o Name of company and product

LightMirror - sunlight mirrors (reflective panels)

o Introduction (Company & product/service)

LightMirror is a new low-tech device for bioclimatic design. Inclined reflective panels at the edge of the roofs of buildings redirect sunlight to another building. Natural light becomes a controllable asset, and there are many benefits: free solar gains, natural light, increase in well-being.

o Silver Innovation (The problem & the solution)

There is some evidence that daylight exposure can affect post-operative outcomes in patients and, consequently, that daylight should be considered in hospital design. The importance of the amount of daylight in a patient's room indicates an impact on patients' length of stay. Still, 47% of medical rooms don't have natural light.

Controlling the sun's trajectory in buildings will make it possible to have less energy-consuming and brighter rooms in care homes and hospitals.

Estonia is 2nd in ranking for CO2 emissions (metric tons per capita) in the EU. Heating is the most significant greenhouse gas emissions sector in the country.

The problem is global: 2/3 of energy consumptions in EU households is for space heating.

Natural light reduced the heating needs of a room massively: a North facade-oriented room receive five times less solar heat than a South oriented one. With LightMirror, redirecting sunlight from the roof of a South facade into the rooms of a North one could reduce by 30% the energy cost.

o Customer segmentation (Market validation & market size)

The EU Energy Efficiency Directive 7,000,000 building renovations/year until 2030.

The public-receiving facility (ERP) have specific objectives, and the states allocate significant funding for their renovation and thermal efficiency.

We are currently in Estonia, where 30 hospitals (2016) and 193 care homes (2020) are in the country. We plan to move the company to Lithuania, where there are 90 hospitals (2016) and 196 care homes (2006).

o Geographical area of operations (Current & future)

We target Northern European countries because the sun's trajectory is ideal for installing panels that do not require motorization. The climate allows us to take advantage of the sun's warmth for a large period of the year.

LightMirror is looking to prototype the project in different countries in Europe to have more data on different climates, the sun's orientation, and urbanism law obstacles. We are currently in contact with entities in Italy, England, France, and the Czech Republic.

o Earnings logic

The selling process is in three steps:

1. Feasibility study (free consultation)

Based on a building model and its environment, we prepare a pre-product specification, select appropriate technologies, and prepare a building roadmap. Clients get answers to the most pressing questions - how it looks, how it works, how much it costs.

2. Prototyping one panel on-site (5000€)

Develop physical samples that showcase your product features. We prepare a detailed product specification, select appropriate materials.

3. End-to-end product development

We prepare the final study of thermal gain and quantify the new daylight factor of each room. (100€/m² of future panels)

We manage stakeholders to make the installation on the whole building. (500€/m² of panels)

o Financing needs

The total finances LightMirror seek at the seed stage are 80,000€.

- To prototype the first panel in a science park, we will need 10,000€.
- 5,000€ are for the IP studies and then 20,000€ for the patent extension around the long-term targeted market (EU, UK, and Canada).
- We'll need 10000€ to renew the professional license of the software I use in January 2022.

o The next step/goal

- Development and validation of the prototype
- Protection of the intellectual property
- Preparation of a detailed investment plan
- The attraction of the investments and making of the investment contract
- The attraction of the subsidies allocated by the EU and other public funds
- Team building