BEVISIONEERS

THE MERCEDES-BENZ FELLOWSHIP

Project Checkpoint 10
Impact Measurement Plan

Outcome 1: Machines working to harness wasted human effort into sustainable living.
Target: Driving people to be more aware and challenging them to think more about the energy they can create to help the environment.
Indicator: Social media trend supporting this energy movement of green gyms and public transportation systems.

Output 1: Simulation Model and Manufactured Prototype.
Target: Mechanical, Electrical and Assembly Simulation for Analysis.
Indicator: Mark II real and functional prototype.

Activity: Model all parts.
Target: Simulate material's strength, assembly & blue prints.
Indicator: Complete CAD model and Assembly.

Input: Mechatronics.
Target: Use technology to develop a functional machine.
Indicator: Electrical energy generated.

Input: CAD model.
Target: Analyze the mechanical structure and assembly.
Indicator: 3D model and material chosen.

Activity: Manufacture all plastic and metal parts.
Target: Take the simulation assembly to a reality, following CAD blueprints.
Indicator: Real built prototype.

Input: 3D printer.
Target: Design and manufacture plastic parts for PCB and electrical generators.
Indicator: Prototype's plastic parts.

Input: CNC machine.
Target: Cutting the mechanical body of the machine on metal sheet.
Indicator: Prototype's structure.

Output 2: Electrical trials to calculate energy generation needed by the market.
Target: Identify prototypes needed to generate profit.
Indicator: Interested costumers.

Activity: Contact and identify Potential Consumer's needs.
Target: Gyms and Public Bike Systems.
Indicator: Valuable contact.

Input: Gyms.
Target: Potential costumers.
Indicator: Power data obtained and relevant contact.

Input: Public bike systems.
Target: Potential costumers.
Indicator: Research for public energy generation and relevant contact.

Activity: Identify energy needed to generate profit.
Target: Gyms and Public Bike Systems.
Indicator: kW needed to make profit at gyms or public bike systems.

Input: Market needs.
Target: Identify prototype functionalities.
Indicator: Power data obtained and relevant contact.

Input: Energy generation needs.
Target: kW Used monthly by gyms and Mexico's rural communities with power issues.
Indicator: Power kW identified.

200-400 words reflection

Our targets align closely with the project vision of **transforming wasted human effort into sustainable energy**. By focusing on creating **green gyms and integrating public bike systems into energy networks**, we aim to **inspire societal shifts toward renewable energy adoption**. **The emphasis on social media trends as an indicator ensures that this vision resonates with stakeholders**, fostering a movement that aligns with both environmental goals and community values.

Baseline data collection will be straightforward and relevant, as it involves measurable metrics such as power output from prototypes, energy needs of gyms and public bike systems, and market demand insights. These metrics are easily obtainable through surveys, energy trials, and direct interactions with potential customers. **By targeting specific audiences like gyms and public transportation systems, the data collected will directly inform the design and scalability of our prototypes**.

The data collection methods and frequency are both realistic and effective. For example, using CAD models and CNC machines to simulate and manufacture prototypes ensures precision in performance analysis, while direct surveys and energy trials with gyms provide actionable insights. Regular milestone checks, such as completing CAD assemblies and conducting energy generation trials, allow for iterative improvements without overextending resources.
The chosen indicators, such as kW generated, social media trends, and prototype functionality are meaningful to stakeholders and the community. For gyms and public bike systems, the focus on energy generation and profitability ensures economic viability, while the broader community benefits from heightened awareness of renewable energy. These indicators also highlight tangible progress, fostering trust and engagement from stakeholders as the project evolves toward creating a sustainable, energy-conscious future.