

HOMELESS SOLUTIONS

PROUD TO PRESENT: eCart

By Patrick Zhou

PROBLEM

Homelessness is a terrible condition for many people across America's cities. Local governments especially are having a hard time housing all of these. Shelters are often full; so many people would end up on the street without basic comfort.

654,000+

**U.S. Homeless
Population**

As of 2022

-190,000

**Shelter Bed
Shortage**

As of 2022

\$70K

**Cost Per Year
To House One
singular Homeless
individual**

In San Francisco



SOLUTION

With the help of subsidized funding from state and city governments, we can construct a fleet of low-cost electric shopping carts for the homeless population and in the future potential automate the production and manufacturing of this good. These electric shopping carts can be charged by users at city centers or communal areas , and can be used on the streets to perform various functions that can help them survive harsh conditions and is eco-friendly.

Mission Statement

Our mission at **Homeless Solutions** is to provide a sustainable solution for homeless people to survive on the streets with added comfort. We aim to achieve this by developing innovative products that cater to the needs of the homeless community. We believe that our products will help improve the quality of life for homeless people and provide them with a sense of dignity and self-sufficiency.

THE PRODUCT

eCart – A **redesigned shopping cart** for the homeless that can **significantly enhance** their living conditions on the streets.

Two rechargeable lithium battery packs similar to the ones found in electric bikes. Estimate total 2000 watts which is sufficient.

Multiple 120v waterproof electrical sockets on inverter for powering certain appliances.

Keyed wheel lock to prevent theft.

Rain-proof PVC QR code linked to GoFundMe and resume

Electric can/bottle crusher

Electric air pump

Cupholder

[Optional] Solar panel to charge the battery





FEATURE: POWER SYSTEM

- 2 x 1000W rechargeable lithium battery
- 1 x 48v 1500W Inverter to transform DC power from the battery into AC power
- Low power space heater is recommended



FEATURE: ELECTRIC CAN CRUSHER

- Promotes Cleaner city
- No more carrying around huge bags of cans
- Saving space means each person can transport more cans
- Potentially increases income from recycling



FEATURE: QR CODE FOR DONATION

- Rain-proof PVC QR code linked to GoFundMe
- Makes it easier for donors to give
- Reduces mugging/robbing of the homeless
- Potential Resume
- Potentially increases income from donation
- An efficient way for food banks to distribute portions of food.



FEATURE: ELECTRIC AIR PUMP

- No more sleeping on cold hard concrete
- Everyone deserves some basic human dignity



FEATURE: KEYED WHEEL LOCK

- Freedom to use public restrooms or receive healthcare services without having to worry about the cart getting stolen while unattended



COMMUNITY IMPACT



- An efficient way to address a humanitarian issue
- Reduce homeless deaths due to hypothermia
- With the availability of smartphones, it will increase chances of homeless re-entering workforce
- Increases young people involvement by recruiting legions of volunteer

BUSINESS MODEL

PARTNERSHIPS

- Homeless advocacy groups – To lobby for public support and funding. To provide product usage training to the homeless
- State and county governments – To provide funding for the eCart's development, production, and maintenance
- High school robotic, collegiate engineering teams, Boy Scouts – To provide labor resource in product development, production, and maintenance
- Corporations such as Home Depot and Macy's – To provide donations or discounts on cheap consumer items such as cooking pots and electric extension cords.

Components	Estimated Cost
2 x 1000W Rechargeable Lithium Battery	\$150
48v 1500W Inverter	\$50
Shopping Cart	\$100
Electric Can Crusher	\$40
Keyed Wheel Lock	\$30
PVC QR Code Signage	\$10
6 ft Power Cord Extension	Sponsors to provide
Cooking Pot or Pan and burner	Sponsors to provide
Electric Air Pump	Sponsors to provide
Airbed	Sponsors to provide
Small low wattage space heater	Sponsors to provide
Simple Mobile Phone	Sponsors to provide

Per Base Unit Cost **\$380**

This doesn't account for bulk purchase

BUSINESS MODEL COSTS

\$70,000 yearly price for a single modest bed in an SF homeless shelter



Compared To

BUSINESS MODEL

EXPECTED REGIONAL FUNDING

Bay Area Counties	2022 Homeless Population	Unit Material Cost	Unit Operating Cost	Funding Needed
Contra Costa	3093	\$ 380	\$ 10	\$ 1,206,270
Alameda	9747	\$ 380	\$ 10	\$ 3,801,330
San Mateo	1808	\$ 380	\$ 10	\$ 705,120
Napa	366	\$ 380	\$ 10	\$ 142,740
Marin	1121	\$ 380	\$ 10	\$ 437,190
Santa Clara	10028	\$ 380	\$ 10	\$ 3,910,920
Sonoma	2893	\$ 380	\$ 10	\$ 1,128,270
San Francisco	7754	\$ 380	\$ 10	\$ 3,024,060

Total Expected Funding: \$13,987,800

Helps Up To

36,810

Homeless Individuals

BUSINESS MODEL

FINANCIAL PROJECTION

Income Statement	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2025 Q1
Revenue	\$ 1,000	\$ 320	\$ 3,801,350	\$ 8,218,740	\$ 1,551,290
Cost of Goods	\$ 380	\$ -	\$ 3,703,860	\$ 7,932,500	\$ 1,252,100
Gross Margin	\$ 620	\$ 320	\$ 97,490	\$ 286,240	\$ 299,190
Research and Development	\$ 200	\$ 100	\$ 5,000	\$ 5,000	\$ 10,000
Marketing	\$ -	\$ 100	\$ 5,000	\$ 5,000	\$ 5,000
General and Administrative	\$ 100	\$ 100	\$ 10,000	\$ 10,000	\$ 30,000
Operating Expense	\$ 300	\$ 300	\$ 20,000	\$ 20,000	\$ 45,000
Net Income	\$ 320	\$ 20	\$ 77,490	\$ 266,240	\$ 254,190

Assumptions:

2024 Q1: Receive funding from Startup at Spring

2024 Q3: Receive funding from Alameda County

2024 Q4: Receive funding from Contra Costa, Santa Clara, and San Francisco Counties

2025 Q1: Receive funding from San Mateo, Napa, and Marin Counties

Note:

Revenue = Net Income from Previous Quarter + New Fundings



PUBLICITY

Since we are contracting directly with the government, we can help fund a government program where we directly deliver eCarts to the homeless. since the government and other research centers already take count of homeless people, we can save time by using that information to directly contact those people. There will need to be some volunteers or workers who go out and help distribute these eCarts, until our message and mission takes off

Market Plan

Since we are looking mainly to the government for funding, the marketing we need to perform is mainly outreach and persuasion.

- Contacting congressional members (because they will be the ones implementing the government budget) to persuade them by explaining the benefits of our product
- Lobbying the government to persuade them of our viability to help society. To gain some traction we may consider collaborating with Non-Profit organizations and companies that help homelessness.



Cost to Create Homeless Shelter (Competitor)

This is the overall cost of homeless shelters which cost 4.2 million upwards to 11.75 million dollars to create the shelter and the cost for the helpers' services.

Table A: Estimated Capital Expenditures, as of November 2019

Item	Notes	Cost –Low	Cost - High
New heating & AC system	Original system was joint with Central Health and recently demolished; currently using a temporary chiller & boiler	\$750,000	\$2,000,000
New mechanical control system	None currently exists	\$100,000	\$300,000
Domestic Water connection	Due to CH demolition, currently water meter from fire hydrant on Sabine	\$100,000	\$500,000
Roof replacement	Currently being patched regularly	\$500,000	\$1,500,000
Restore commercial kitchen	Estimates based on experience with renovations – no condition assessment	\$100,000	\$500,000
Laundry services	Estimates based on experience with renovations – no condition assessment	\$100,000	\$300,000
SUBTOTAL	Capital (hard) costs	\$1,650,000	\$5,100,000

Table B: Estimated Professional Services, as of November 2019

Item	Notes	Cost –Low	Cost - High
Project management & design	Architect, engineers, project manager, other professional services	\$350,000	\$350,000
Permitting	5% of total	\$100,000	\$272,500
Contingency	15% of total	\$300,000	\$817,500
Building costs	Ongoing maintenance of building during design	\$60,000	\$100,000
	Professional Services & other (soft) costs	\$810,000	\$1,540,000
SUBTOTAL			
TOTAL, ALL COSTS		\$2,460,000	\$6,640,000

New York City Example

There are over **100k homeless people** in the city of New York with more than **4000+** of them living in areas like subways, and train stations. On top of that there are **only 17 homeless shelters** to house the needy. If they are unable to retrieve a homeless shelter in the night, they unfortunately have to survive on the barren sidewalks, and subway stations. Through the use of our carts, they will be able to have a much easier time during the night when they are unable to find a homeless shelter to stay.

Other example

In **Los Angeles** there is about **76,000 homeless people** and only **20k get shelter** that is around **26% of the homeless population**.

Here is another example where our ecart can be used to help the massive **55,000 people** who need these carts and are **unsheltered** from harsh climate and conditions of LA. This is shown in many other cities, like **Seattle, San Diego, San Jose, and Oakland**. These are all cities that we know. The **closest** one being **San Jose**. Where only **20%** of its homeless population is **sheltered** leaving the other 80% unsheltered.

Potential Outcomes

Worst Case Scenario

Government doesn't take the idea and sticks to traditional homeless shelters. In this scenario we will seek out nonprofits to adopt our idea to help the unsheltered homeless individuals and families.

Best Case Scenario

The government has implemented a program where homeless individuals are provided with carts to enhance their quality of life while living unsheltered. These carts serve as a tool for individuals to improve their circumstances, offering them support to overcome poverty and work towards a better future.

	Homeless Shelter	eCart
Technology	Requires a lot of utilities and infrastructure, like central heating, water, and electricity, as well as workers and other resources (economic and human)	Lots of easy to use and convenient features that will assist and increase homeless people's quality of life (can crusher, qr code, power system, etc.)
Cost	4.2 - 11.75 million dollars. They can hold roughly 1000-2000 people	\$380 (not accounting for bulk purchases; we can provide a discount for that). For those same 1000-2000 individuals it would cost 380,000
Speed and Labor	The process of creating a homeless shelter takes 1 to 3 years. This is further exacerbated by the legal and governmental necessities of getting approval. It also takes a lot of capital and around 200 workers to plan and build a homeless shelter	To manufacturing a cart we estimate it will take 1-3 days with only 2 volunteers.

ROADMAP

