AI-Powered Carbon Footprint Calculator

Sustainable Resource Management

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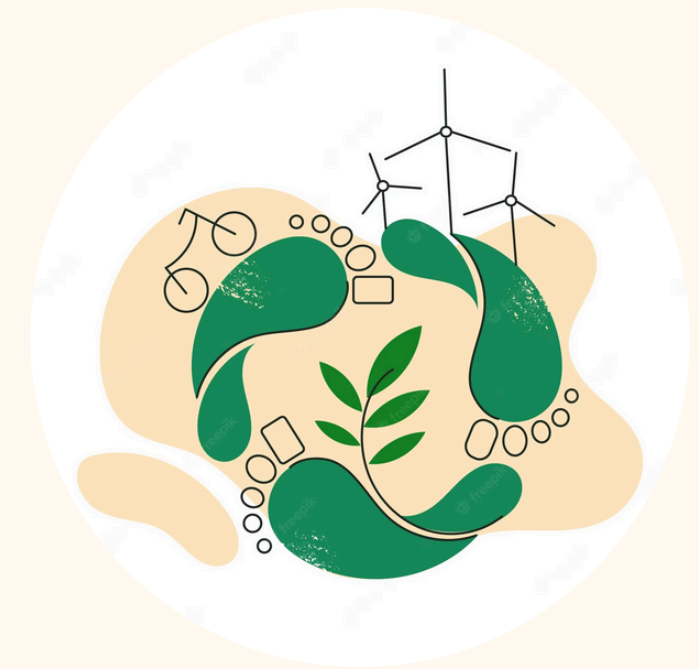Jibei Ma

Global Carbon Footprint & Climate Targets

Current Global Average
Each person globally emits about **4.7 tonnes of CO2** annually

Paris Agreement Targets
To avoid a critical **2°C** rise in global temperatures, average emissions per person need to **reduce to below 2 tonnes** CO2 by **2050**

Required Reduction
This entails a reduction of more than **50% from current levels** over the next few decades

Why this tool?

This is an AI system designed to assist companies and individuals in calculating and reducing their carbon footprint.

This tool leverages predictive analytics to optimize energy use, transportation contribution, and resource allocation and provides a user-friendly interface for interactive guidance and reporting.

Why does our Product matter?

1. Saving the world
2. Improving individuals' contribution to the environment
3. Sustainability and Regulatory Compliance
4. Standardization of Carbon Footprint Calculation

Problem Statement

Market Needs:

1. Accessibility and Real-time Response for carbon footprint calculations
2. Standardization Across different features on an enterprise level
3. Individual awareness and motivation to make it a daily practice
4. User-Friendly Solutions for companies and individuals

Challenges:

1. Compliance with Regulations
2. Operational Costs
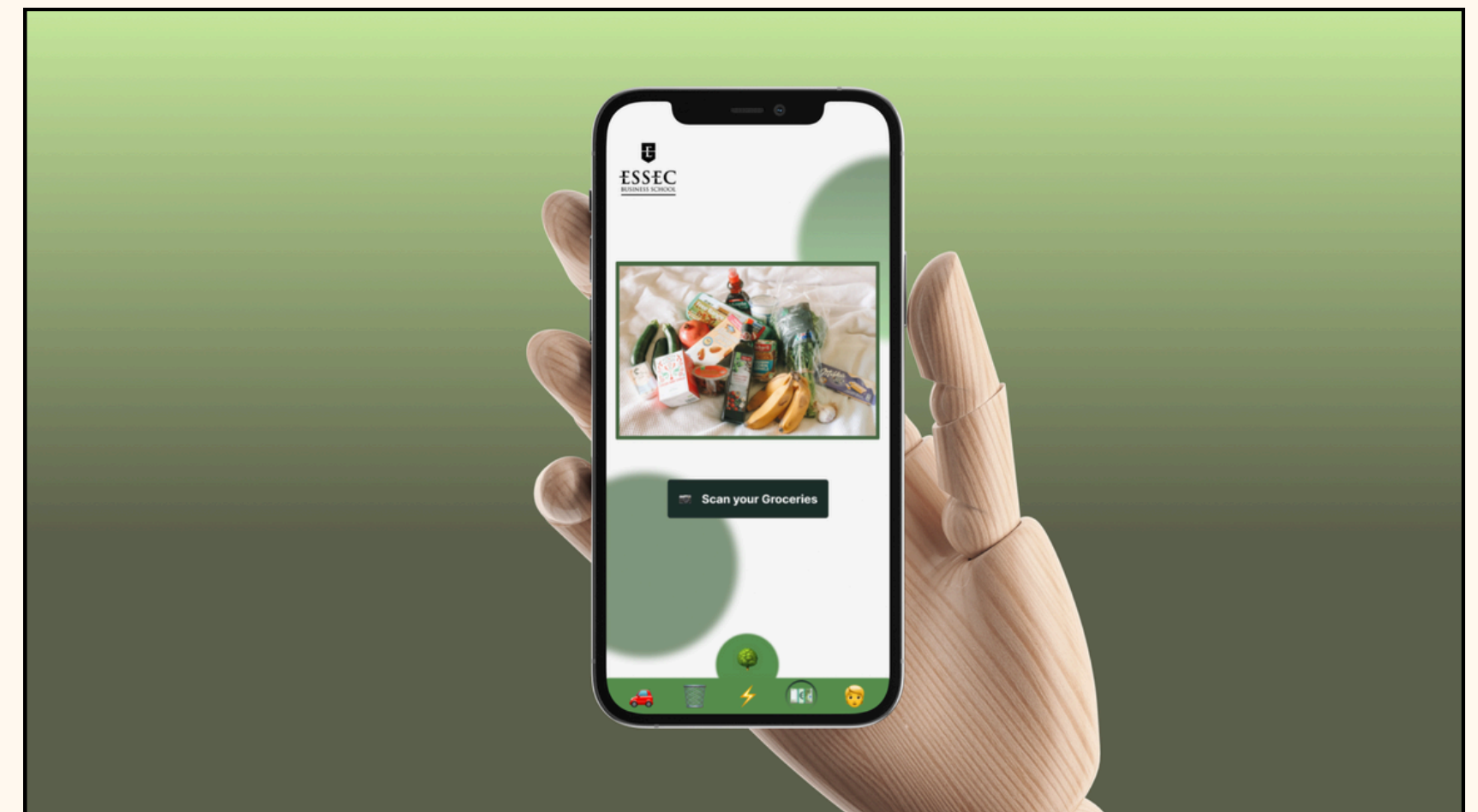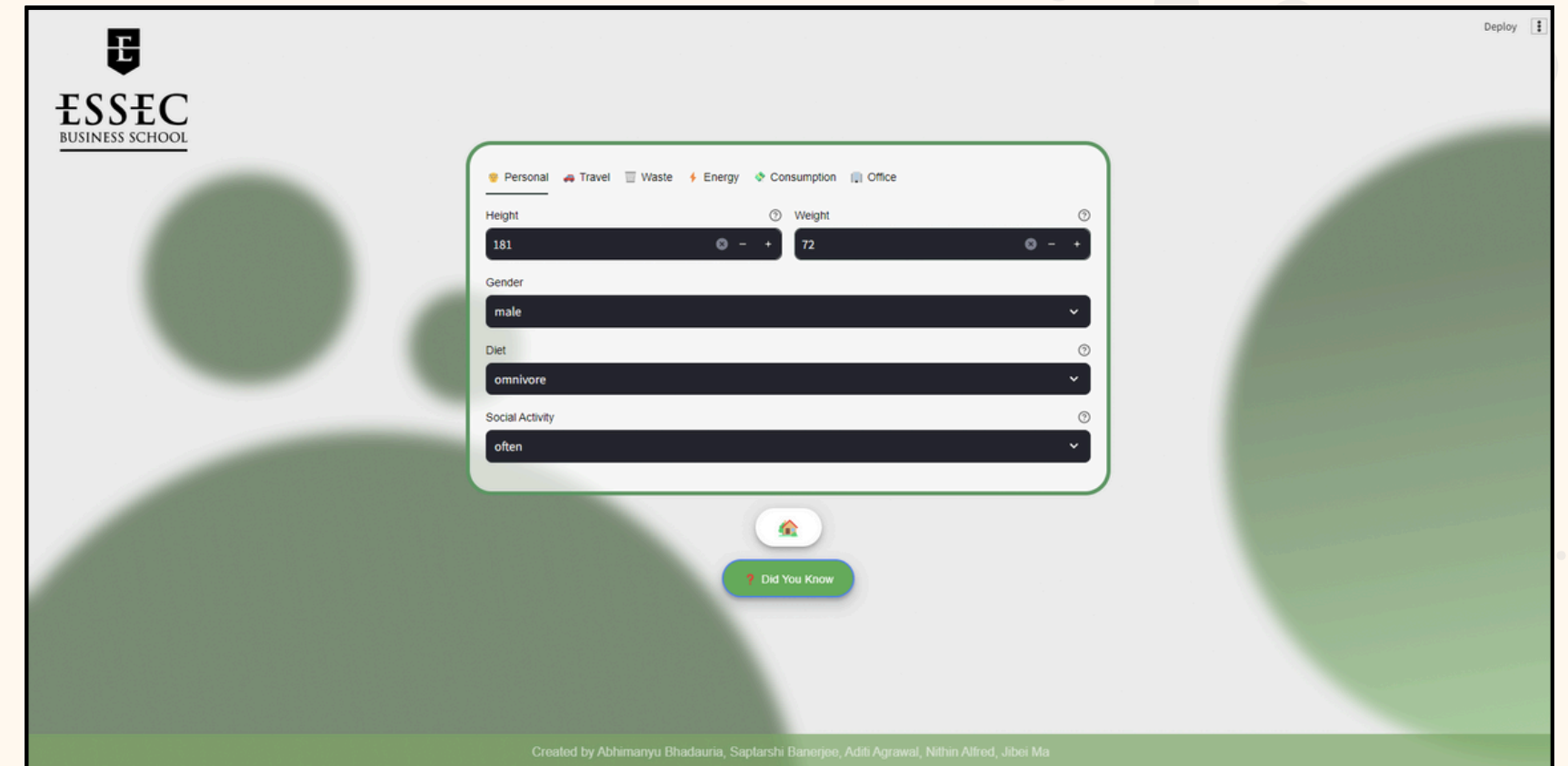3. Consumer Demand for Sustainability
4. Corporate Social Responsibility (CSR)

Our Solution

Unique Value Propostion:

Standardized one-stop tool to calculate an individual's carbon footprint at an enterprise level.
A **gamified app** to increase interaction & participation.

Future Features:

Real-time monitoring and optimization suggestions

Demo

# Lean Canvas Business Model

The Lean Canvas

Problem

- **Lack of Accessible Tools** in for individuals & companies to manage their carbon footprint

- **Regulatory Compliance** in environmental regulations faced by companies & individuals to save the world

- **Lack of standardization** of accurate carbon footprint calculation in the current market

Existing Alternatives

- **Traditional Manual Consultancies:** that provide carbon footprint analysis without real-time data/ AI optimization

- **Simple Carbon Calculators** that offer static carbon footprint calculations with limited actionable insights

- **Environmental Management Software** that are not user-friendly or tailored specifically to carbon management

Solution

- **Interactive Carbon Footprint Calculator** for individuals & enterprises

- **Real-Time Optimization Suggestions:** to reduce the carbon footprint based

- **Integrated interface** that offers guidance, simplifies data input, and helps interpret results for users

Key Metrics

- **User Adoption Rate:** The number of new sign-ups and active users (enterprises)

- **Customer Retention Rates:** The number of customers renew their subscriptions.

- **Carbon Reduction Achieved:** Total amount of carbon emissions reduced by users of the tool.

Unique Value Prop.

- **Standardization Across Industry:** One-stop tool for all calculations to give a standard value of carbon footprint

- **Comprehensive Management Tool:** All-in-one solution for tracking, reporting, and reducing carbon emissions.

- **Real-Time Data Utilization:** Uses real-time data to provide immediate feedback and actionable insights.

High-Level Concept

"Gamifying Carbon Footprint Calculations":

An app that that tracks and provides insights into your carbon footprint similar to the functioning of a Sleep App. Furthermore, can be a morale boosting factor on an enterprise level among employees..

Unfair Advantage

- **Advanced AI Algorithms:** Proprietary machine learning models that offer more accurate predictions and optimization than competitors.

- **Seamless Integration Capability** with existing systems in any industry.

- **Expertise in Environmental Compliance:** In-depth understanding and built-in features to ensure compliance with global standards.

Channels

- **Online Platforms:** Distribution through SaaS models via company websites and apps

- **Trade Shows and Conferences:** Engagement with potential customers at environmental and industry-specific events.

- **Direct Sales Teams:** Targeted outreach by sales teams to enterprises and SMEs.

Customer Segments

- **Manufacturing Companies:** Industries with significant environmental impacts and regulatory compliance needs.

- **Tech Companies** looking to enhance their CSR initiatives & reduce operational emissions.

- **Small and Medium Enterprises (SMEs)** seeking cost-effective solutions to manage their environmental responsibilities.

Early Adopters

- **Eco-conscious Businesses:** Companies already committed to sustainability initiatives.

- **Tech-Savvy Enterprises:** Businesses that are early adopters of new technologies, especially in tech and manufacturing sectors.

- **Regulatory-Driven Companies:** Enterprises in regions with strict environmental compliance laws.

Cost Structure

- **Development Costs** (Ongoing development of AI algorithms and system updates) €150,000
- **Maintenance Cost** (other operational costs): €30,000
- **Marketing and Sales** (Costs associated with acquiring new customers and market penetration) €50,000
- **Client Acquisition Costs** €40,000
- **Total Costs: €270,000**

Revenue Streams

- **Subscription-Based Model:** Monthly or annual subscription fees for access to the tool €250,000
- **Consulting Services:** Providing expert analysis and personalized advice as a premium service €100,000
- **Partnerships and Integrations:** Revenue from partnerships with other environmental tech companies €40,000
- **Advertisements:** Revenue generated from advertisements on website and app €30,000
- **Total revenue: €420,000**

Revenue Model

The global carbon management market size was valued at approximately **€10 billion in 2020 &** is projected to grow to around **€15 billion by 2025**
France accounts for about 3% of the global market, the target market size in France could be around **€450 million by 2025**
Paris accounts for around 30% of the national market, the target market size in Paris would be approximately **€135 million.**

Component	Cost (EUR)
Development Costs	€150,000
Maintenance Costs	€30,000
Marketing Costs	€50,000
Client Acquisition Costs	€40,000
Total Costs	**€270,000**

Component	Revenue (EUR)
Subscription Revenue	€250,000
Consulting Revenue	€100,000
Partnership Revenue	€40,000
Advertisement Revenue	€30,000
Total Revenue	**€420,000**

Market Impact
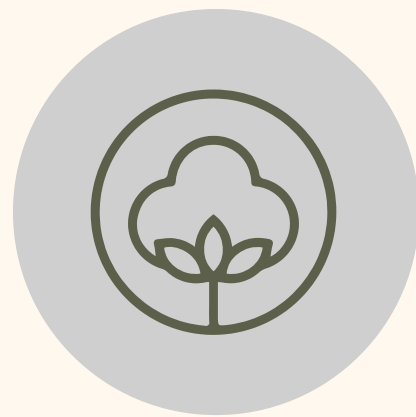
Enhanced Regulatory Compliance and Avoidance of Penalties

Our AI tool facilitates real-time carbon emissions tracking and compliance reporting, enabling companies to meet regulatory standards effortlessly.

Cost Savings through Efficient Resource Management

By leveraging predictive analytics and optimization algorithms, our tool helps individuals & companies reduce their carbon footprint and operational costs.

Strengthened Brand Reputation and Customer Loyalty

By integrating CSR into their core strategies and providing transparent carbon output data, businesses can enhance their brand reputation and build stronger customer loyalty.

Future Directions

- Expansion to Consumer Markets with Mobile Integration
  - Gamification elements
  - Earning badges for reducing energy
  - Suggesting eco-friendly transportation options
  - Integration with smart home devices and wearables

- Enhance the tool's predictive capabilities using advanced machine learning algorithms

- Extend the tool's functionality to include comprehensive supply chain carbon footprint analysis

- Collaboration with sustainable travel companies, hotels, etc

Thank you!
We are open to your questions.