial and emotional well-being. ● Women federation members residing in Rourkela have got access to new and meaningful livelihood opportunities. They have also positively impacted the lives of small and marginal vendors. ● Senior citizens and physically challenged citizens of Rourkela now have the option to order and receive commodities (fruits and vegetables) at their doorstep independently. <p>Environmental impact:</p> <ul style="list-style-type: none"> ● Mainstream citizens also have the choice and comfort of commodity shopping from home. The use of emerging and clean technologies will have a positive impact on the environment of Rourkela. ● One cold room on solar panels of 5 MT reduce 1000kg of CO2 emission likewise at 150-200 MT capacity it reduces around 30-40 tons of CO2 emission. <p>Economic impact:</p> <ul style="list-style-type: none"> ● Reduction in vegetables wastage at city level, Decline in distress selling (increase in income levels of vendors), Appropriate capacity utilization of cold rooms, Increase in income levels of members from participating women federations, Increase in online demand of commodities.
<p>Inclusion</p>	<ul style="list-style-type: none"> ● Holistic approach: The city council has long term plans in securing and enriching the livelihood of small and marginal vendors of the city alongside with creating meaningful livelihood opportunities for women federations under the Mission Shakti Programme. Engagement of Women Federation-Selection of women vendors by the city council, Technical training of women federations (managing the cold room, inventory management), Non technical training of women vendors (vendors' management, stakeholders' management), Supporting vendors to use the cold room, supporting customers to use the online delivery services. At least 6-8 women federations are involved in the project, 100 vendors use the facility per day. At least 100 consumers use the app services per day. ● Stakeholders' engagement : Onboarding of vendors, Preliminary survey for vendors, Setting up registration counter near to vendor place of work, registration of vendor with ID cards distribution, training of vendors on how to keep their products in cold room, Allow vendors to keep their products in cold room. More than 1000 vendors have registered for this project and more than 100 vendors keep their products on daily basis. ● Inclusion and Scale up plan: Pancity project ,across six markets of Rourkela further extending to all markets. Around 8-9 EV deployed in the city for distribution of items to consumers. In addition to this, the city council has initiated the "solarization Rourkela programme" to promote clean energy.
<p>Challenges and learning needs</p>	<p>At the initial phase, we had no idea as-to how should we onboard the vendors and women federation into the project. We designed a work plan with a detailed on-boarding strategy which involved participatory discussions and subsequent co-creations with these stakeholders.</p> <p>Our pilot launch incorporated marketing tools that our stakeholders recommended: registration booth, audiovisual announcements, poster distribution etc. In a matter of few days, we were able to onboard 250 vendors. It is essential to co-create activities with core driver of project. In our case, the women federation took an active role in mobilizing vendors through discussions, demonstrations and formal registration process.</p> <p>It is essential to demonstrate some output via piloting of project: the core users (farmers/vendors) resonate more with the idea when they see it in action instead of just hearing about it.</p>