LOGIC LORDS

ENERGY EMANATION DETECTOR

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PROBLEM STATEMENT

Open Innovation Challenge : Climate Change

Electric power generates the second largest share of greenhouse emissions that pollute the atmosphere and raise temperature thus causing global warming.

Household appliances like Refrigerators, ACs, Freezers are major contributors to the ever-growing issue of greenhouse effect.

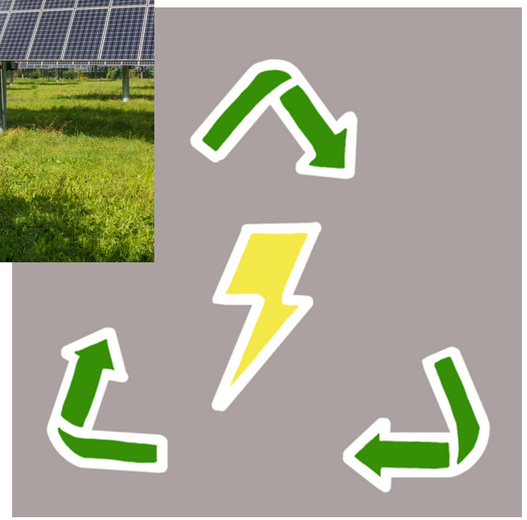
IDEA OVERVIEW

Our idea revolves around the development of a platform which would include the following key features:

Measuring the overconsumption of energy at our households and switching to solar panels when exceeding the set limit

Installation of solar panels by taking in accordance of the area that we live around and evaluating the cost required

Educational platform which tells about productively applying the 3Rs in regards with energy consumption



Website Link- [Emergency Emanation Detector]

BUSINESS MODEL CANVAS

KEY PARTNERS

Future collaborations possible with electrical companies such as WIPRO, Philips, Luminous, Voltas, Hitachi and many more such appliance companies.

KEY ACTIVITIES

Our model will be designed to help people prevent overconsumption of power by alerting them and helping them switch to solar energy.

KEY RESOURCES

Arduino chip,
IoT,
Python,
MERN stack,
Solar Power

VALUE PROPOSITIONS

1. Manage household energy usage to stay within limits and switch to solar panels when needed.
2. Evaluate area and cost for solar panel installation.
3. Promote the 3Rs for energy consumption through blog posts.

CUSTOMER RELATIONSHIP

Our platform offers 24/7 customer helpline to provide personal assistance during the sales process and after purchase.

CHANNEL

We offer services through an online platform which has features like blog posts, calculating total energy consumption, customer helpline through which people can connect to us.

CUSTOMER SEGMENTS

Our platform benefits residential homeowners, public and government entities, and real estate developers by reducing energy bills, enhancing long-term sustainability, lowering operational costs, demonstrating environmental responsibility, meeting energy efficiency regulations, and achieving sustainability goals.

COST STRUCTURE

1.Cost to make smart chip.
2. Cost to make working platform.
3. Promoting our website on different social media platforms.
4. Site maintainance

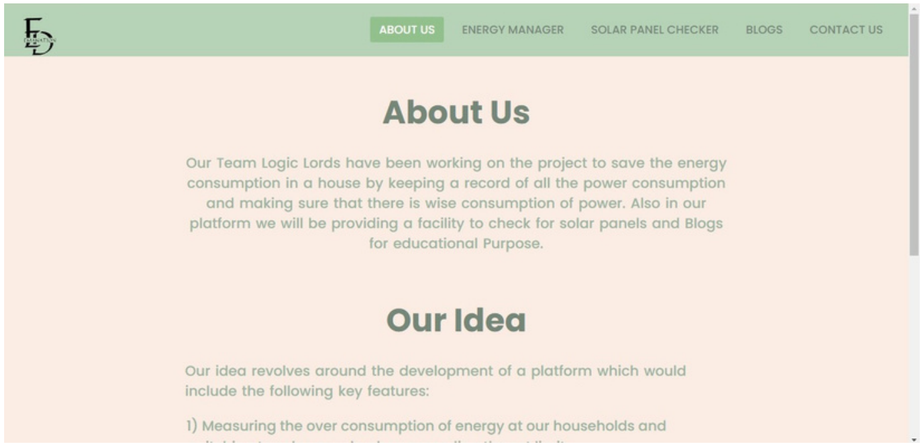
REVENUE STREAM

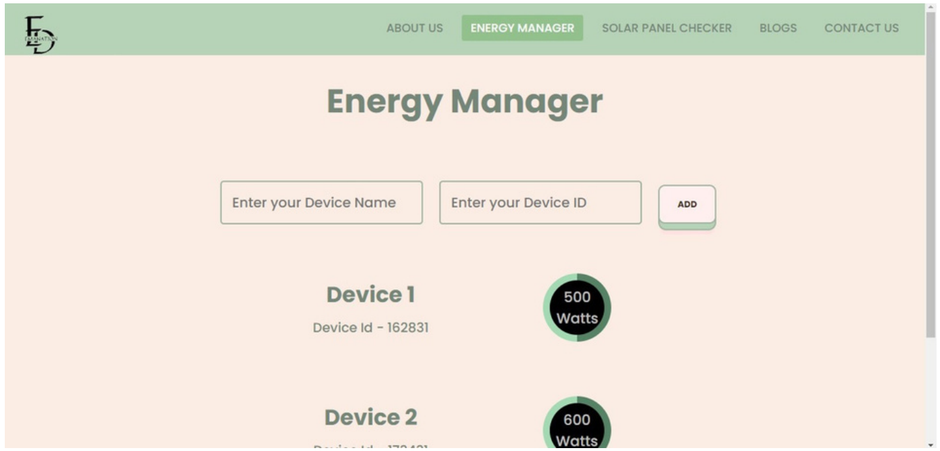
1. Sales of smart chip through online platforms and local shops.
2. Premium features to be added in our site.
3. Ad revenue in our blog platform.
4. Promoting solar panels companies and electrical companies on our platform.

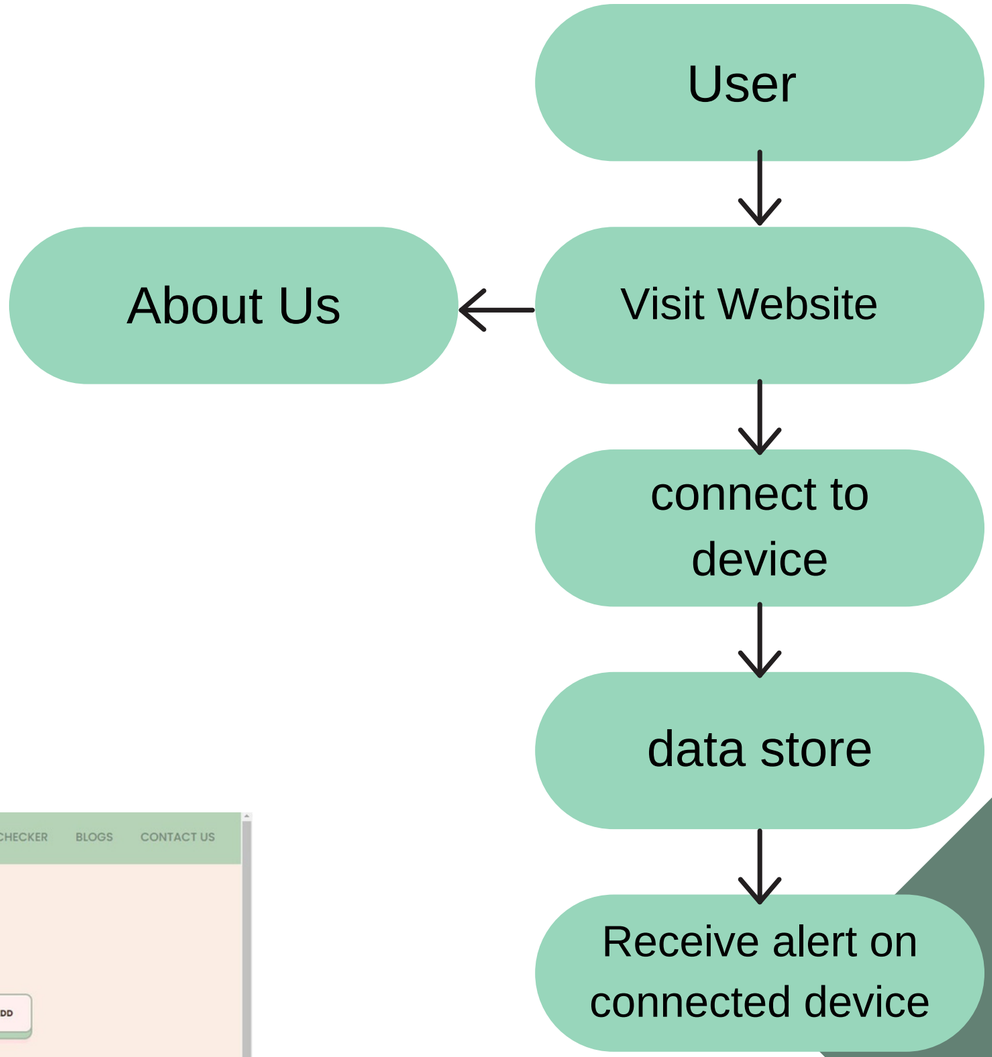
WORKFLOW

1. Energy Manager

A MERN stack website enables users to connect to their device, store data in a database, and receive energy consumption alerts while switching to alternatives to prevent overconsumption of energy.



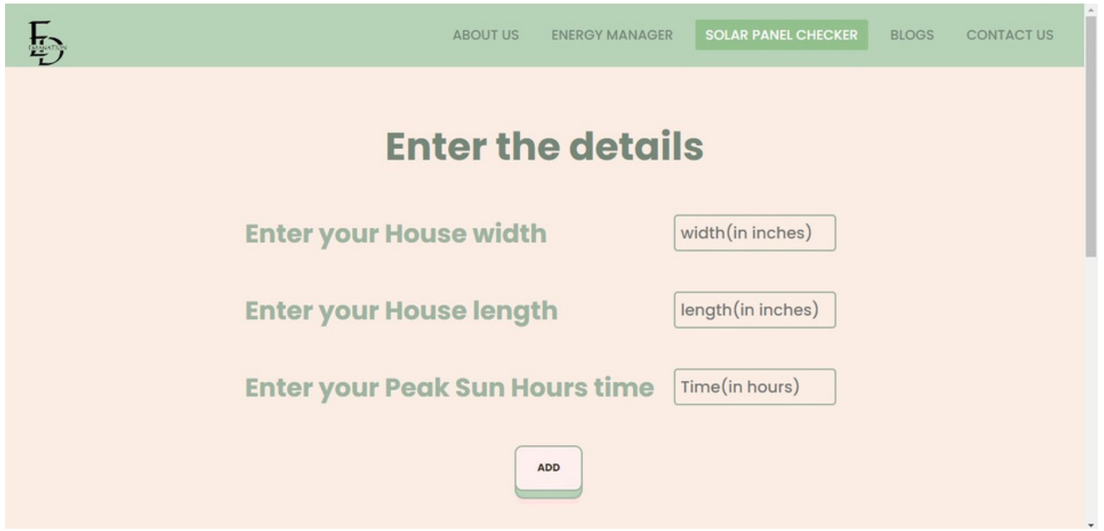


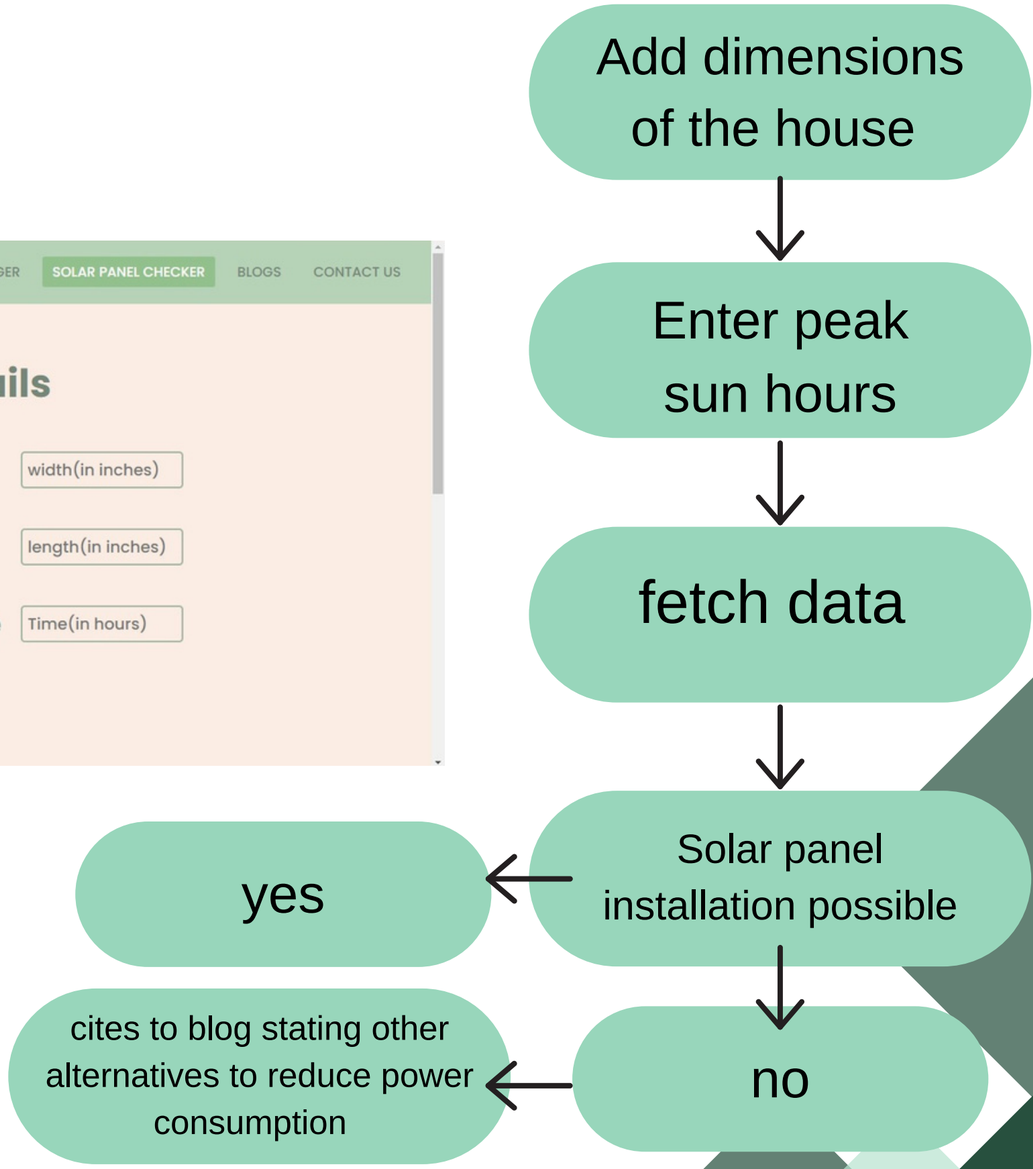


WORKFLOW

2. Solar Panel

To determine the number of solar panels that can be installed on a terrace, users must input the house's dimensions and peak sun hours. The system will verify if the installation is possible and calculate the number of panels that can be installed. If not possible, the system will suggest alternatives to reduce power consumption. The user's data in "Energy Management" is also used to determine the electricity requirements.

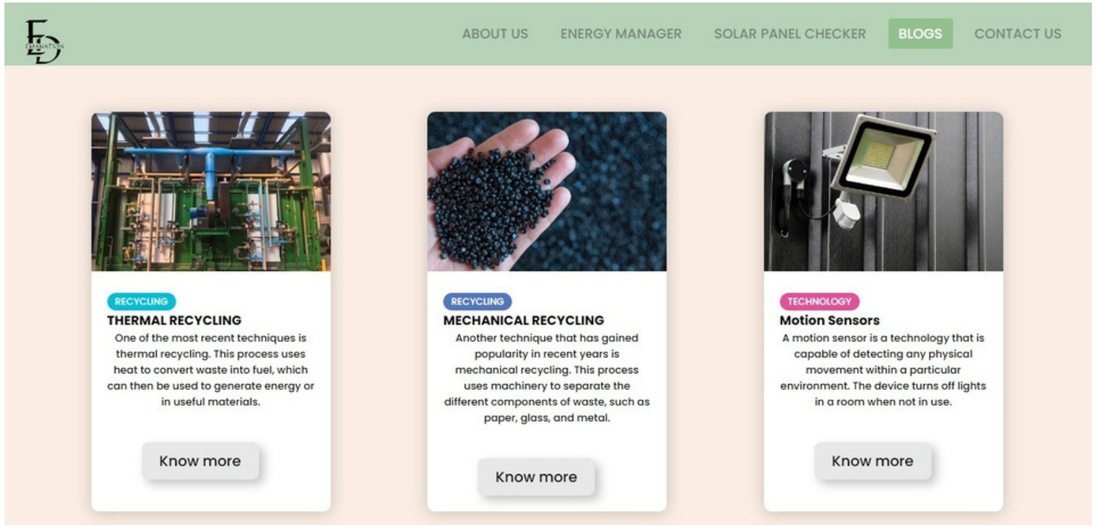




WORKFLOW

3. Blog Post

Users can enter the name of an item they wish to reuse to access an article detailing various ways to reuse it. The article offers different options for repurposing the item.



Enter name of reusable item

↓

Article Site about mentioned item

↓

Go through article

↓

Having doubt? Contact us

←

Choose any way to repurpose the item

TECHNOLOGIES USED

IOT

Internet of Things, refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves

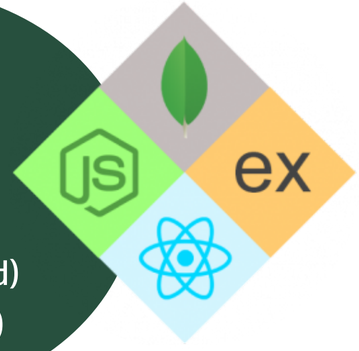
ARDUINO

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online.

MERN STACK

A web development framework made up of the stack of

- MongoDB – document database
- Express(.js) – Node.js web framework (backend)
- React(.js) – a client-side JavaScript framework (frontend)
- Node(.js) – the premier JavaScript web server (backend)



PYTHON

Python is a high level language commonly used for developing websites and software, task automation, data analysis, and data visualization

SOLAR POWER

Solar power is the conversion of energy from sunlight into electricity, either directly using photovoltaics (PV) or indirectly using concentrated solar power.

Technical Overview

1.First build the smart chip using Arduino.
2. Install the smart chip in the switch board.
3. Connecting the smart chip with our application using IoT.
4. Landing on our application which is built using MERN stack.
5. The data from smart chip will be stored and shown to the user. The user then can see the power consumption of each appliance and do the changes as per the requirements.
6. If the power consumption is more, then they can switch to solar power. To check that there is a feature in our website that will calculate the solar panels needed as per the power consumption and area .
7. If they have any appliances to recycle or reuse there is a blog page that can help them to get knowledge.
8. There is also a contact form where they can easily clarify their doubts.

FUTURE GOALS

- Improve our systems using AI algorithms
- Collaboration with electrical brands (Application friendly)
- Research in clean energy sources
- Promoting and scaling the brand further
- Making it economically sustainable and cheaper
- Introducing AI chatbots.