

EXECUTIVE SUMMARY

E-Touch is a company focused on making use of energy that is wasted by everyone otherwise. This energy is renewable, clean and available as long as humans walk on this planet. Right now, we aim to harvest the kinetic energy produced by footsteps and make use of it in various applications. Our product is able to get this energy and transform it into power.

PROBLEM

As fossil fuels are running out, and the ozone layers is weakening there's a pressure to move to clean energy. Eco-friendly companies and environmental organizations are consistently looking for new ways to achieve sustainability.

One footstep can produce up to 7 watts. This potential energy is wasted every day without anyone noticing. The energy produced by footsteps is available everywhere there's a busy place (like metro stations) and is wasted daily since there is nothing that can produce power from this energy.

Value Proposition

Through the use of this plates, there's an enormous potential to gather power. Our plan is to place them at the metro gates (since it is a place where people are forced to go through) and generate power that can be relayed back to the grid or (if we find a cheap solution) store it for later use.

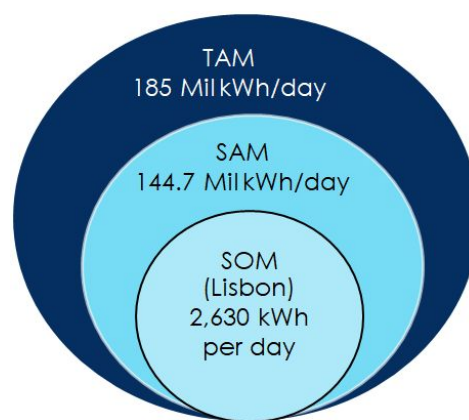
Our proposal offers companies a cheaper alternative power source compared to solar power along with the installation and maintenance needed for implementation and sustainability.

In the future, there is a possibility to expand the product to other applications like entertainment (spend the energy as it is produced to light something).

Market

In Portugal, there's, on average, around 375 thousand people using the metro in Lisbon, per day. This number means that every day, there are 2 630 kWh that could be produced.

The plan is to expand to other, bigger city metros than Lisbon, where more power can be generated, and the plates can be more efficient. For example, Madrid (1.5M per day), Paris (4.1M per day) and densely populated cities, like New Delhi (2.75M per day) and Mumbai (3M per day). To show more clearly our potential market we have this graph:



Competition

There are some companies that use kinetic energy to create power but there is only one using plates to gather energy from footsteps which is PaveGen. This firm uses a different design (triangle shaped) and utilized a closed system meaning that the power is used instantly, and it's not connected to the grid.

Our main difference is that it's focus is on data (for example, football data, where people walk, etc) instead of a clean energy source but they also do some advertising deals with companies (Coca Cola).

Business Model

Our business model is composed of two parts: permanent and rental. The former is the one described in the value proposition, we charge companies for the

installation and the maintenance required (eventually replacing the plates). Knowing this, our team will focus on metro companies for now since it is an organization that can benefit greatly from our product.

This come with its own disadvantages which is the long sales cycle (around 2 years to replace the plates) and the issue that company will take a long time to actually pay (so it will require a bigger amount of working capital).

To solve this problem, we have the second part of the business model, rental. The focus on this part will be on companies that want to advertise their brand or product and can use our product to do that in the form of signs that light up using the energy from footsteps.

Cost Structure

We estimated that our cost for implementing the product in the Lisbon metro. Assuming our plates cost 5€ and that we can implement in all 50 stations (8 gates each) we get to a total of 1200€ on the product. Adding to this will be the payment to the installation company which we estimated will amount to a total of 8000€.

Comparing to solar energy, this means almost 80% reduction in costs. Annexed is a sensitivity analysis (appendix 1) for both of these costs, which shows that our product will save money to the firms with the cost of each panel is below 20€ and the implementation costs are below 40 thousand.

The bigger percentage we save the client, the higher profit margin we can capture through our pricing.

APPENDIX

1- Sensitivity Analysis:

		Panel Cost				
79%		5	10	15	20	25
Implementation Cost	8000	79%	75%	71%	67%	62%
	15000	65%	60%	56%	52%	48%
	25000	44%	40%	35%	31%	27%
	30000	33%	29%	25%	21%	17%
	35000	23%	19%	15%	10%	6%
	40000	12%	8%	4%	0%	-4%
	45000	2%	-2%	-6%	-10%	-15%