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Smart cycle

Meet the team

Dhahri ayoub

Moncer Fatma

Mhiri sinda

Masri Walid

Sustainability challenge :

transforming urban mobility and ressource management for tomorrows cities.

Proposed solution:

Our **smart cycle** application integrates cutting-edge technologies to optimize energy usage and waste management, creating a sustainable and efficient ecosystem for tomorrow. Through intelligent machine control, IoT integration, and blockchain-based tracking, we're driving a transformative shift towards a greener future.

Application space:

Every factory has to register all its features and caracteristiques in her space in the application in order to efficiently control the Energy usage in the factory by an intelligent algorithm.

we are basically using a comparative system between the fictive counter that predicts the estimated amount of energy(wats→ according to the machines informations) and the real counter in the factory .

One of the Basic rules to subscribe in the application space should be a correct comparison between the two counters(fictive and real) while the factory activity.

Once the comparaison is not correct the Factory will recieve a reclamation.

If the factory didn't consider the reclamation (did not register all her machines) it will be excluded from our cycle!

Energy Management:

1

Intelligent Machine Control

Our application utilizes a network of sensors to monitor and precisely control the energy usage of each connected machine.

2

IoT Integration

By seamlessly integrating IoT technologies that relies the real machine in the factory with the application .

3

Blockchain-based Tracking

Each machine's energy consumption history is securely recorded on a chain block, providing a transparent and tamper-proof audit trail for better decision making.

Every block represent a machine.

Waste Management: Marketplace and Closed-Loop Utilization

Waste Marketplace

Our platform facilitates the buying and selling of waste, enabling a circular economy where waste becomes a valuable resource of money.

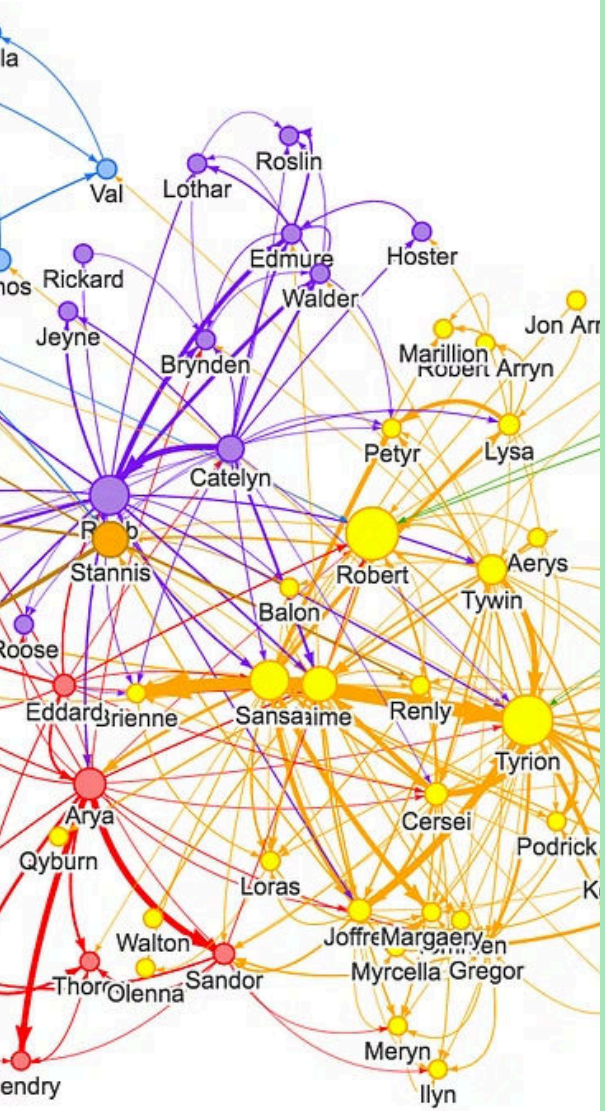
Closed-Loop Utilization

By implementing an intelligent recommendation system for each factory for the reuse and repurposing of waste (for more than 2 recipient factories), we strive to minimize waste and maximize the efficiency of resource utilization.

Blockchain-based Tracking

Each waste transaction is recorded on a blockchain, providing transparency and traceability to the waste management process.

every transaction is a block in the chain.



Optimization through Graph Theory and AI

1 Graph Theory Analysis

We leverage graph theory to model the complex relationships between energy sources, machines, and waste, enabling holistic optimization.

2 AI-powered Models

Advanced AI algorithms analyze the data to identify patterns, predict trends, and recommend optimal energy and waste management strategies.

3 Continuous Improvement

Our system continuously learns and adapts, ensuring ongoing optimization and sustainable performance for our smart cycle solution.

Waste Management: Marketplace and Eco-transportation

Graph Theory

Our graph theory use an AI Model to figure the best and most efficient path to transfer waste using electric vehicules .

smart bins

we use a smart bin classification to classify and detect recycalability potential.

Saistainability themes behind smart cycle

Resource Efficiency:

The application focuses on optimizing energy usage and waste management in urban environments, contributing to resource efficiency and conservation.

Renewable Energy Adoption:

By monitoring and controlling energy usage in factories, the application promotes the adoption of renewable energy sources and efficient energy practices, contributing to the reduction of carbon emissions and dependence on fossil fuels.

Saistainability themes behind smart cycle

Circular Economy:

The waste marketplace feature of the application encourages the concept of a circular economy, where waste is seen as a valuable resource that can be reused, repurposed, or recycled, reducing the strain on natural resources and landfills.

Smart Transportation:

Through the utilization of graph theory and AI models, the application promotes eco-friendly transportation solutions for waste management, such as electric vehicles, reducing emissions and congestion in urban areas while optimizing transportation routes for efficiency.

Saistainability themes behind smart cycle

Sustainable Urban Development:

By addressing challenges related to urban mobility, energy usage, and waste management, the application contributes to the creation of sustainable and resilient cities capable of meeting the needs of present and future generations without compromising the environment or depleting natural resources.

Saistainability themes behind smart cycle

Project Scope:

Developing a smart cycle application for factories to optimize energy usage and waste management.

Objectives:

Ensure regulatory compliance, optimize resource utilization, and promote sustainable urban mobility through transparent tracking and intelligent algorithms.

Methodology

1

Analysis and Requirement Gathering

2

Technology Selection

3

System Design

Methodology

4

Development and Integration

5

Testing and Validation

6

Deployment and Rollout

Methodology

7

Monitoring and Optimization

8

Scalability and Sustainability

Impacts

:

- Revolutionizes urban sustainability through energy optimization, waste reduction, and eco-friendly transportation.
- Utilizes IoT, blockchain, and AI to enhance resource efficiency, reduce emissions, and foster a circular economy.
- Promotes community engagement and creates cleaner, healthier, and more resilient cities for the future.

BMC

SMART CYCLE BUSINESS MODEL CANVAS

KEY PARTNERS

FACTORIES AND INDUSTRIAL PARTNERS

ENVIRONMENTAL ORGANIZATIONS

KEY ACTIVITIES

Our key activities encompass the development, integration of technologies, algorithm implementation, stakeholder engagement, training, monitoring, and regulatory compliance to effectively operate the smart cycle application and promote sustainable urban development.

KEY RESOURCES

Key resources include technological infrastructure (IoT sensors, blockchain platforms), skilled personnel, access to energy and waste data, partnerships, and financial resources.

VALUE PROPOSITIONS

provide factories with a smart cycle application that optimizes energy usage, minimizes waste, and promotes sustainability, resulting in cost savings and environmental benefits.

CUSTOMER RELATIONSHIPS

In the customer relationship aspect, we prioritize continuous support, feedback gathering, and customization to ensure the smart cycle application effectively meets the evolving needs and challenges of our factory partners.

CHANNELS

Our channels include online platforms for application access, direct sales teams for client engagement, and educational workshops for user training and awareness-building.

CUSTOMER SEGMENTS

1. Factories and industrial facilities.
2. Government agencies and regulatory bodies.
3. Technology providers.
4. Environmental organizations.
5. Investors and financial institutions.

COST STRUCTURE

OUR COST STRUCTURE ENCOMPASSES EXPENSES RELATED TO APPLICATION DEVELOPMENT, TECHNOLOGY INTEGRATION, PERSONNEL, MARKETING, AND ONGOING OPERATIONS TO ENSURE THE EFFECTIVE IMPLEMENTATION AND MAINTENANCE OF THE SMART CYCLE APPLICATION.

REVENUE STREAMS

Our revenue streams consist of subscription fees, revenue sharing from transactions, consultancy fees, and potential partnerships or licensing agreements.

conclusion

By embracing our smart cycle solution, communities can unlock a future of sustainable and efficient energy and waste management, paving the way for a more resilient and environmentally-conscious world.

Thank you for your attention!