

# POPPY.

an eco-friendly sanitary napkins' subscription  
& responsible disposal service

# design brief.

Out of **336 million menstruating women** in India, about 36% i.e. 121 million women use sanitary napkins.

Assuming every woman uses 8 pads per cycle, around 1 billion pads are used every month.

That is, **12 billion pads a year**.

Most of the sanitary pads in the market have Super Absorbent Polymer (SAP) and take **500-800 years to decompose**.

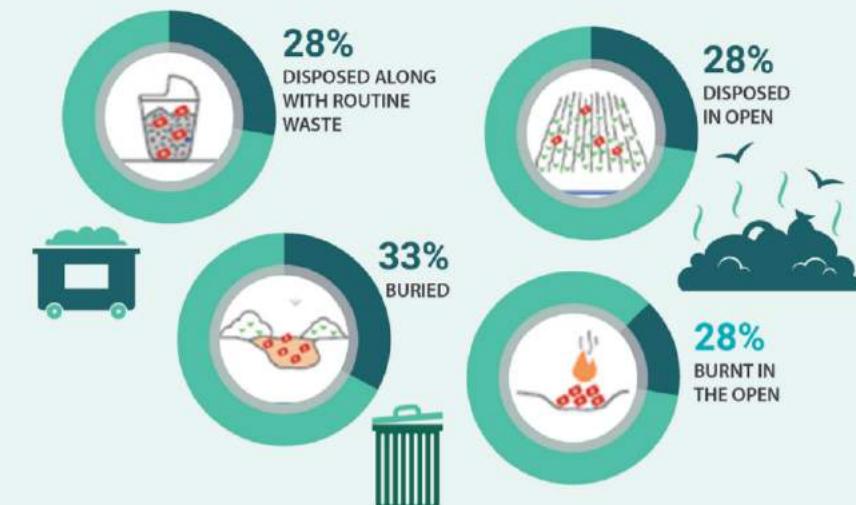
PRODUCT CATEGORY	NON – COMPOSTABLE/ DISPOSABLE SANITARY NAPKINS	COMPOSTABLE PRODUCTS	REUSABLE PRODUCTS
Products	<ul style="list-style-type: none"> <li>❖ Without Super Absorbent Polymer (SAP)</li> <li>❖ With SAP in absorbent core</li> </ul>	<ul style="list-style-type: none"> <li>❖ Compostable sanitary napkins</li> </ul>	<ul style="list-style-type: none"> <li>❖ Cloth pad variants</li> <li>❖ Menstrual cups</li> </ul>
Life span	<ul style="list-style-type: none"> <li>❖ One time use</li> <li>❖ 800–900 years to decompose</li> </ul>	<ul style="list-style-type: none"> <li>❖ One time use</li> <li>❖ 3–6 months to decompose</li> </ul>	<ul style="list-style-type: none"> <li>❖ Multiple use</li> <li>❖ 1–10 years</li> </ul>

**Taboos, shame & lack of awareness** not only contribute to lack of availability of pads,

but also **irresponsible & stealth disposal** of the soiled napkins.

This **biomedical waste** consists of skin cells & blood and pose serious threats to the people handling it.

## Where are the 12 billion pads being disposed?



There is not much awareness about the different types of menstrual products available in the market. Hence, even **eco-friendly pads have a very little market share**.

Even though periods are periodic, purchasing of menstrual products is irregular. And sometimes, women tend to **forget about their cycle and have no sanitary pad** available for emergencies.

For many women who stay at home, **going out and buying menstrual products is not convenient**.

Several women even **feel shame to ask for sanitary napkins in a shop**, especially in absence of other women.



# current systems map.

Menstrual waste disposal practices among females vary - major factors:

1. surroundings
2. socio-economic status
3. residence in urban or rural areas
4. cultural beliefs and taboos associated with menstruation and menstrual blood



TABLE 1: MENSTRUAL WASTE DISPOSAL PRACTICES AMONG ADOLESCENT GIRLS IN INDIA\*

Disposal of menstrual absorbent	Total pooled proportion*	Rural pooled proportion*	Urban pooled proportion*	Slum pooled proportion*	Concerns with disposal method
Throw with routine waste/dustbin	45	28	70	51	Menstrual waste enters the solid waste stream and is subject to the same treatment as other solid waste – placed in landfills to disintegrate over hundreds of years
Thrown away in the open (open spaces, rivers, lakes, wells, roadside etc.)	23	28	15	30	Menstrual waste can contaminate water sources, clog drains
Burning (open)	17	15	23	-	Burning of commercially available pads at low temperatures can create odours and expose nearby population
Burying	25	33	12	-	Burial is not done effectively, and without appropriate composting, waste will take hundreds of years to degrade
In toilets (flushing down the toilet, throwing in pit latrine)	9	10	7	-	Used pads mixed with faecal sludge, complicates disposal of that sludge (in the case of septic tanks) or interferes with the production of usable manure (in the case of leach pits)

Source: van Eijk et al (2016). Menstrual Hygiene management among adolescent girls in India: a systematic review and meta-analysis

# SWOT analysis of current scenario.

## Strengths:

- Feminine hygiene products market in India is **expanding at a 15% rate** due to - increased awareness, growing number of working women and risen literacy rates.
- **Uniformity** in commercial product sales - 99% is disposable pads.
- Menstruation is a biological process and is certain to occur in women of 12-50 years. Hence, menstrual supplies are **Fast-Moving Consumer Goods** (FMCG).
- Global agencies and organizations such as UNICEF and UNESCO have been active in **raising literacy levels of young females in under-developed and developing countries**.

## Weaknesses:

- Lack of responsible **disposal** practices.
- Plastic disposable sanitary napkin **requires several centuries to decompose** completely.
- Women **don't like to explore options** other than commercial disposable product.
- The **taboos** related to periods still exist even in well-off houses.
- Presence of men while buying pads can be uncomfortable.

## Opportunities:

- With dedicated subscription schemes, we may make women sell menstrual products to women, creating **fellow feeling**.
- By letting women take the baton, the **information transfer will be as intimate as desired**.
- There is scope in building a model around **responsible disposal** of menstrual waste.
- Providing **jobs to women**.
- Development of **eco-friendly products** such as sanitary napkins from the natural fiber is a sustainable option to advance in this market.

## Threats:

- **Taboos** and witchcraft associated.
- **Engagement of men** in the model may cause hindrance in intimate and comfortable information transfer.
- Girls face stigma, harassment, and social exclusion during menstruation which compels girls and women to **adopt traditional feminine hygiene products or completely avoid using them**.



# target group.

**Urban/Semi-urban pool** (customers, dealers)  
+  
**Slums** (dealers)

Sample cities: Mumbai, Jaipur

**Moni**, cleaned the house and washed the utensils, hailed from Kerala, had no mom so she did not know about periods -

"I buy the pads from shops. I do not enter the shop if there is no woman. If there is, I send my husband to get it for me. I dispose by wrapping in a newspaper and throw in my house's general waste."

Glad to talk to me about the issue, "felt good". Enthusiastic about being a dealer. Would not like to throw pad waste near the pot. If there could be a burning solution, she will perform that.

**Neetu**, a housewife, has two daughters, lives in a well-off highrise society in Jaipur -

Enthusiastic on starting a small home-run factory for menstrual products.

**Arpana**, a biotechnology scientist, has a son and a daughter, lives in a well-off high rise society in Jaipur. She has studied in the US and lived there for 10-12 years -

Talked about other menstrual products in the market and the Indian context.

**Sunanda**, a maid from Mumbai, single mother of a little boy -

I prefer some kinds of pads over others. She usually bought pads from a pharmacy and would be hesitant to enter the shop in absence of women.

She was enthusiastic and ready to know more. "Many groups may form to participate in this model as dealers", "achcha kaam karne mein knowledge bhi badhta hai aur achcha bhi lagta hai" ..

**Abida**, helped in kitchen, was very shy to talk about the topic -

"My husband gets pads for me. I rarely go and buy. I use whisper or stayfree pads, wash them after use and then dispose it in the common dustbin in my area."

Did not talk much.

**Pinki** cleaned the house and washed the utensils. Was quite talkative -

"Usually my husband gets it for me. If I go, I prefer the presence of a woman there. But if it's an emergency, I step in myself. I dispose it by wrapping in a newspaper and throw in my house's general waste."

Very enthusiastic on being a dealer. Said that many other women will join if such a thing happens.

"In my village, we are made to sleep on a rag outside the house. It is considered impure. Flowering plants will not work as flowers are offered in temples. Burying in soil may work. Maybe wild plants may work."

**Seema**, another woman from the same society of Jaipur has built an extra kitchen in her house for period days. She and her daughter sleeps in the store room, cook for themselves and live there for 5-6 days of the month.

**Ritu**, a working woman from Mumbai, having an elder son and younger daughter -

We usually order from BigBasket or D-Mart. When there is an urgent need, I get it from a general store. Usually, it's just me running errands related to periods. My daughter once looked for eco-friendly sanitary pads but firstly, they are costly and secondly, we are hesitant to switch to different products.

# exploring customer needs.

## Aspirations:

- Intimate affair of buying and disposing pads
- Need an understanding of different kinds of sanitary pads available
- A fellow woman with whom they can interact about their problems
- A reminder about their menstrual cycle
- Easy, convenient period days



# Preparatory questionnaire.

## What motives for innovation does the company have?

Menstruation is still considered taboo, with **only closed-door conversations** regarding menstrual health and management (MHM) taking place. It is still something of a social and cultural taboo in India, which creates challenges for women.

According to the National Family Health Survey (NFHS) 2015-16 report, about 48 per cent of women – aged between 15-24 – in rural areas and **78 per cent in urban areas use sanitary napkins** during the menstrual cycle. Most of them contain Super Absorbent Polymer (**SAP**) and take **500-800 years to decompose**. Apart from the product used in its manufacturing, napkins **contaminated with blood** are a biological hazard and pose great health risks for the waste collector.

Considering how essential of a commodity sanitary napkin is, **procuring it** is still done in a stealth way. Making it available every month or once in a few months **can be inconvenient**.

So we have come forward to solve the problem of logistics and disposal with the concept of a **subscription service that helps efficient distribution and responsible disposal of sanitary napkins**.

## Does the company know the social acceptance of the current offer and of new offer ideas?

Yes. None of the existing company covers total solution. But the followings are notable,

1. Stayfree- providing versatile and comfortable products
2. Jayashree Industries- providing affordable products. The company has already sold 1300+ machines. The company is running on 0% debt. It is expanding his business to 106 countries including Kenya, Nigeria, Bangladesh, and the Philippines. It is expanding it's plant size as well, so in coming years Jayaashree Industries will be among the top profit earning companies of the country.
3. Padcare- providing smokeless incinerator and odourless disposal bin. The PadCare bin is secured sensor-based collection units for at source collection, which provides 100% bacterial lock & deodorization. Till now it has recycled 9500+ Pads, installed 150+ Bins where 4000+ Women's has participated and 5000 kg s + Carbon emissions reduced.

But all of them has some limitations like,

1. Stayfree does not provide low cost pads
2. Jayashree industries does not have waste disposal
3. Padcare does not provide sanitary products

# porter's 5 forces.

Porter's Five Forces is a model that identifies and analyzes five competitive forces that shape every industry and helps determine an industry's weaknesses and strengths.

## Competitive Rivalry

- imported products from MNCs
- high media spends

## Supplier Power

- limited number of suppliers
- credit and bank guarantee requirements
- raw material needs to be imported

## Buyer Power

- various existing brands available
- easily substitutable

## Threat of Substitution

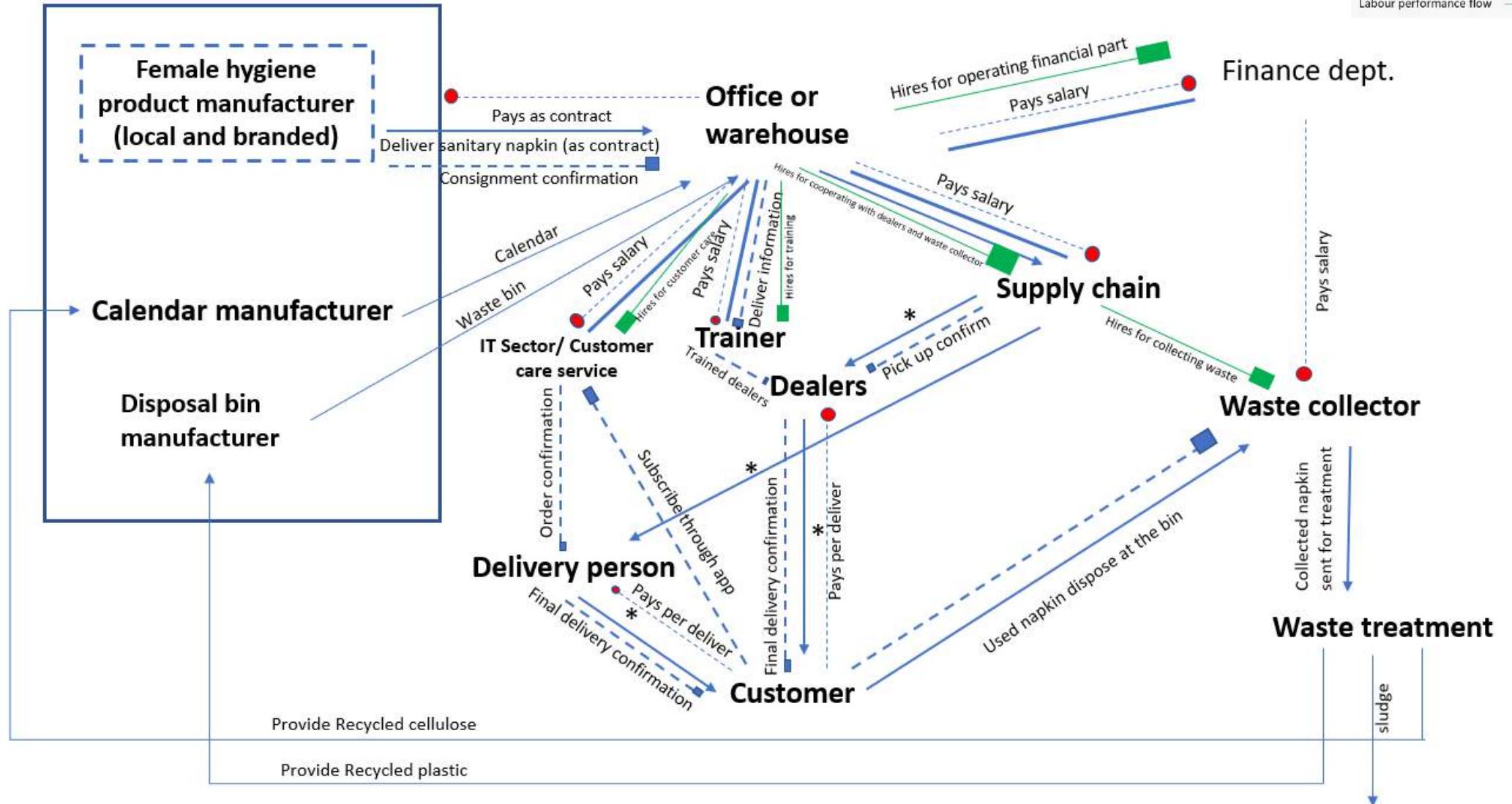
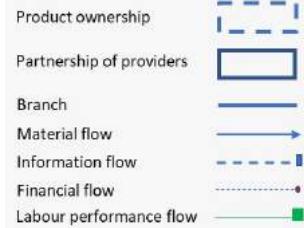
- other MHM products do not possess a threat
- less probability of going back to older methods once pads used

## Threat of New Entry

- entry barriers high
- capital requirement
- access to distribution
- channel restricted low economies of scale is unsustainable
- import of sanitary pads a usual practice
- dealers unwilling to involve waste management practices
- can be manufactured at a small scale



# proposed system map.



\* Waste bin+ Sanitary Napkin (confidential parcel) + calendar

# awesome actors tool.

Awesome Actors Tool helps us understand the needs, aspirations, motivations and challenges faced by the various actors involved in the system.

Actor		Waste pickers	Dealers	Trainers	Waste treatment worker	App development and server maintenance	Female Customers	Transporters	Help desk employees
Contribution	What they are doing?	picking up menstrual waste as assigned and dropping it at the waste treatment facility	trusted network of door-to-door sales agents and in-school distributors	Offer informal or formal education like workshops to female sales agents, teachers, village meetings, toll-free hotline	incinerate the menstrual waste	designing the app for customers and do the maintenance required	getting easy access to products and reduce missed days of schooling and employment	transporting waste from pick up facilities to waste treatment plant, delivering sanitary pads	helping women and dealers
Values added	What value does the actor bring to the ecosystem?	stopping misuse of waste, providing a stealth pickup of pad waste	marketing and distribution	raise awareness	they end the hazard stages of the menstrual waste	build and maintain app based service to the customer	come out from the societal taboo	physically connecting stakeholders	convenience and trust towards company, bridging gap between stakeholders
Motivation	Why does the actor choose to do what it does?	for earning and some may be voluntary	to earn commission from sales	for voluntary works	for earning money	For earning money and fulfilling the customers demands	for convenience	for earning money, for travel	for money, for social cause
Problem solved	What are the problems that the actor is trying to solve?	helping in responsible menstrual waste management	reaching out to women who are shy to buy pads in public and cannot explore options in presence of other people	removing taboo regarding menstruation and raise awareness of menstrual health	reduce the amount of sanitary waste without letting out toxic gases	add connection between customer and company	ease through their periods safely and healthily	logistics	people's problems related to delivery, pick up, customer service
Challenges faced	What stops it from performing activities?	biohazard, the problems faced by waste pickers are exacerbated by social stigma	taboos, family problems, physical disabilities	community restrictions, family issues, societal reactions	improper safety measures in factory, physical disabilities, biohazard, family issues	network issues, technical limitations, health issues, family issues	community restrictions, family issues, societal reactions	health issues, family issues, physical disabilities, violating traffic rules	taboos, family problems, illness, strikes
Tools used	What are the tools if any	waste truck, safety gear, anti-bacterial spray	sample products, company pamphlets, databasing tools	projector, informational charts, sample products	Incinerator	programming tools, workstation, servers etc	app, disposal bin, cycle tracker	vehicles, containers	telephone, dealers database, PC

# Value opportunity analysis.

Value Opportunity Analysis is an actor-centric model to help gauge the needs of the actors.

What are the needs of the actors		Waste pickers	Dealers	Trainers	Waste treatment worker	App development and server maintenance	Female Customers	Transporters	Help desk employees
		Sunita - 30 year old woman	Sarita - 40 year old woman	Parvati - 25 years old	Suman - 35 years old	Bhavya - 24 years old		Krishna - 40 years old	Sanchita - 20 yrs old
Emotions	Independence	female waste pickers' may need to provide for the family, abide by the community restrictions	they should be able to sell door-to-door	independence to work	independence to work	independence to work	space and time to buy menstrual products at home	independence to travel, drive	independence to work
	Security	secure jobs only when area assigned	need job security since their income is based on sales	have job security	have job security	have job security	secure transactions	travel insurance	Job security in the office
	Confidence		saleswoman's confidence	be confident about the cause she chose to work with		technical knowledge		confidence to drive a heavy motor vehicle	able to communicate with her clients as per her knowledge and skill
	Power	knowhow of her assigned area	knowledge of the market	know about the menstrual hygiene	knowhow of the waste treatment	knowledge of company's information architecture	buying power	license	knowledge about the company and customer needs
Aesthetics	Visual		keen observation		able to see and segregate waste	good visual knowledge		good sight for driving	
	Auditory		good listener	good listener				attentive	good listener
	Tactile	physically capable of collecting from door-to-door	physically capable of selling door-to-door	be able to travel and reach out to more women					
Identity	Point in time	she should be punctual about the pick up wrt day and time	should be able to keep up with her targets	to be identified as an awareness agent	should be regular	information about his tasks assigned	available to hear to the dealers	to be a licensed driver	have an ID card
	Sense of place	she should know about the area assigned	she should know her market well	needs to reach out to as many women as she can		mental, creative and physical space for work	available to accept orders and waste pick up	knowledge of maps and consignment destinations	registered as a help desk employee
	Personality		convincing nature, friendly, open about menstrual hygiene	friendly, understanding, good guiding skills		curious, smart, skillful	trustworthy	punctual, disciplined	helpful, friendly, patient, empathetic, active
Impact	Social	feel a part of the community	feel acknowledged about her good work to her community	needs acceptance of her teachings socially	feel a part of the community	social acceptance wrt to the cause of the company	acceptance among fellow women	drive carefully	social acceptance wrt to the cause of the company
	Environmenta l		feel acknowledged about her good work to environment				need to not mix the pad waste with general waste	take care of vehicle's PUC	
Ergonomics	Comfort	comfort in carrying out her daily work	perks	should not have to struggle with travel	comfort in carrying out her daily work	mental, creative and physical space for work	comfort of buying and disposing pads from home	useful schedule	mental, emotional and physical space for work
	Safety	needs proper gear to avoid health hazards	presence of women in her houses, like-minded people	presence of other women in areas she visits, social acceptance of the taboo	needs proper gear to avoid health hazards		safety when dealers, waste pickers visit	be given a well-serviced vehicle to drive	have fellow women around
	Ease of use	should not be made to pick heavy trash cans			should not be made to pick heavy trash cans	should be provided with the right tools	smooth implementation of the subscription scheme	be given a vehicle the driver is comfortable with	
Core Tech	Reliable	tools should be durable	an ID card	must have reliable information	tools should be durable	should be provided with the right tools	trustworthy app	be given a well-serviced vehicle to drive	must have reliable information
	Enabling		an ID card	must have the necessary tools		develop a working app	app enabling ordering pads and scheduling waste pickup		must have the necessary tools
Quality	Craftsmanshi p		sales and communication skills	communication skills		relevant graphics, user interface			
	Durability	tools should be durable			tools should be durable				



# knowledge mining tool.

Knowledge Mining Tool helps us rectify the infrastructure in the existing condition and transformations required towards building the system.

## Type of infrastructure

### Knowledge infrastructure

- Lack of waste segregation knowledge among the waste pickers
- Improper disposal of menstrual products at the household level
- Lack of local production houses & entrepreneur dedicated to female hygiene
- Plastic pads are more affordable & produced in more quantity than Organic pads

### Financial infrastructure

- High cost of Menstrual products
- Lack of investment in disposal of menstrual product waste

### Physical infrastructure

- Most women go to shop physically to buy menstrual supplies
- Lack of co-ordination in local distribution
- Menstrual waste is dumped irresponsibly

### Social infrastructure

- Taboo regarding Menstruation
- Lack of awareness to female hygiene among lower income groups
- Inaccessibility of sanitary pads to lower income groups

## Existing Condition: Is the existing condition sufficient

## Transformation Required

- Training the waste pickers to segregate menstrual waste from other waste
- Installation of proper menstrual disposal bins for the convenience of the user
- Local entrepreneurs must be encouraged to produce female hygiene products
- Supporting organic pads more than plastic pads

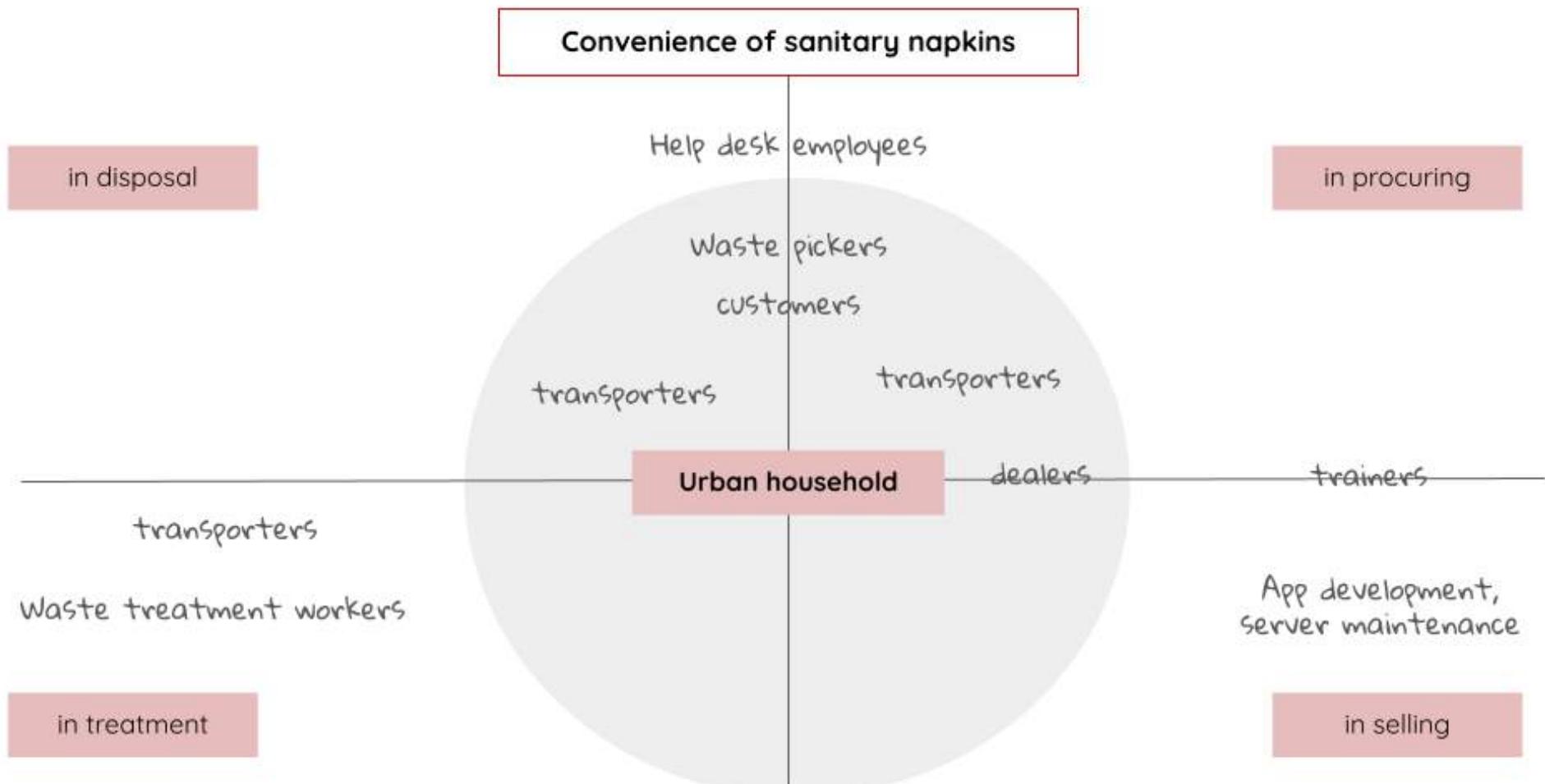
- Affordable sanitary products must be made available
- Local entrepreneurs must be encouraged to produce menstrual disposal bin

- Developing an app for women to order sanitary pads
- Building help desks to help dealers with the information, supplies, and promotional products
- Building a waste treatment facility

- Removing the taboo regarding menstruation and related health conditions
- Increasing awareness among the people regarding availability of Menstrual products
- Making the menstrual products accessible to lower income groups

# Satisfaction diagram.

Satisfaction Map plots the satisfaction required for all actors with respect to a satisfaction unit (convenience of sanitary napkins) and sub-satisfaction units (in procuring, in selling, in disposal, in treatment).



# polarity diagram.

Polarity Diagram defines clusters and single ideas, identifying promising polarity diagrams, polarising ideas and defining visions.

- Lower investment required
- Relative speed to market is faster
- Applicability in both product and technology

- Control Over Production Costs, Marketing, and Branding
- Higher Profit Margin
- Additional Income from Wholesaling
- Minimum order quantity is sometimes larger than actual order quantity
- Unsold Inventory
- Customers aren't as likely to trust smaller, lesser-known brand



- Greater brand recall
- Build a local brand
- Less competition
- Changing consumer behaviour towards digital market
- Geographical and demographic limitations

- Convenience alongwith Better Prices
- More Variety
- No Sales Pressure
- Privacy for Discreet Purchases
- No Support for Local Retailers
- Risk of Fraud



- Revenue flows linearly
- Cost of infrastructure is too high
- Exclusive significance to product design, development and marketing

- Subscription-based pricing attracts more customers
- Recurring billing offers predictable revenue
- Easy to offer a proof of concept
- Earning more through up- and cross-selling
- Subscription billing increases return on customer acquisition costs



- Better technique than landfill dispose of menstrual waste
- Burning of pads releases harmful gasses that effects health and environment

- Maximum restoration of resources
- Must be done maintaining proper hygiene
- Recycled products can be used to make other useful products for the system



- Convenient for dispose-off but difficult for treatment
- Sanitary waste mixed with other waste can be unhygienic
- Problem of segregation

- Segregation at consumer level
- Particular treatment can be performed for a particular type of product
- Planter-based menstrual waste disposal bin is beneficial for purification of air
- Many demographic population are hesitant to have planter as a sanitary waste disposal bin due to socio-cultural issues



# SDO toolkit - environmental sustainability.

Criteria	Sub-criteria	Priority	Analysis	Orient Concept	Check Concept
System life optimisation	Are infrastructure with short life-span used in the system?	High	Use period of the feminine hygiene products is 7 to 8 hours	Schedule waste pickup everyday	Radical Improvement
	Are disposable products, packaging or support products used?		Sanitary products and its packaging are disposable but not biodegradable	Sanitary products and its packaging are disposable but not biodegradable	
	Do parts of the system tend to be technologically obsolete? Or to be culturally/ aesthetically obsolete?		Due to taboo, many female still prefer to adopt unhygienic products (like uncleanned cloth) during menstruation.	Women who can not afford or are not aware of sanitary napkin often lie in BPL category. We plan on making them dealers so that they get pads at subsidized prices and there is increased awareness	
	Is the system individually used, when it could be shared in some of its parts?		Usage and disposal of female sanitary products are done individually and privately	By introducing disguised disposal bins and making the waste get picked up by women employees	
	Does the system lack of maintaining and up-grading services?		Disposal of pads requires constant cleaning of equipments and infrastructure	We will employ cleaners, waste segregators and maintenance workers	
Transportation/distribution reduction	Is there any excessive transportation of goods?	High	With less manufacturing units and ample demand, the transportation is excessive for the FMCG product	By popularizing the brand and increasing the number of customers in a particular locality, we can reduce the per hour cost of transportation	Incremental Improvement
	Are the transportation means in service fully used?		Companies like Whisper and Stayfree have a compact logistics chain. So, the transportation is planned and fully used. There are no concerned waste pick up facility for now.	For distribution, we will procure pads and stock in our warehouse. Then the bifurcation - delivery via dealers and app.  For app deliveries, we can compact the logistics via AI.  For dealers, initially, until there are enough dealers in an area, we need to make the sales apparatus available to them at their place. As the business grows and there are many dealers, they can collect their sales orders from our hubs.	
	Is there any excessive use of package?		Packaging is excess as it has no value after the main product is unpacked	For collection of waste, we will assign pick up employees for all kinds of order sources (dealers or app). All the transportation will be used in full capacity once we grow and stabilize.  Encourage women to use the sanitary napkin packaging to dispose off the waste whenever possible, instead of using newspapers	
Resource reduction	Is the system consuming high quantities of energy?	Medium	No		Radical Improvement
	Is the system consuming high quantities of natural resources? Is the system absorbing high quantities of consumable?		Currently almost all of sanitary product in the market consists of plastic and cellulose	We are trying to get back the plastic and cellulose into our manufacturing cycle. Plastic - manufacturing plastic disposal bins. Cellulose - making period tracker calendars	
	Are products, packaging or support products highly material intensive?		Yes, every pad uses pad materials and packaging materials	Yes, but we will recycle the materials from the used product	
	Other?				
Waste minimisation/valorisation priority	Do all waste end up in landfill?	High	Almost all of the Sanitary wastes end up in the landfill	We are picking up the sanitary waste and disposing off responsibly	No Improvement
	Does the system produce high quantities of landfill waste at the end of service-life?		Yes	We are picking up the sanitary waste and disposing off responsibly	
	Do the production, packaging and support products produce big quantities of landfill waste?		Yes, mostly the packaging goes to the landfill	We are trying recycle as many plastic packaging waste as possible	
	Others?				
Conservation/biocompatibility	Is all the energy produced from fossil fuels?	No	Only at the production and transportation level fossil fuel is used		No Improvement
	Is all the energy produced from exhausting resources?		Yes	We will outsource pads. Their resources are out of our system boundary.	
	Does the system use mainly depleting and/ or non-renewable materials for the production processes?		Yes	We will outsource pads. Their resources are out of our system boundary.	
	Does the system use mainly depleting and/ or non-renewable materials for products, support products, packaging, and infrastructure?		Yes	We can encourage women to use the sanitary napkin packaging to dispose off the waste whenever possible, instead of using newspapers	
Toxicity Reduction	Are the processed resources toxic or potentially toxic for the workers?	High	Anyone handling the collected sanitary napkins may come in contact with toxic gases and material	With proper safety gear and awareness about waste handling, we can overcome it	Radical Improvement
	Are the processed resources toxic or potentially toxic in during distribution?		No		
	Are the processed resources toxic or potentially toxic for the user?		If used for a lot of time, it can cause infections	We can spread awareness through instructions on the package	
	Are the products, support products, packaging or infrastructure toxic or potentially toxic during/after service time treatments?		There is no treatment of waste	The effluents on treatment are - Plastic, cellulose, sludge. The effluent sludge can be sent to a biomedical treatment plant to bring down the toxicity levels in prescribed limits	
	Are there any problems with forced or child work?		No		

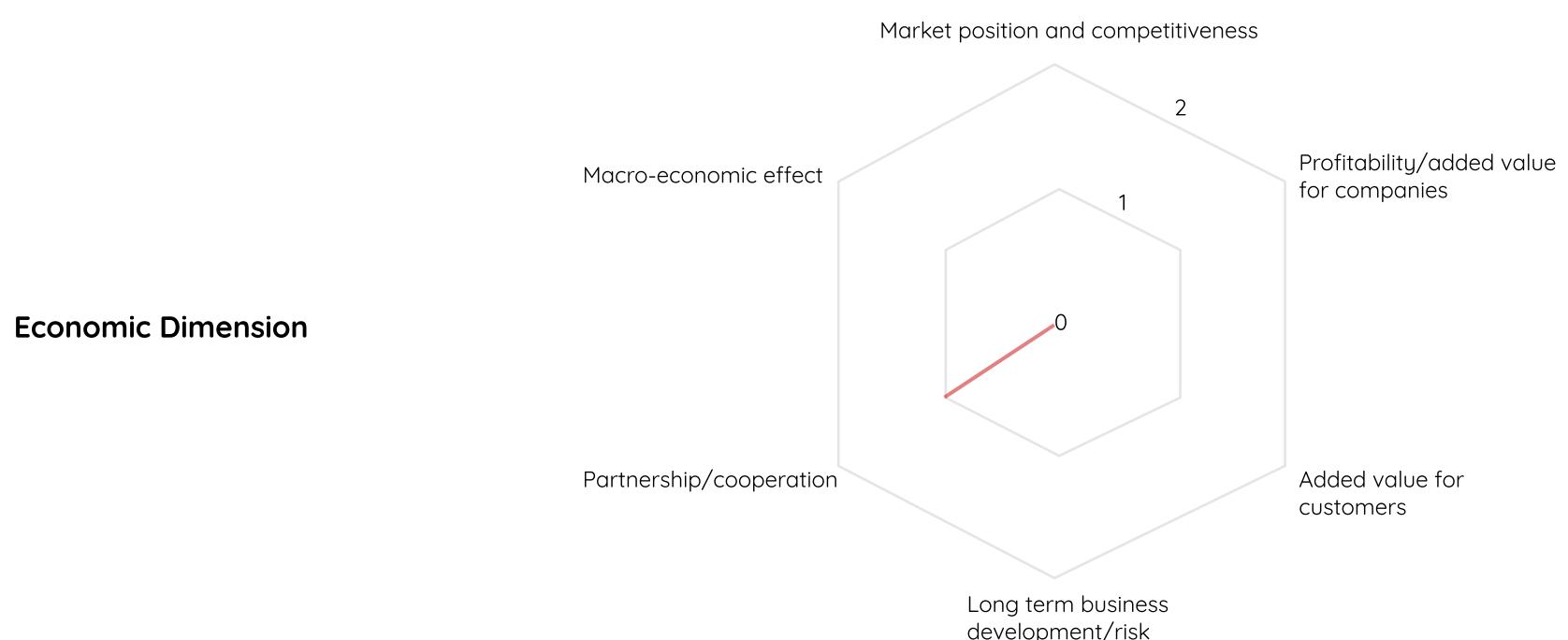
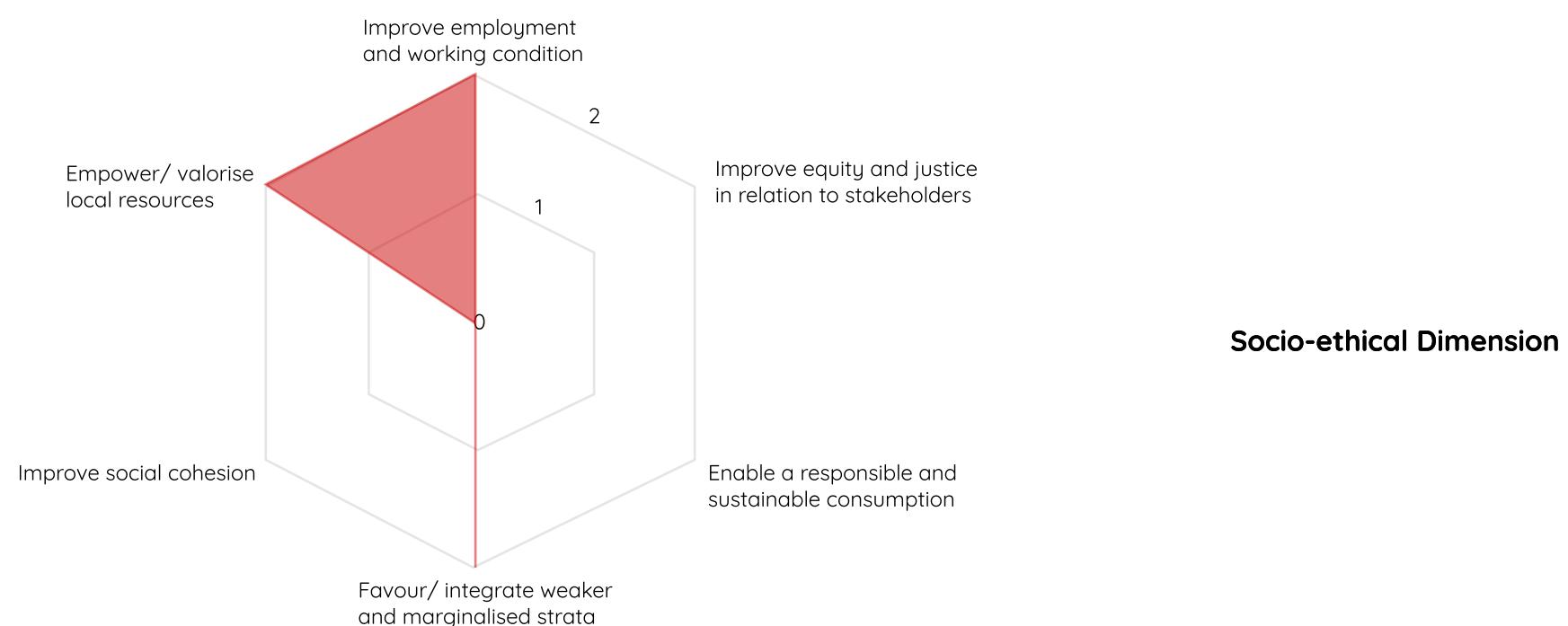
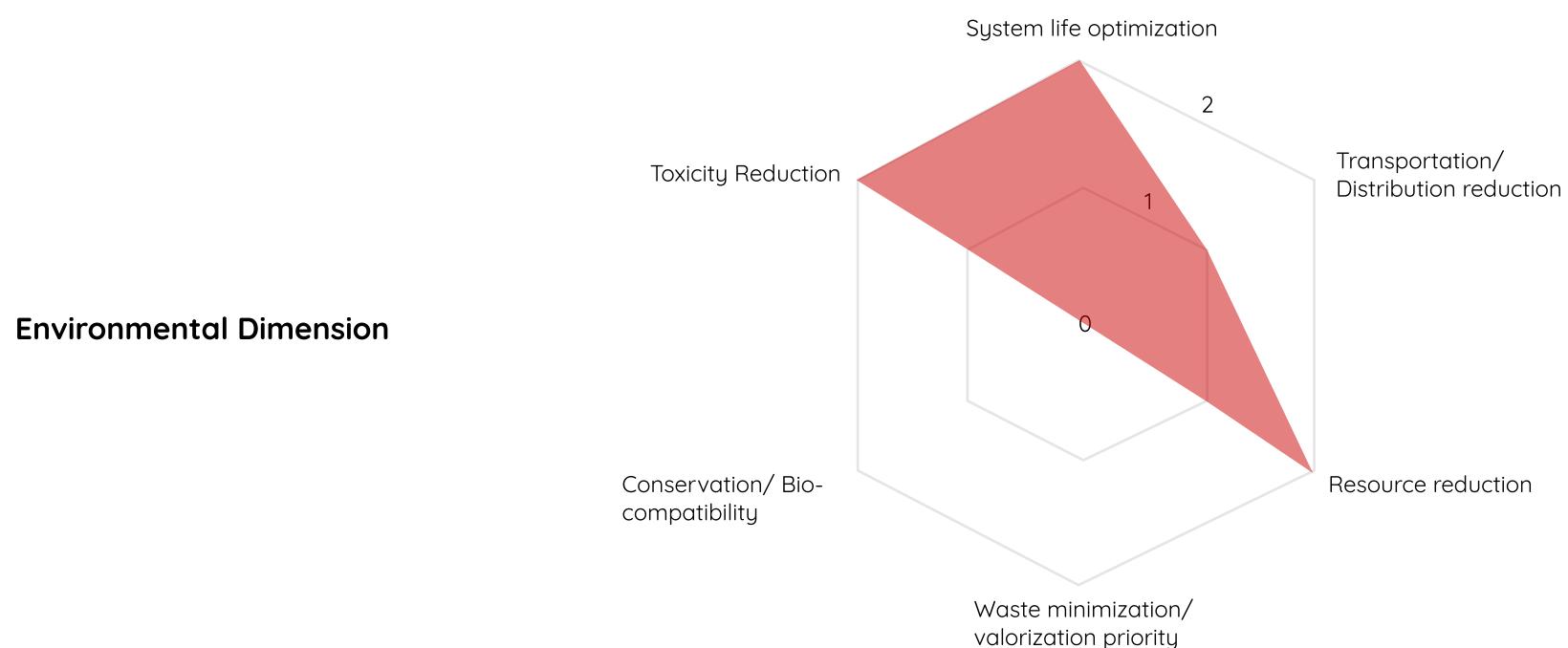
# SDO toolkit - socio-ethical sustainability.

Criteria	Sub-criteria	Priority	Analysis	Orient Concept	Check Concept
Improve employment and working conditions	Are there any problems with the health and safety?	High	Yes. The waste collector and who are related to incineration could face health issues	With proper safety gear and awareness about waste handling, we can overcome it	Radical Improvement
	Are there any problems of discrimination in the workplace?				
	Are there any problems with work overload and for inadequate wages?		There is tension between the lower income (cleaning employees) and higher income group (office employees)	We are promoting dealership and extra income among women belonging from poor backgrounds	
Improve equity and justice in relation to stakeholders	Is the client/ final user criticising the supply system?	Medium			No Improvement
	Are there any unjust relations between the partnerships?				
	Are there any unjust relations with suppliers, subcontractors and sub-suppliers?				
Enable a responsible and sustainable consumption	Is the client/ final user able to acknowledge clearly and easily the social (un)sustainability along the whole value production chain?	High	Only educated and well-off users may understand	Only educated and well-off users may understand	No Improvement
	Is the client/ final user able to understand the responsible/sustainable behaviour by the supply system?		Only educated and well-off users may understand	Only educated and well-off users may understand	
Favour/ integrate weaker and marginalised strata	Does the supply system create obstacles or limit access to people with weaker social status (e.g. kids, elderly, differently able, etc.)?	High	Lower income groups cannot afford branded feminine hygiene products due to high price.	We are promoting dealership and extra income among women belonging from poor backgrounds	Radical Improvement
	Is the offering system accessible to people with lower income?		It is accessible but there are limitations due to taboo and lack of communication	Promoting dealership among women belonging from poor backgrounds can raise awareness about associated taboos	
Improve social cohesion	Is the offering system creating or favouring any form of intra-gender, intra-cultural, intra-generational exclusion?	High	Depending on the beliefs on menstruation, the offering system may favour the well-off and educated, city dwellers	The current system only serves in urban and metropolitan areas	No Improvement
	Is the system creating/ favouring any forms of discrimination (sexual, religious, cultural, gender)?		Religious discrimination for menstruating women. They are bounded by several beliefs and rituals	-	
Empower/ valorise local resources	Does the current reference system impoverish local cultural values and identities?	High	The current system is driven by local beliefs/taboo	Employing women for jobs in this area helps in gradual wearing off of taboos	Radical Improvement
	Does the current system offer only one solution/ few variations for all regions and cultures?		There are a lot of variations wrt regions and cultures, both in using and disposing the pads, and practices during menstruation	The current system only serves in urban and metropolitan areas	
	Is the current system impoverishing local economies?		Current market dominated MNCs leaving very little scope for local entrepreneurs	We are partnering with local entrepreneurs to manufacture bins, calendars, incineration agencies and employing workforce for operations	
	Is the system absorbing local non-renewable resources?		Tissue papers and newspapers are used by women which may absorb non-renewable resources	-	

# SDO toolkit - economic sustainability.

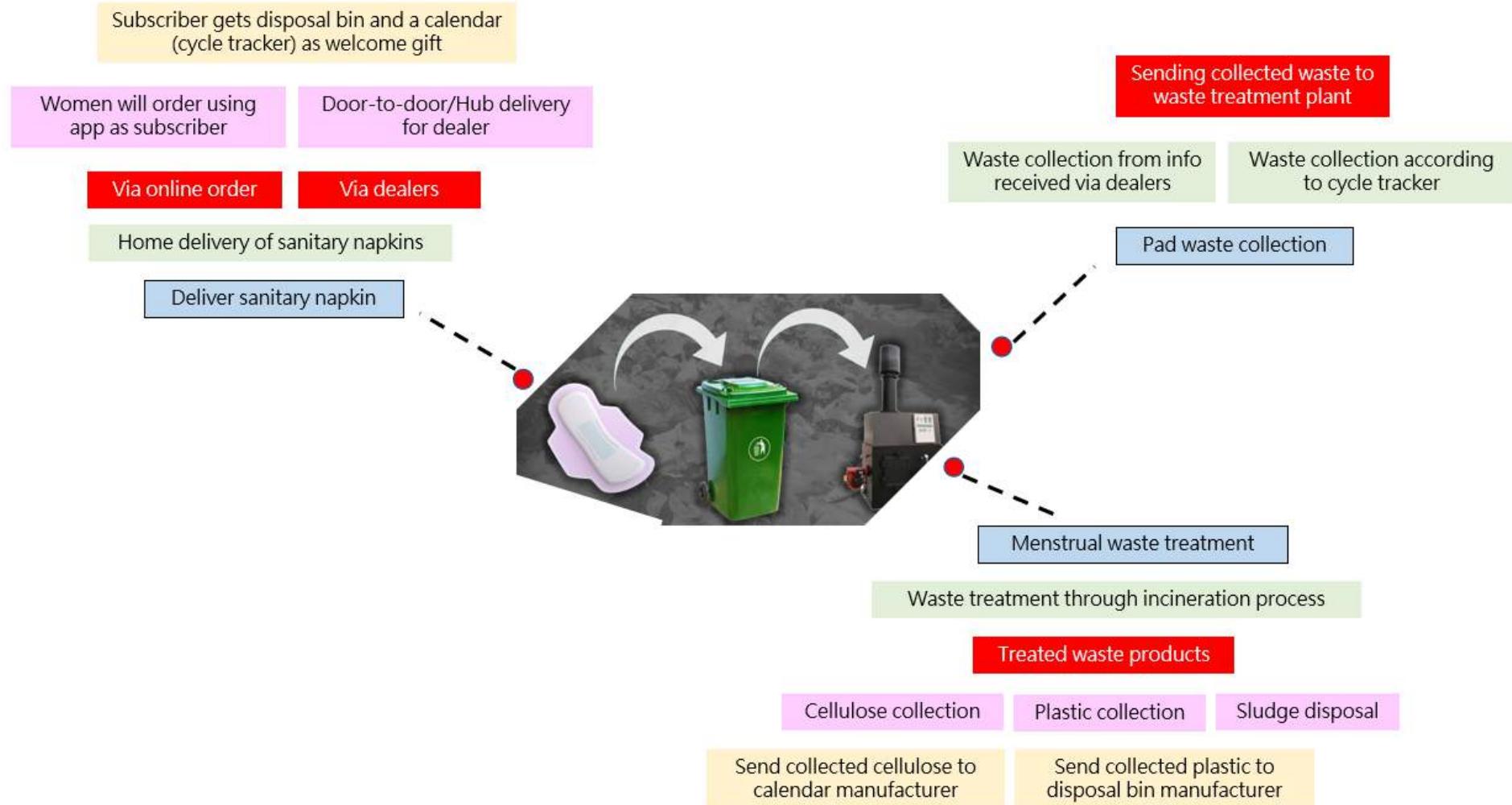
Criteria	Sub-criteria	Priority	Analysis	Orient Concept	Check Concept
Market position and competitiveness	Do you have a weak market position in the current system?	Medium			No Improvement
	Are there possibilities to improve your market position that you do not use at the moment?				
	Do you see current and future threats for your market position?		No		
Profitability/ added value for companies	Is the profitability of the current system low for your company and other external partners?	Low	Yes	-	No Improvement
	Is there anybody producing better offers than you in a cheaper way?		No		
	Are there missed opportunities to create more value in the whole value chain/ system?		Not at present		
	Is somebody else using this opportunity (e.g. selling your products second hand)?		No		
Added value for customers	Is the profitability/ value low for customers/ consumers?	High	No		No Improvement
	Do you fail to offer concrete, tangible savings in time, material use etc. for the customer?		There might be issues in waste pickup and product delivery timings until we scale up	We can boost brand visibility through promotional campaigns	
	Do you fail to offer 'priceless', intangible added value like esteem, experiences, etc. for which the customer is willing to pay?		No		
	Are competitors creating more value for money for the customers?		We have almost no competitors		
Long term business development/ risk	Are there any threats in the current system for your business in the longer term?	Low	Mostly no	We need to build and maintain a strong customer-centric PSS	No Improvement
	Do you foresee that the customer's needs for your offer will disappear?		Never		
	Are there any major risks from external sources (clients, government, legislation, NGOs) for your offer?		No		
	Is your offer more a short term business, will it disappear soon?		No		
	Is your offer threatened by technological or fashion changes?		No		
	Is your financial background sound?		-		
	Is your market position in danger?		No	We need to build and maintain a strong customer-centric PSS	Incremental Improvement
Partnership/ cooperation	Do you have a weak market position that you want to improve?	Medium	No		
	Can you use strategic partnership and co-operation?		Yes, we need partnership as we will outsource supplies and infrastructure units	Yes, we need partnership as we will outsource supplies and infrastructure units. We are partnering with local entrepreneurs to manufacture bins, calendars, incineration agencies and employing workforce for operations	
	Are your competitors co-operating and therefore have a better market position?		No		
	Are you missing competencies internally that you need today and in the future?		No		
Macro-economic effect	Are there problems on a macro economic level, e.g. disclosure of participants in economy, monopolistic structures, rebound effects?	Low	No		No Improvement

# SDO toolkit -RADAR.

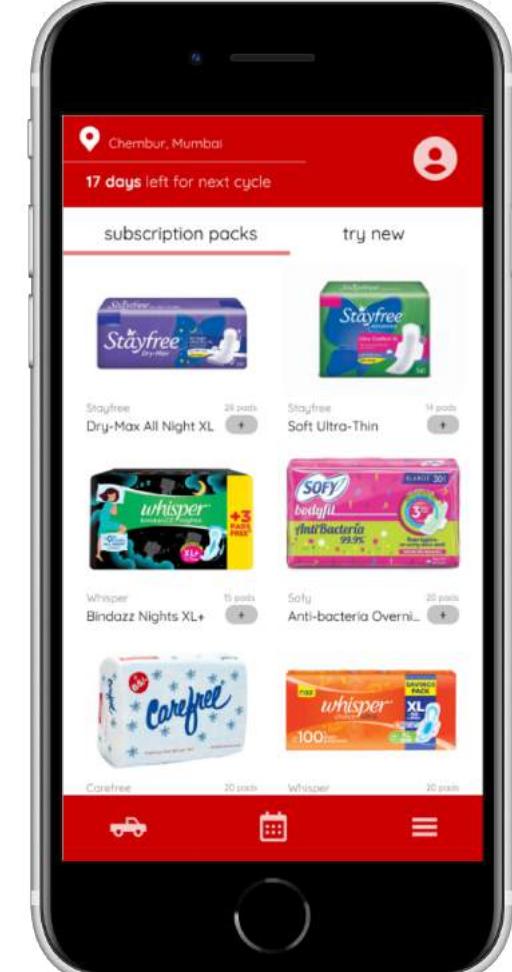
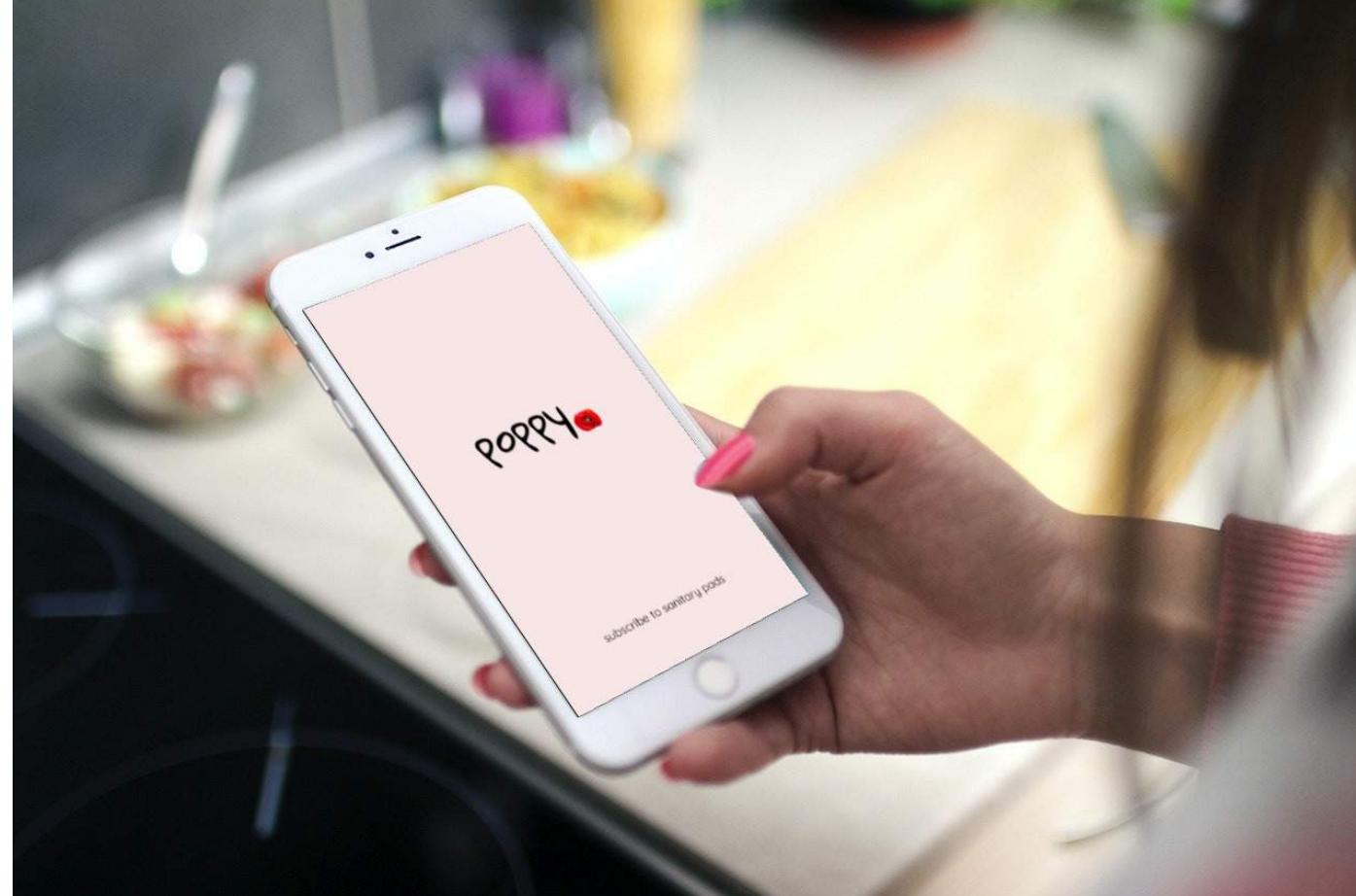
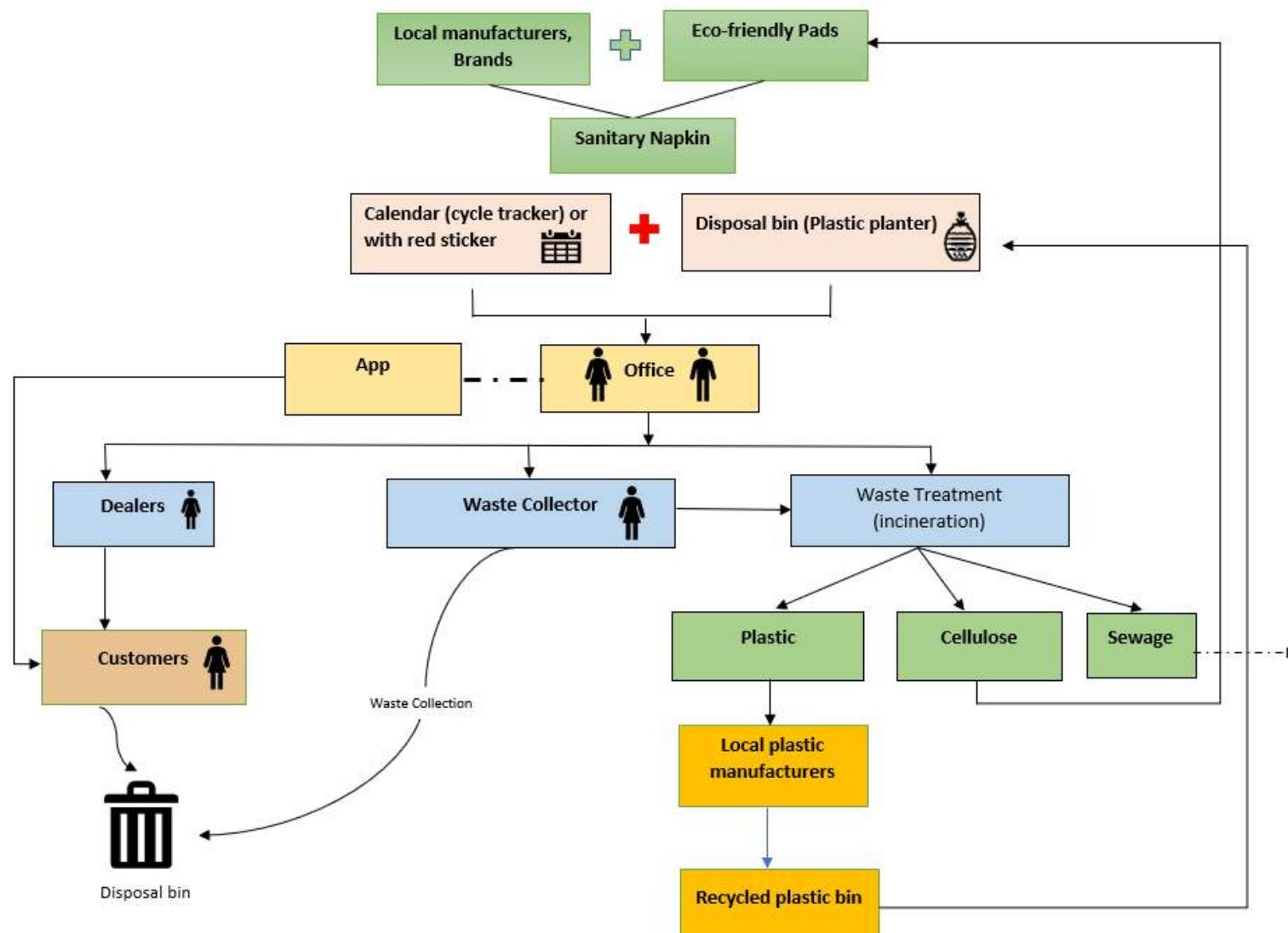


# offering diagram.

Offering Diagram communicates what our Sustainable Product-Service System offers.



Following is a simple flowchart of our Product-Service System model:



# promotional strategies.

1. Sample kits
2. Dealers as saleswoman
3. First subsidized subscription
4. Referral codes
5. Advertising in public washrooms, washrooms in malls, cinemas, airports
6. Word of mouth through schools, women clubs
7. Brochure distribution in shops selling women's apparel, cosmetics, sanitary pads
8. Instagram, Facebook ads
9. Social Media influencers

