UCOKERS

IOT AND SMART CITY

Business Plan

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

Our group, Ucokers, is developing an IoT solution that will automatically adjust temperature and electricity output in the green deck based on data received from multiple sensors scattered around the structure. The system will be controlled by an algorithm that will analyze the data and make adjustments as necessary. Our target market is homeowners and businesses looking to reduce their energy consumption and costs while maintaining a comfortable environment.
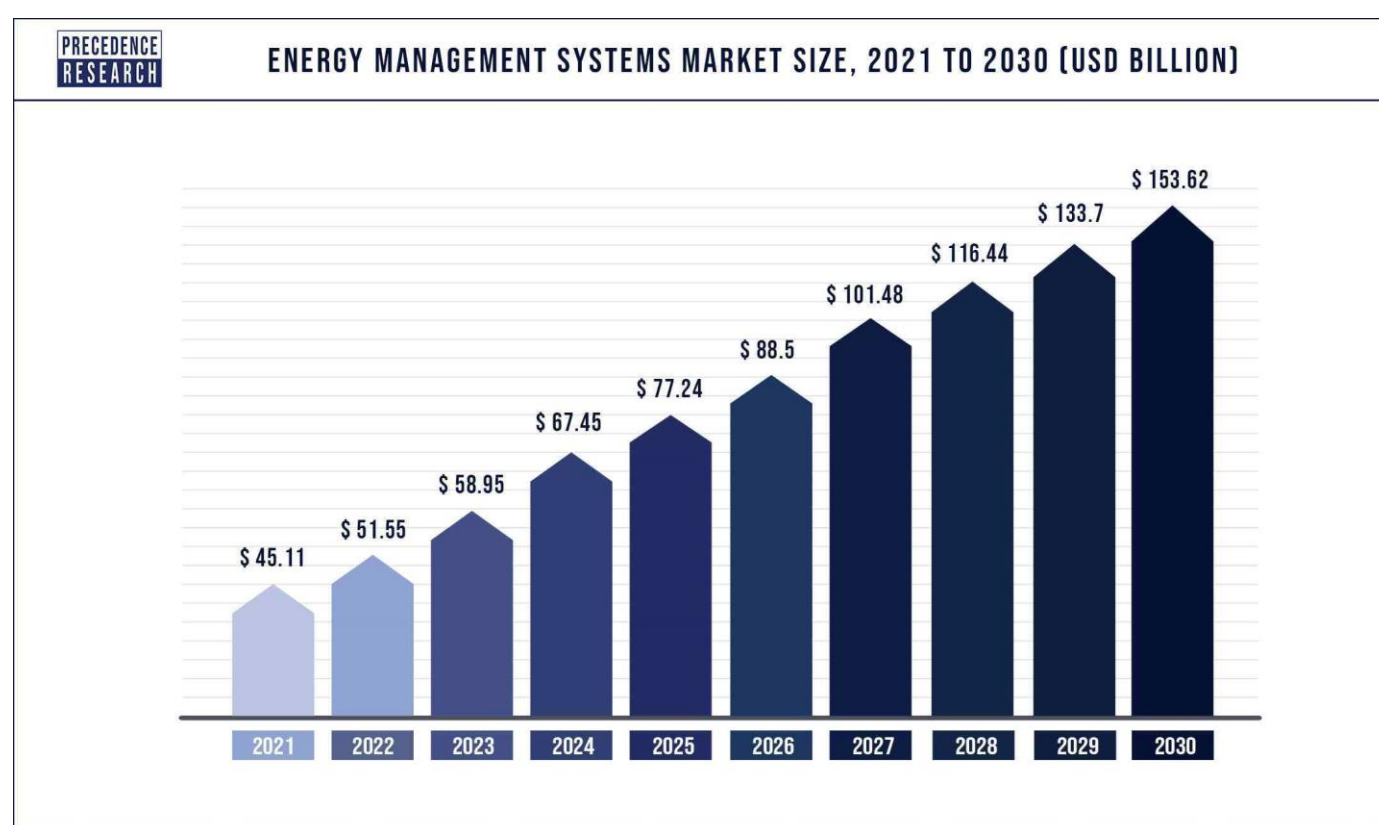
2. PROBLEM STATEMENT

Modern cities are plagued by many problems. These problems include high traffic density, poor air quality, and hot temperatures. The green deck is planned to resolve these problems by creating a deck that will provide green space in the city center and where pedestrians can commute comfortably around the area. However, The green deck would need to implement various IoT and smart city solutions to fully achieve its planned goals. Structures of this size would usually waste a lot of electricity in the Heating, Ventillation, and Air Conditioning (HVAC) due to lacking the ability to adjust its HVAC systems based on the conditions of the indoor areas. This project aims to provide a solution using IoT and smart city systems.

3. PROPOSED SOLUTION

Our IoT system will consist of multiple sensors placed throughout the building to collect data on temperature, humidity, air quality, and occupancy. The data will be analyzed by an algorithm that will make adjustments to the heating, ventilation, and air conditioning (HVAC) system and power outlets as necessary. The system will be controlled through a user-friendly app, which will allow users to monitor and manage their energy usage and other data remotely.

4. MARKET ANALYSIS

The energy management market is a growing industry, with a projected value of $77.24 billion by 2025. There is a growing demand for energy-efficient solutions that can help reduce energy consumption and costs. Our IoT system will provide an affordable and efficient solution to reduce energy usage and maintain comfortable temperature levels and air quality.

ENERGY MANAGEMENT SYSTEMS MARKET SIZE, 2021 TO 2030 (USD BILLION)

PRECEDENCE RESEARCH

Year	Value
2021	$ 45.11
2022	$ 51.55
2023	$ 58.95
2024	$ 67.45
2025	$ 77.24
2026	$ 88.5
2027	$ 101.48
2028	$ 116.44
2029	$ 133.7
2030	$ 153.62

Source: https://www.precedenceresearch.com/energy-management-systems-market

5. IMPACT ASSESSMENT

- Improved air quality in the cross-harbor tunnel area and its surroundings
- Decrease wasted electricity usage
- Improve cost efficiency of maintaining the weather control systems of the green deck
- Increased comfort for pedestrians commuting around the cross-harbor tunnel toll area