



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



BY: MARGREET DE HEER

WE MUST MAKE SURE THE PRODUCTION PROCESS FROM MANUFACTURER TO CONSUMER DOES NO HARM TO NATURE NOR HUMANITY AND GENERATES AS LITTLE WASTE AS POSSIBLE!

COMPANIES MUST BE OPEN AND RESPONSIBLE ABOUT THEIR PRACTICES.



WE MUST HAVE INTERNATIONAL AGREEMENTS FOR THE HANDLING OF HARMFUL CHEMICALS.



WE MUST PREVENT FOOD WASTE!



AND
KEEP THE PUBLIC
INFORMED
AND EDUCATED!

Sustainable Development Goal 12

Responsible Consumption and Production

Design Process Documentation

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Background

The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.

The SDGs came into effect in January 2016, and they will continue to guide UNDP policy and funding until 2030. As the lead UN development agency, UNDP is uniquely placed to help implement the Goals through our work in some 170 countries and territories.

Introduction

SDG 12 aims at “Responsible Consumption and Production”. The transition to sustainable consumption and production of goods and services is necessary to reduce the negative impact on the climate and the environment, and on people's health.

Developing countries in particular are greatly affected by climate change and other environmental impacts, which lead to increased poverty and reduced prosperity.

Sustainable consumption and production involve using resources efficiently, taking account of ecosystem services that are key to making a living, and reducing the impact of dangerous chemicals.

This not only means environmental benefits but also social and economic benefits such as increased competitiveness, business sector development in a global market, increased employment and improved health, and consequently reduced poverty.

Sustainable consumption and production patterns are therefore a prerequisite for the transition to a green economy and sustainable development.

Objective

The SDG was set with the following objectives:

1. Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
2. By 2030, achieve the sustainable management and efficient use of natural resources
3. By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
4. By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
6. Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
7. Promote public procurement practices that are sustainable, in accordance with national policies and priorities
8. By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
9. Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

10. Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products
11. Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on

Methods

1. Stakeholder Mapping

The stakeholders were assigned to us by our instructors for this project which were the Indian youth population.

2. Online Research

A general research was done via the internet to understand the goal assigned to us, what all it entails and what were the main aims of the goal. What one expects from these goals , what areas come under this goal.

This was done to familiarize ourselves with the goal and to build a base on which further research would be done to identify a potential problem area we could work on with the resources available to us.

3. Dedicated Research

After scoping the problem area we decided to split the goal into production and consumption and do research on them separately so as find a problem area which was common to both fields.

For this we split the topic such that 2 members would research on production and the other 2 on consumption.

To get the maximum diversity of results in a everyone was supposed to research individually on the topics assigned to them and share their findings. A deadline was set till which everyone was supposed to present their findings.

4. Online Surveys

An online Survey was conducted to check awareness of the SDG amongst the stakeholders. The survey aimed at checking if the user is aware about his/her daily expenditure.

5. User Interviews

Specific users with different backgrounds were selected to ensure diversity among the demographic. Who were interviewed and were asked a set of questions to test how the user acts in different situations and how they are connected to the SDG.

6. Analysis

After every stage we analysed the results to and applied our findings in the next stage. This was a major part of the process followed as the findings in a particular method helped in further gathering of specific information which may have missed or may now be required.

Findings

1. Online Research

Sustainable consumption and production is a cross-cutting issue that complements other goals. The transition to sustainable consumption and production patterns requires a range of tools and measures at various levels that must be implemented by various actors.

The SDG looks at two aspects namely Production and Consumption, both are vast fields one must understand both of them separately.

2. Dedicated Research

Production was based on profit and didn't take into account the consumed amount of their product and the surplus amount which was eventually discarded.

Consumption involved interaction with our stakeholders as they were the ones using the produced goods. We were able to identify where does our user gets involved in this SDG.

Users related inputs were needed to see awareness about the topic.

3. Online Surveys

Many users were aware of the fact that they had to consume in a responsible manner.

Many users tried to rationalize their answers.

We felt the need to interact with the user itself.

4. User Interviews

User were not aware about the production process.

All the users used some form of technology like a phone or a laptop.

User not aware about his/her basic requirements.

Users are unable to differentiate between their needs and wants.

Analysis

After researching on the project intensively we came to the conclusion that focusing on only one aspect of the SDG i.e. production or consumption wasn't an option as it will eventually clash with the other SDGs.

We needed to connect production and consumption with the users in a way that the users become aware of their own requirements and the production can be optimised accordingly.

We needed to reduce the wastage that happened due to overproduction and underconsumption.

The Supply Chain

We chose to target the supply chain as it links both production and consumption.

Making the user aware about the supply chain will make them aware of the wastage that happens and realise their real needs.

Drafting of Problem Statement and Review

By applying our findings we were able to identify the problem we needed to work on and began drafting our problem statement. After making the first draft we reviewed the same with

our instructors and redrafted the problem statement multiple times to arrive at the final problem statement.

First Iteration

Producer doesn't know the consumer's requirements, the consumer in turn doesn't know the difference between their wants and needs which results in exploitation of resources at both ends which affects the environment. Hence we need to optimise the consumption end to know our needs.

Second Iteration

Promoting an awareness of excessive wants would lead to understanding of real needs.

Third Iteration

Because of excessive wants, we, as consumers and producers are not being able to satisfy our real needs.

Final Problem Statement

“Because of our excessive wants, we as consumers or producers are unable to satisfy our real needs.”

Solution Scoping

Make an interactive game to make the user aware about the production process and the whole supply chain.

An app to connect the producer and consumer and spread awareness about SDG.

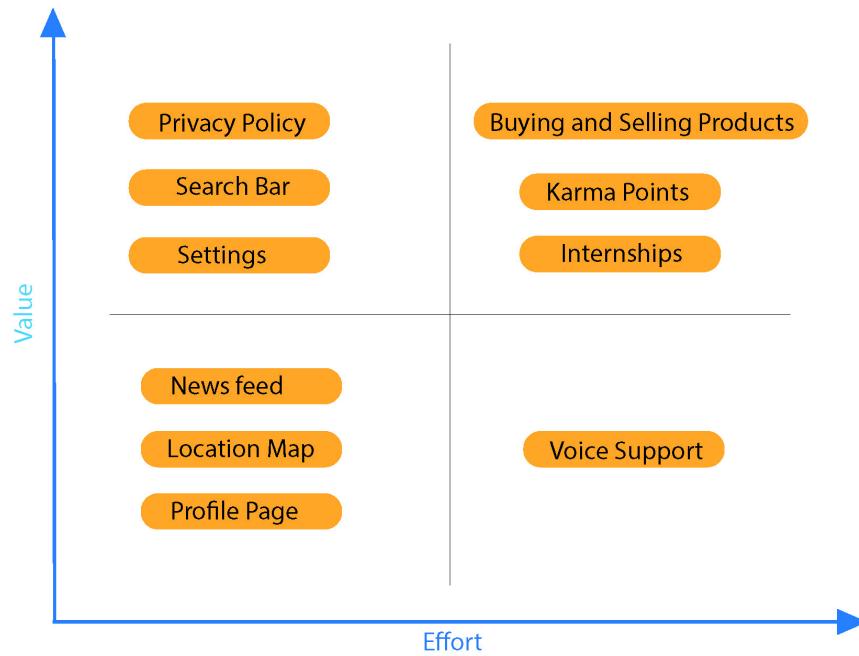
Promote a modular approach to minimise wastage and promote reusability.

We chose the second solution as we were supposed to make a digital solution.

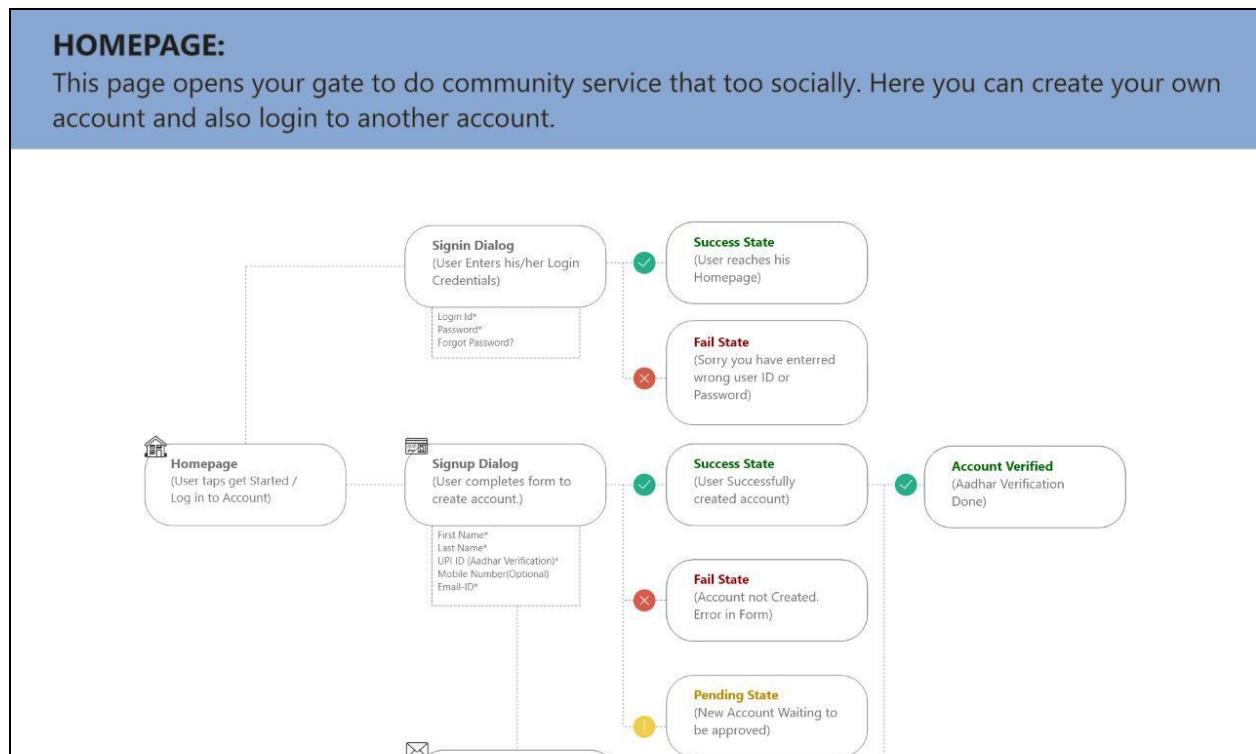
We decided to make an app where the user can buy/sell used goods to minimise wastage. To create awareness about the supply chain the app will also have a jobs section where the user can do internships or community work and become a part of the production process and gain firsthand experience or spread awareness about the supply chain. We would award the

user with karma points as incentives through which the user will be able to avail special privileges.

Feature Prioritization

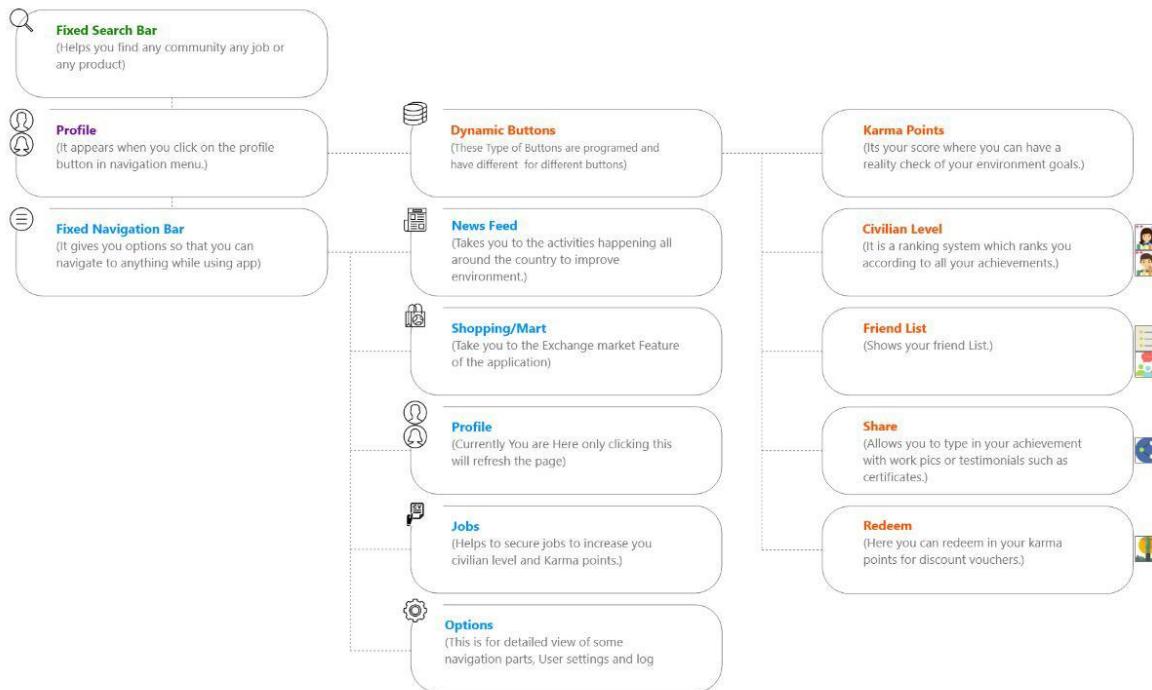


User Flow



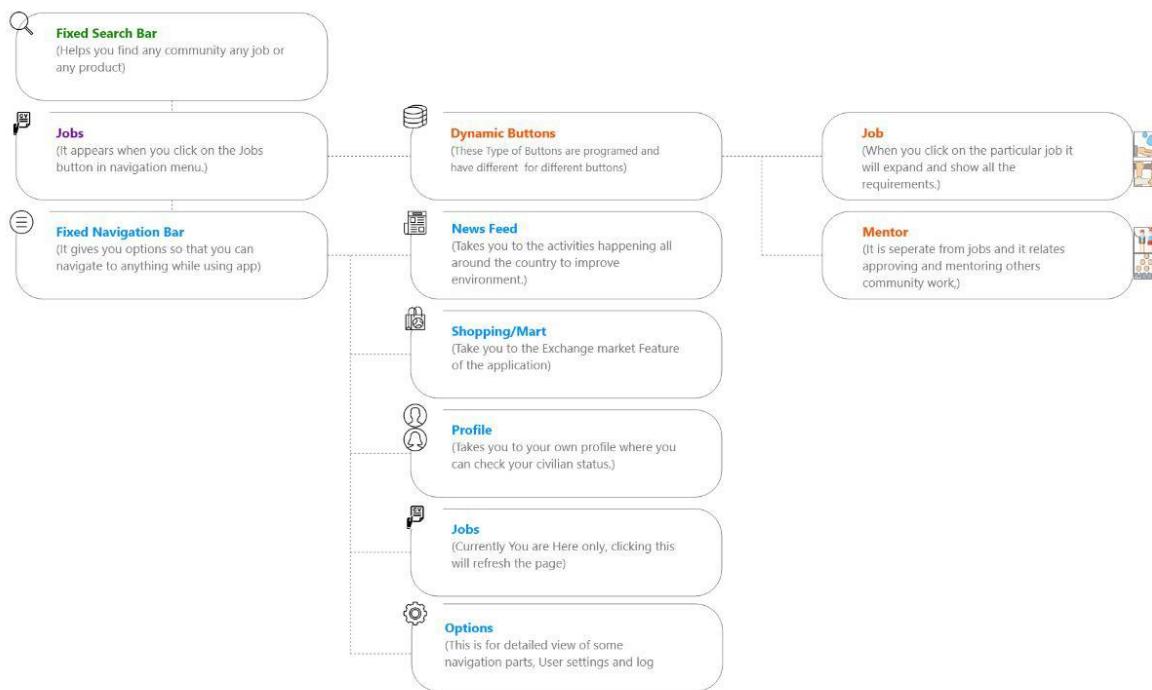
PROFILE:

Here you can see in your Civilian Level, Karma Points and all your achievements and shares. Also you can share new Achievements and redeem your Karma Points.



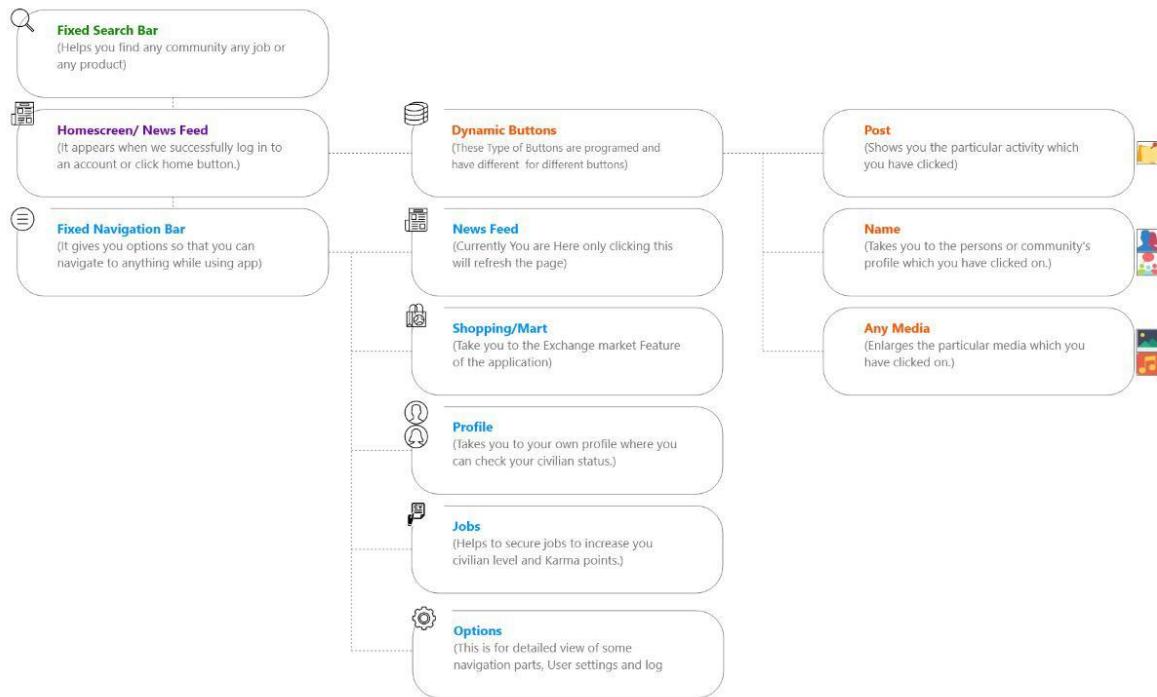
JOBs:

This feature helps you achieve community service goals. It brings NGOs closer to you and also helps you to mentor individuals and approve work done by fellow users to get their karma points.

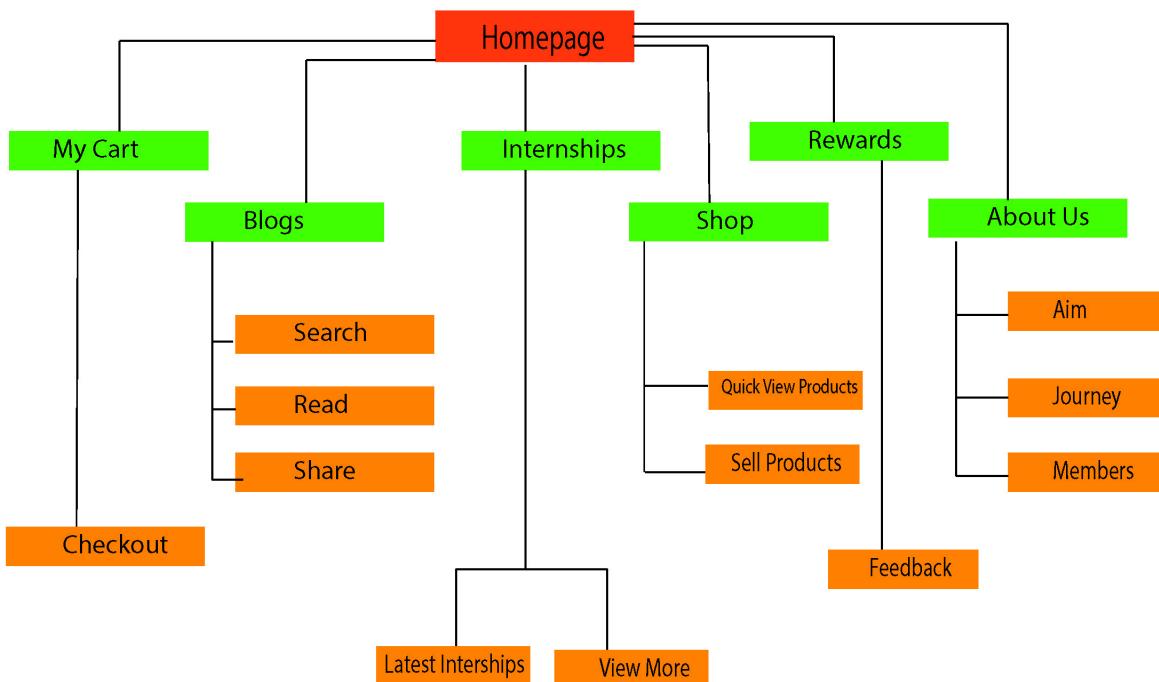


NEWS FEED:

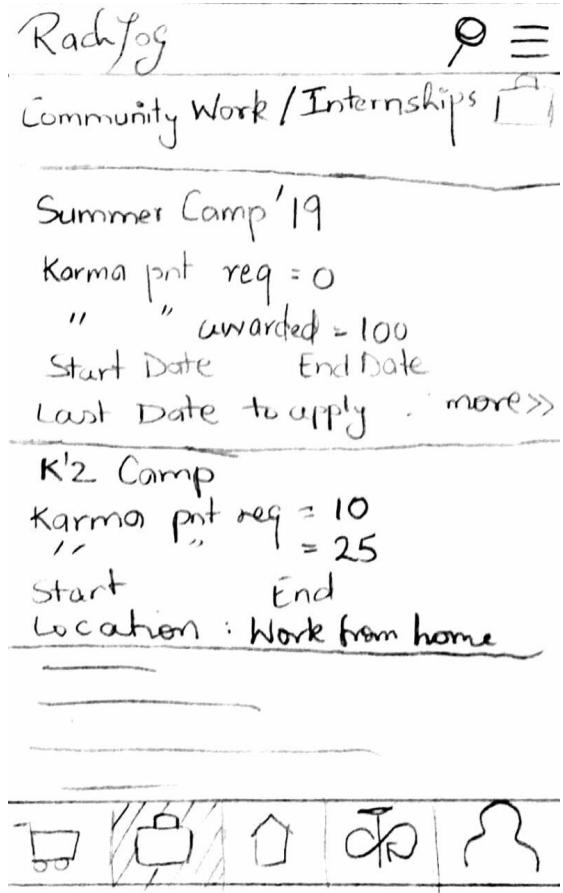
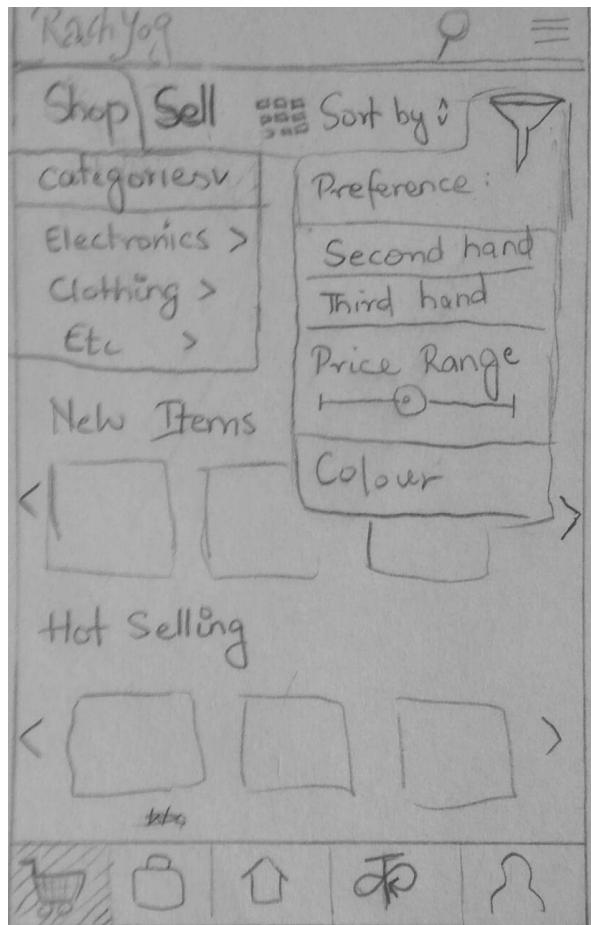
This feature takes you through what's all going around you what your friends are doing, different community activities to motivate you to participate more in protecting environment

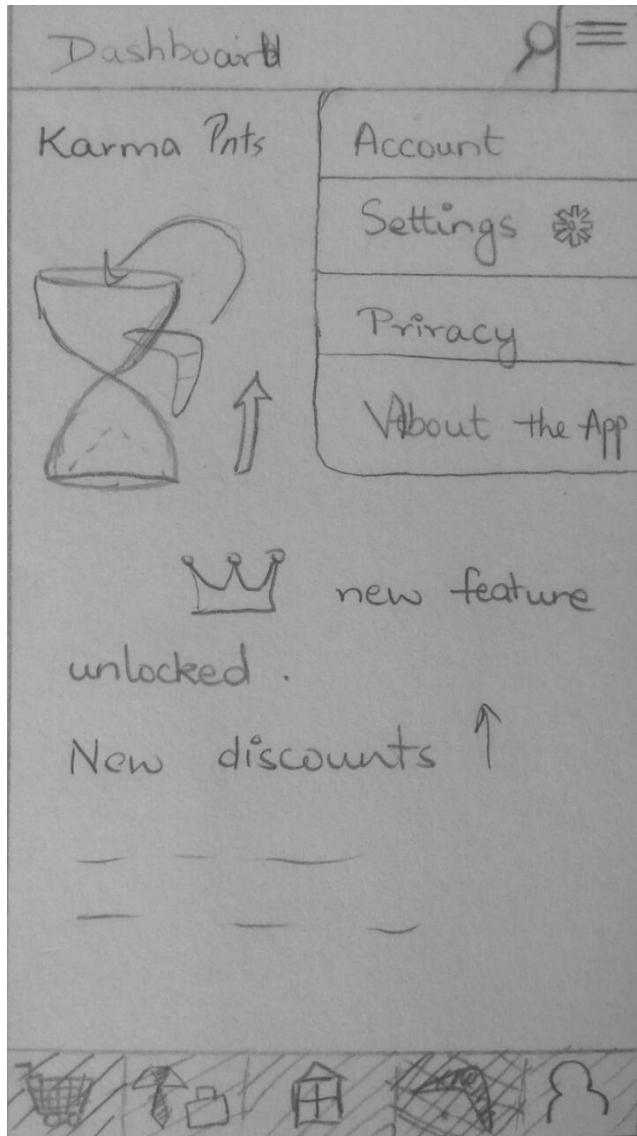


Site Map



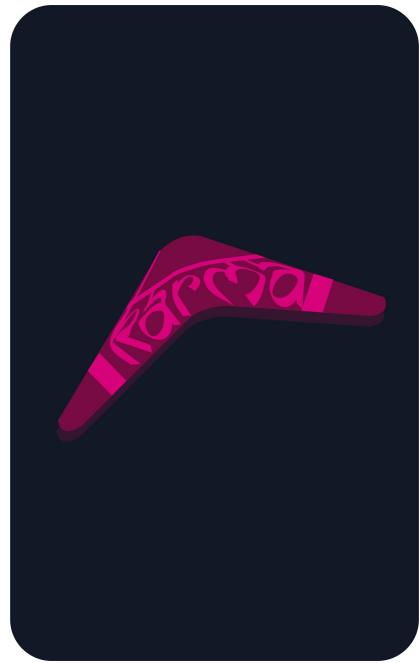
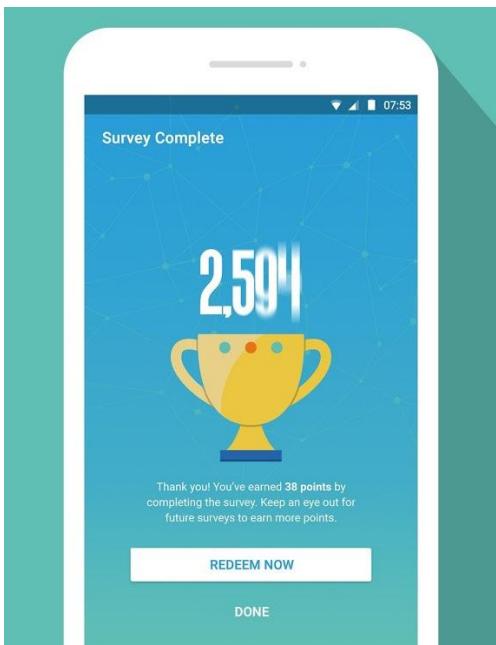
Low Fidelity Prototype







Design Iterations





Top: Symbol iteration

Bottom: App Icon iteration

High Fidelity Prototype:

Final Logo and Symbol:



Website Links : We made two websites

<https://atul17284.wixsite.com/website>

<https://varnika17321.wixsite.com/mysite>

App Files:

<https://drive.google.com/drive/folders/1ZXos0v7Fx4zVKr-yhwSD3FzJAg3usPR9?usp=sharing>

App Video:

<https://drive.google.com/file/d/1lzpULSvkajcTtb7gcPGVHlO67Qs56LJ/view?usp=sharing>

References and Annexure:

<http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

<https://www.government.se/government-policy/the-global-goals-and-the-2030-Agenda-for-sustainable-development/goal-12-responsible-consumption-and-production/>

[SCP Issues Brief SDG_FINAL](#)

[Probable solution](#)

1.3 billion tonnes of food is wasted every year.

If people worldwide switched to energy-efficient light bulbs, the world would save US\$120 billion annually.

Should the global population reach 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles.

More than 1 billion people still do not have access to fresh water.

India is the fourth largest GHG emitter, responsible for 5.3% of global emissions. India has committed to reducing the emissions intensity of its GDP by 20 to 25% by 2020.

<http://www.worldbank.org/en/news/feature/2012/05/17/india-agriculture-issues-priorities>

Highlights:

First, nearly three-quarters of India's families depend on rural incomes. Second, the majority of India's poor (some 770 million people or about 70 per cent) are found in rural areas. And third, India's food security depends on producing cereal crops, as well as increasing its production of fruits, vegetables and milk to meet the demands of a growing population with rising incomes. To do so, a productive, competitive, diversified and sustainable agricultural sector will need to emerge at an accelerated pace.

India is a global agricultural powerhouse. It is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes), as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. The country has some 195 m ha under cultivation of which some 63 per cent are rainfed (roughly 125m ha)

while 37 per cent is irrigated (70m ha). In addition, forests cover some 65m ha of India's land.

<http://www.worldbank.org/en/news/feature/2012/05/17/india-agriculture-issues-priorities>

Highlights:

The issue of resource use is vital for the country. While the country is home to 17.5% of the world's population, it has only 4% of global water resources. The generation of waste and pollutants also poses a challenge. India is the fourth largest emitter of greenhouse gases and is responsible for 5.3% of global emissions. However, in October 2015, India made a commitment to reduce the emissions intensity of its GDP by 20-25% from its 2005 levels by 2020 and by 33-35% by 2030. On 2 October 2016 India formally ratified the historic [Paris Agreement](#). The [National Policy on Biofuels](#) and the [National Clean Energy Fund](#) are some of the government's flagship schemes aimed at achieving sustainable consumption and production, and managing the efficient use of natural resources.

<https://www.government.se/government-policy/the-global-goals-and-the-2030-Agenda-for-sustainable-development/goal-12-responsible-consumption-and-production/>

Highlights:

The transition to sustainable consumption and production of goods and services is necessary to reduce the negative impact on the climate and the environment, and on people's health. Developing countries in particular are greatly affected by climate change and other environmental impacts, which lead to increased poverty and reduced prosperity.

Sustainable consumption and production involve using resources efficiently, taking account of ecosystem services that are key to making a living, and reducing the impact of dangerous chemicals. This not only means environmental benefits but also social and economic benefits such as increased competitiveness, business sector development in a global market, increased employment and improved health, and consequently reduced poverty. Sustainable consumption and production patterns are therefore a prerequisite for the transition to a green economy and sustainable development.

Sustainable consumption and production is a cross-cutting issue that complements other goals. The transition to sustainable consumption and production patterns requires a range of tools and measures at various levels that must be implemented by various actors.

Education is an important cornerstone. Through education, people can acquire the values, knowledge and skills to enable them to contribute to sustainable development. Another

cornerstone is information. Clear and easily accessible information in the form of environmental labelling, consumer information services, product information in shops and online information, etc. enables consumers and other actors to make responsible and sustainable choices of products and services, and to adopt more sustainable lifestyles.

<https://sciencing.com/harmful-effects-green-revolution-8587115.html>

<http://rsos.royalsocietypublishing.org/content/4/3/160764>

<http://www.ijmbs.com/13/devesh.pdf>

CONSUMPTION:

1. Electricity sector in India

- India is 3rd largest producer and consumer of electricity.
- India has surplus electricity but due to proper infrastructure it hasn't reached all the parts in India.
- Lowering the use of coal and other fossil fuels for the energy needs.
- Increasing capacity of renewable energy production.
- Theft of power
- Electric Vehicle as a replacement of the today's vehicles.

2. Water consumption in India

- India 4 percent of the world's water resources at its disposal.
- The current consumption in the country is approximately 581 trillion liters with irrigation requirements accounting for a staggering 89 percent followed by domestic use at 7 percent and industrial use at 4 percent.
- In the next decade the demand in water is expected to grow by 20 percent, fueled primarily by the industrial requirements which are projected to double from 23.2 trillion liters at present to 47 trillion liters. Domestic demand is expected to grow by 40 percent from 41 to 55 trillion liters while irrigation will require only 14 percent more ten years hence, 592 trillion liters up from 517 trillion liters currently.
- Irrigation water usage across the country is inefficient.
- Domestic and industrial usage of water is also inefficient and one of the key reasons for this is the lack of economic pricing of water. Governments have largely desisted from pricing water at its real cost. The unrealistically low prices tend to encourage overuse and wastage.

QUOTES:

1. People shouldn't teach their garbage to swim.

FACTS AND FIGURES:

1. 25% of Fresh Water for food Production is Ultimately wasted, even as millions of people don't have food to eat.
2. About 20% of Urban Food Eventually Gets Wasted.
3. India Wastes Rs 244 Crore Worth of Food In a day.

SOLUTIONS:

1. Our Idea should be explicitly for Indian Youth So we need to add some of the Catchy ideas to Interact youth in creative and appealing manner.
2. Waste manipulation Something which helps to sell waste and get a price for it instead of throwing waste away and giving money to the garbage pickers.
3. Promoting resource and energy Efficiency ensuring adequate resources.
4. ThinkOcean for saving Water,
5. Give Take Relationships for students, Like NGO options, cleanliness Drives, and in Return, they get a certificate or something like that which will help them in Advancing in their carriers. Similarly, it goes for the Adults who can be hired as mentors for Same students. Frontend and Backend Operations.

RESPONSIBLE CONSUMPTION:

1. We must separate Economic Development from Environmental Degradation while ensuring that the transition to green economies create opportunities and promotes well being for everyone.
2. Indians Waste as much of Food as the whole of United Kingdom consumes also Indians spend a excess of oils and food products in Pilgrim Places which may not be necessary. Despite this, India is ranked 63 among 88 Countries in the Global Hunger Index. Even after producing excess food for export our own people are malnourished due to food wastage.
3. Our Big Goal is to Serve a population of around 4 Billion people by 2050 so we need Ideas For proper consumption and production of food.

PRODUCTION

https://en.wikipedia.org/wiki/Production%20possibility_frontier

A production–possibility frontier (PPF) or production possibility curve (PPC) is the possible tradeoff of producing combinations of goods with constant technology and resources per unit time. One good can only be produced by diverting resources from other goods, and so by producing less of them. This tradeoff is usually considered for an economy, but also applies to each individual, household, and economic organization.

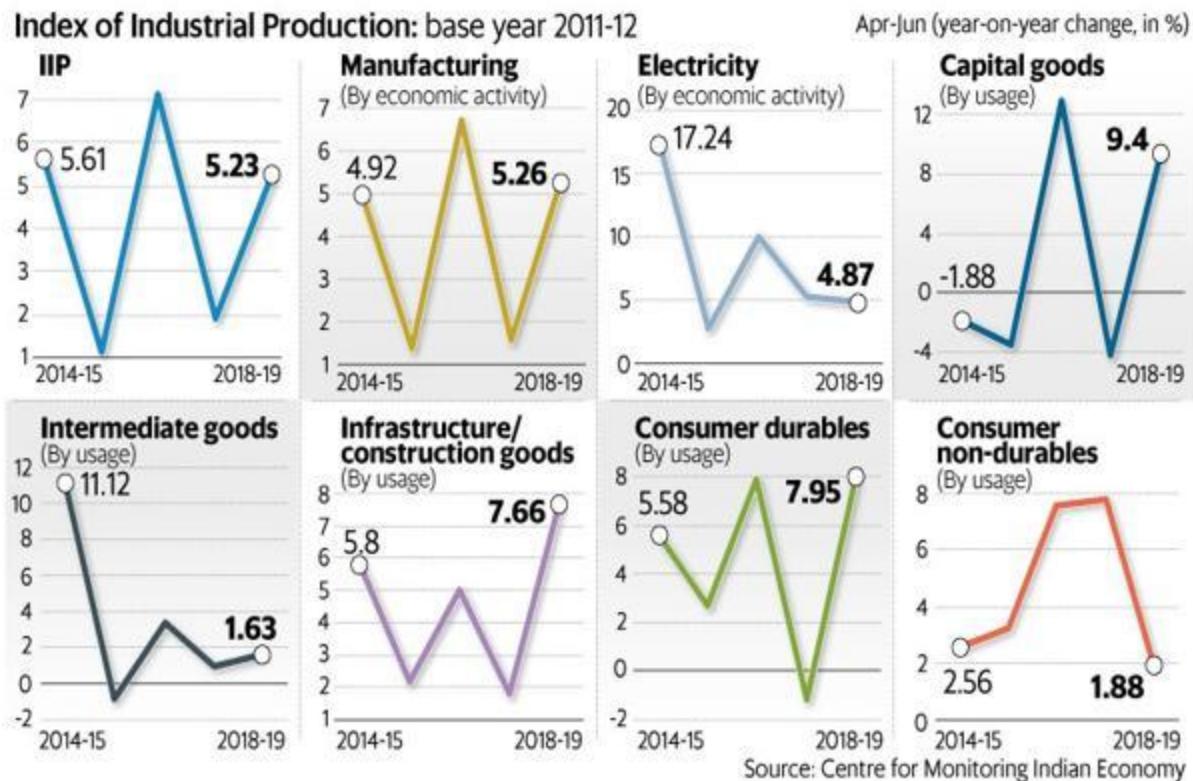
https://en.wikipedia.org/wiki/Productive_efficiency

productive efficiency occurs when a good or a service is produced at the lowest possible cost. The concept is illustrated on a production possibility frontier (PPF), where all points on the curve are points of productive efficiency. An equilibrium may be productively efficient without being allocatively efficient— i.e. it may result in a distribution of goods where social welfare is not maximized. It is one type of economic efficiency.

Raw materials required/used/consumed

TYPES:

Production Sectors in India



<https://www.oecd.org/env/1830307.pdf>

Report on the mining sector in India and its harmful effects.

<https://intpolicydigest.org/2016/08/22/climate-change-and-indian-agriculture/>

India's agriculture has been dependent on monsoons. Any change in monsoon trends drastically affects agriculture. Even the increasing temperature is affecting Indian agriculture. In the Indo-Gangetic Plain, these pre-monsoon changes will primarily affect the wheat crop

Connect between consumption and production

Weather changes affect production of crops

Food security is both directly and indirectly linked to climate change. Any alteration in the climatic parameters such as temperature and humidity which govern crop growth will have a direct impact on quantity of food produced.

<https://www.scidev.net/global/climate-change/feature/india-climate-change-facts-and-figures.htm>

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Harmful emissions affect weather in india

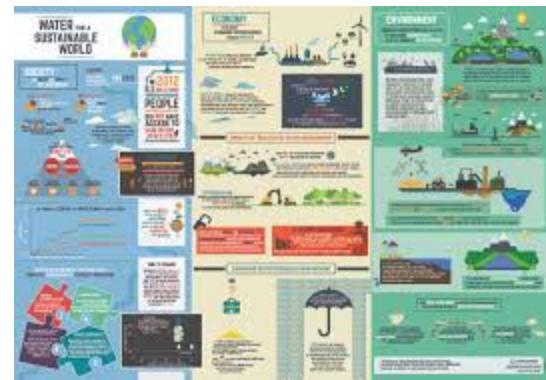


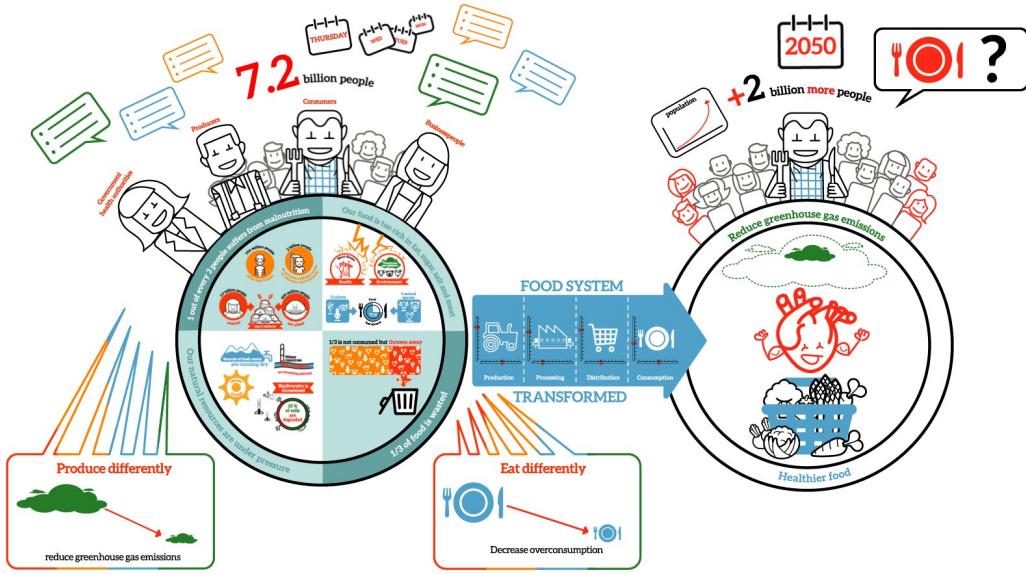
QO Responsible consumption and Production
ONE
one.org



“SUSTAINABLE DEVELOPMENT is that which MEETS THE NEEDS of the PRESENT WITHOUT COMPROMISING the ability of future generations to MEET THEIR OWN NEEDS”

The definition of sustainable development comes from Gro Harlem Brundtland, Prime Minister of Norway and author of Our Common Future (1987)





Producers:

Want to make more profits:

1. End up dumping all the waste into the water bodies rather than using expensive techniques
2. Use materials which are bad for the environment because they are cheap
3. No innovation end up using outdated tech
4. Polluting sources of energy are used
5. Lots of wastage of material
6. Child labour: creates an imbalance in the society
7. Unplanned Industrial Growth
8. Leach resources from nature

What happens??

For most of the production based companies, profit is goal number one – but some of those companies take it way too far, sacrificing the health of the planet and its inhabitants for a bigger bank balance. Far too many corporations turn a blind eye to the consequences of their destructive, exploitative practices. The worst of them are committing atrocities that go beyond the realm of objectionable into criminal, dumping toxic chemicals without regard to public health and employing child labour.

Extraction and processing of non-regenerative raw often energy-intensive activities involving large-scale interventions in ecosystems and the water balance and result in air, soil and water pollution.

Why do we need responsible production??

How can it be achieved:

1. Concentrating more on the research aspect: come up with more efficient and viable modes of fuels/power sources.
2. Use operational efficiency/lean manufacturing principles to eliminate waste, shorten the process and improve deliveries and costs.

COMMON LINKS:

Cost cutting

Waste Reduction

Cutting edge Technology

Awaring the youth

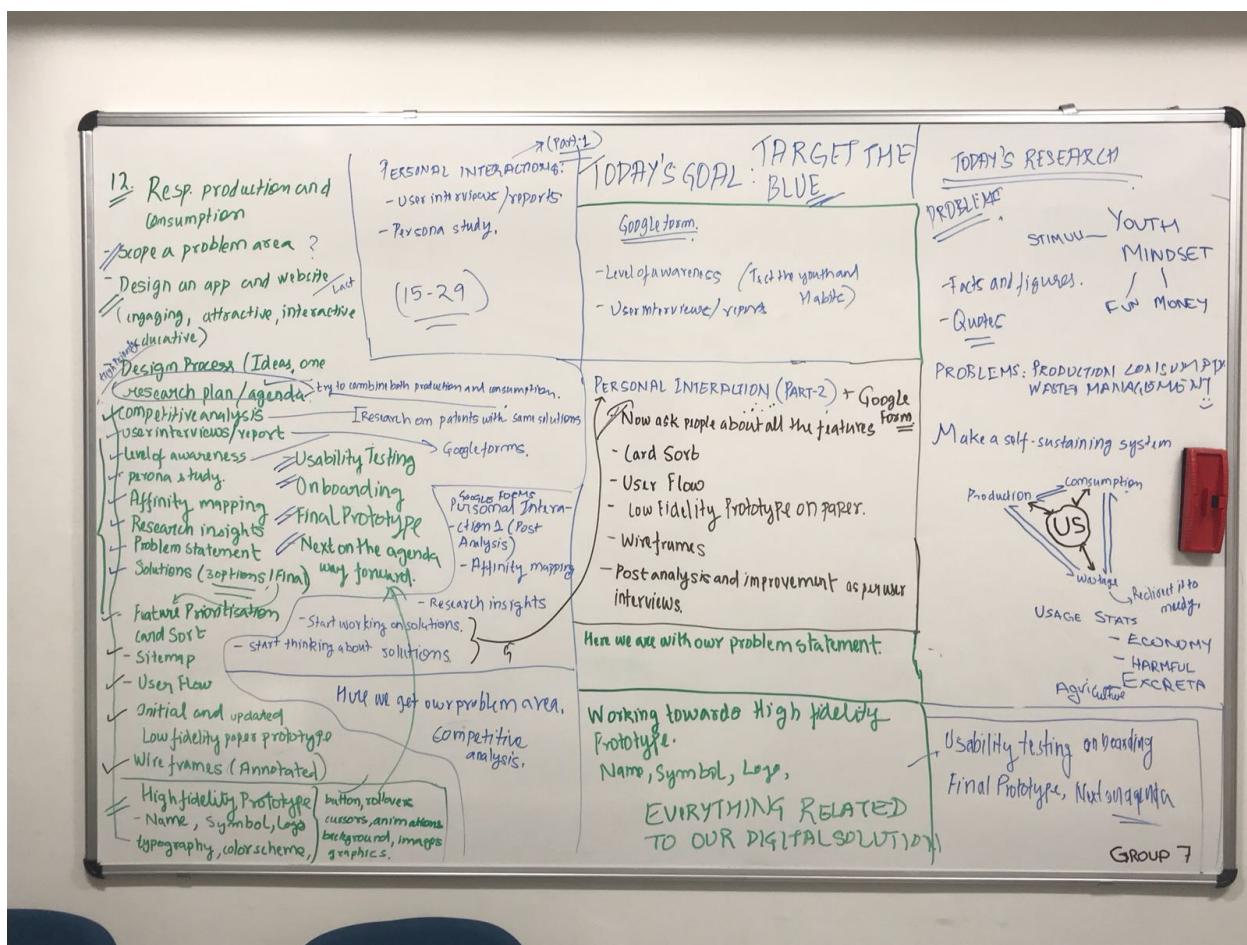
Law enforcement for both industries and consumers (production and consumption respectively)

Strict penalties for violation of laws for the industries.

AWARENESS VIDEO:

<https://www.facebook.com/TED/videos/1559507660751354/>

ASSIGNMENT BREAKDOWN:



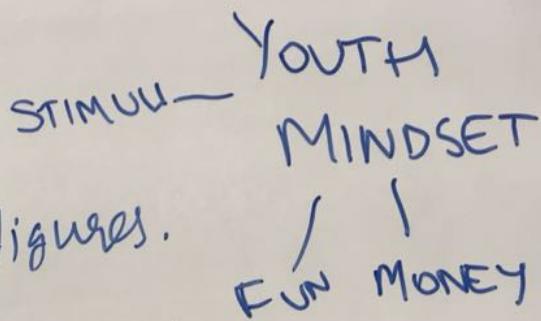
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TODAY'S RESEARCH

PROBLEMS

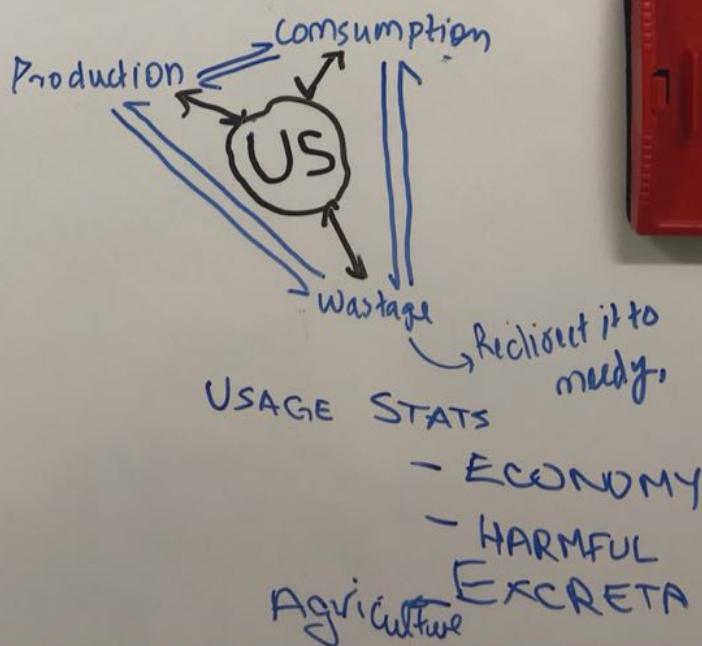
- Facts and figures.

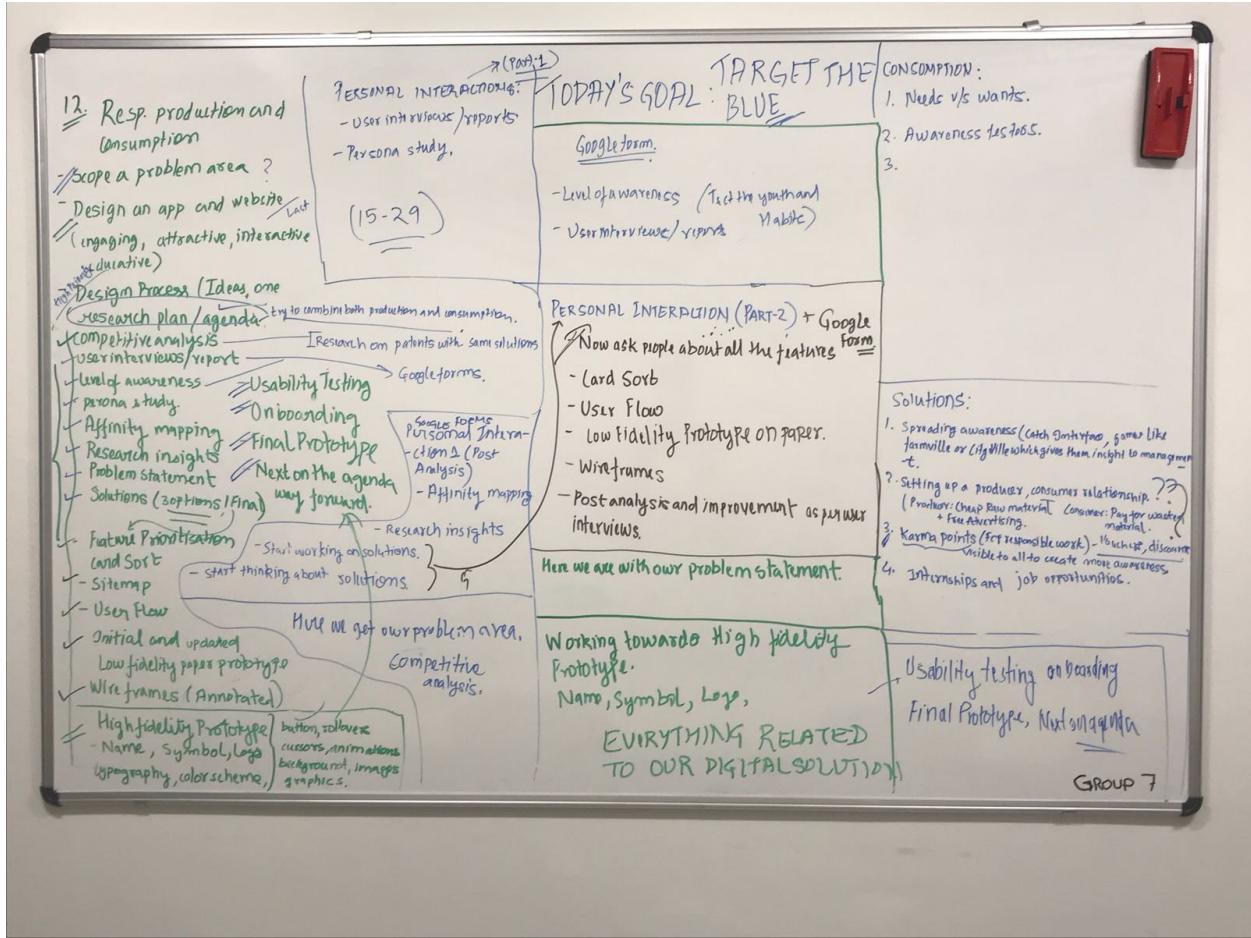
- Quotes



PROBLEMS: PRODUCTION CONSUMPTION
WASTE MANAGEMENT

Make a self-sustaining system





Features of our application.

OLX + LinkedIn + Quicker

Screen Recording
Aadhar.

id: Name, Aadhar
Mobile,
or KYC verification)

Search bar.
Dashboard Tab
(B)
Communities

Image Video
(D.B.)

Position share

(S.D.B.)
Offer view, karma

NGOs, Certifications

- ① Unique identification, Link with Aadhar card, KYC.
Every person has 1 account.
- ② News Feed. Everybody can see friend's work here and companies with sustainable + awareness use.
- ③ communities: Something similar to groups on facebook. Here you can join into movements of sustainable development.
- ④ Buy: Here you can buy in new materials for the producers perspective.
- ⑤ Sell: Here we can sell our products.
- ⑥ Profile icon: Here we can see our karma points.
- ⑦ Jobs / Internships.
- ⑧ Search where you can add in friends.
- ⑨ Redeem feature,

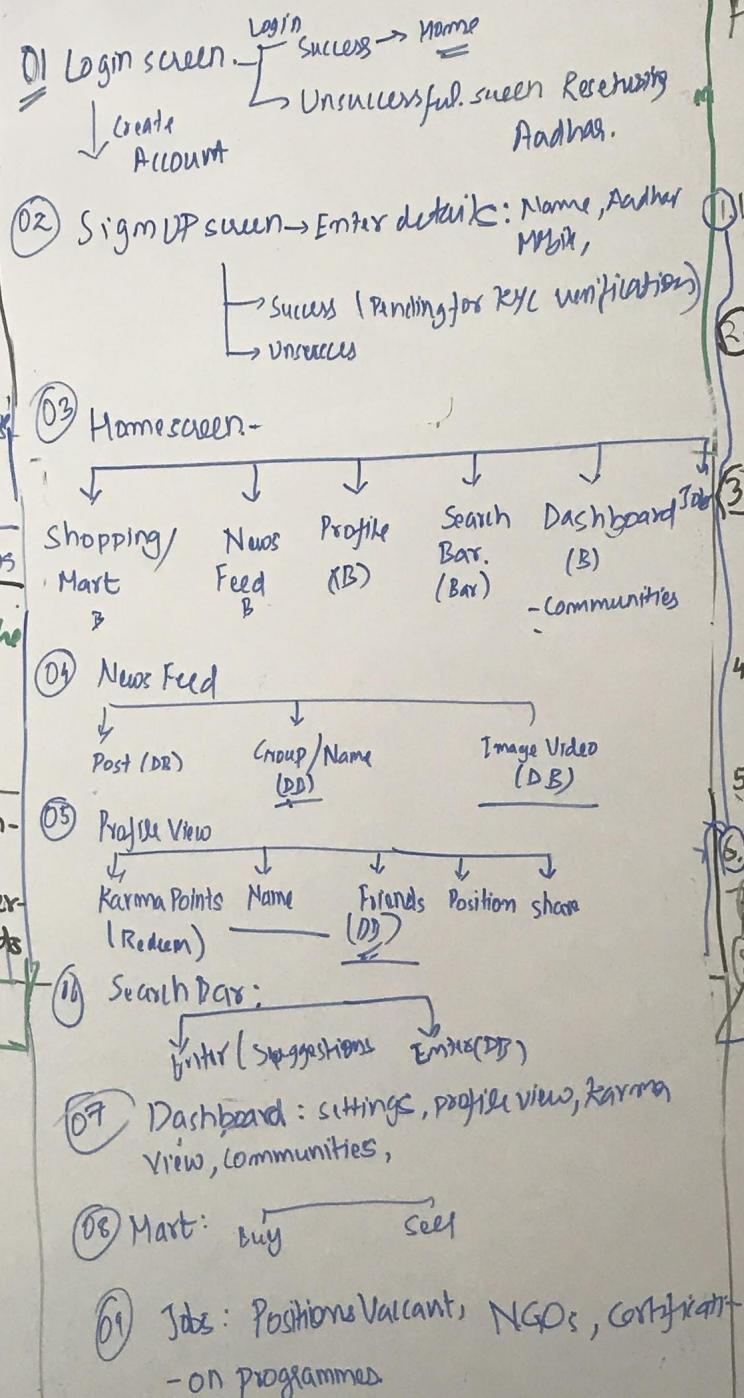
less (catchy) infrastructure
more producer net
ex: cheap RM.
wants. +
responsible work
and job opport-

which let the user
want to customize
reduces the wastage ;)
split by the process

King towards the
prototype, Name,
model logo etc.

moting an awareness of excessive wants / lead / result to understanding of unreal needs by 81s.

and improvement
is per se.



Features of our app

- OLX + LinkedIn

Unique identification
every person has

 1. Never Feed: Everybody works here and comment + awareness user
 2. communities: some groups on facebook into business development.
 3. Buy: Here you can for the producers products
 4. Sell: Here we can.
 5. Profile icon: Here we can
 6. Jobs / Internships.
 7. Search where you can
 8. Redeem feature

