



SOLARTRADE



Table of contents

4

01

Description

02

Related Apps

03

Survey Highlights 04

PACT

05

Personas

06

Activity Scenarios

07

Functionalities









Description





What is Solar Trade?

SolarTrade is a Mobile App that empowers users to efficiently manage and optimize their solar panel systems. Key features include:

- Auto-Repair Functionality: Utilize embedded robots for minor repairs.
- **Energy Sales:** Sell excess energy to the grid, including international markets.
- **Real-Time Monitoring & Energy Reports:** Track energy production and consumption seamlessly.

SolarTrade offers an innovative solution for managing solar energy, promote sustainable living













02 Related Apps





Related Apps



EDP Solar



mySolarEdge















03

Survey Highlights









The survey was distributed during the **week of October 4th, 2024**, to understand people's
current energy usage habits and their needs
regarding solar panel management.

It was conducted with **40 individuals**, ranging in age from 14 to 78 years old, with the majority (37.5%) being 20 years old.







92%



solar panel owners were **satisfied** with the savings and would be interested in earning money from excess energy production

87.2%

saw value in remotely repairing minor issues through a mobile app



ZERO

Preferred fully manual control of their energy consumption.



- 39.5% preferred fully automated
- 60.5% preferred mix of manual and automated







04 PACT Analysis



People

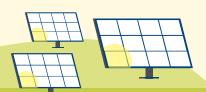
Target audience: Individuals of all ages interested in or owning solar panels.

User range: From beginners to experienced users focused on energy management and sustainability.

Context

Remote management: Users can monitor and manage solar panels from anywhere (home, work, on-the-go).

Demand for automation: Clear need for mobile-friendly solutions, enabling flexible interaction based on individual preferences.





Activities



Monitoring habits: Users typically check energy consumption during billing periods.

Satisfaction: Current solar panel owners are satisfied but seek more engaging monitoring and insights on cost savings.



Technologies

Smartphone features: Utilizes touchscreens and notifications for real-time engagement.

Wireless connectivity: Ensures stable communication with solar panels.

Auto-repair robotics: High-tech robots perform maintenance on-demand.

Energy trading: Facilitates international selling of excess energy, enhancing user flexibility.







05

Personas





Anne Green





Age: 29

Occupation: Marketing Manager

Location: Urban area, lives in a solar-powered condo

Technology Proficiency: Comfortable with technology and apps

Energy Goals:

- Reduce energy costs
- Minimize her carbon footprint
- Stay informed about energy consumption









Age: 45

Occupation: Small Business Owner (grocery store)

Location: Suburban area, owns a home with solar panels

Technology Proficiency: Moderate; uses technology for business

but is not overly tech-savvy

Energy Goals:

Maximize energy savings
Learn more about optimizing solar energy production
Sell excess energy to the grid









06

Activity Scenarios









Post-Work Check: Anne opens the SolarTrade app to review her daily energy usage.

Monthly Reports: She analyzes visual reports and identifies evening energy spikes.

Goal Setting: Decides to reduce consumption by switching to energy-efficient appliances.

Virtual Repair Tool: Checks solar panels for minor issues and schedules an annual maintenance checkup.

Optimization Suggestions: Explores additional tips for enhancing energy efficiency.

Energy Production Check: Peter uses the SolarTrade app during a break to monitor solar panel output.

Selling Energy: Reviews detailed reports and selects the best country option to sell excess energy to the grid.

Maintenance Reminder: Schedules a maintenance appointment for peak efficiency across his properties.

Prompt Repairs: Uses the repair tool to address minor solar panel issues, ensuring optimal performance.











07

Functionalities



Interactive Virtual Repair Tool with Real-Time Control & Review Scheduling



Repair Identification:

Highlights areas needing repair on solar panels using color codes (e.g., red for

Remote Control: Users can initiate real-time repairs through their mobile devices to efficiently address minor issues.



Allows scheduling of maintenance checkups with technicians via a calendar interface.



Performance Optimization:

Combines user-controlled repairs and professional maintenance to ensure optimal solar panel performance.



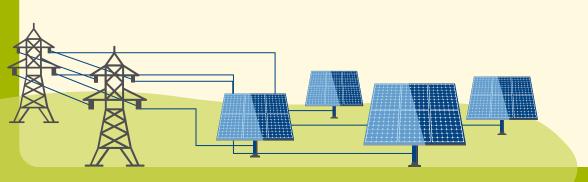
Energy Selling



675,000,000

Number of people without access to electricity worldwide

The Energy Progress Report 2023

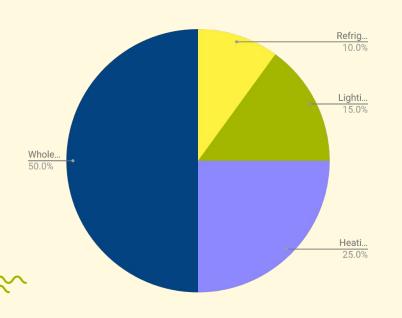






Detailed Energy Usage Reports







Refrigerator



Lighting

25%

Heating/ Cooling 50%

Whole House





Thanks!

Do you have any questions?

Artur Moreira up202208189 Augusto Amaral up202402913 Bruno Huang up202207517 Ricardo Yang up202208465 Tomás Linhares up202207236

Team 05 Class 07 + 08

