Lean Canvas

Designed via Altexsoft Lean Canvas Tool

Problems

- Develop a smart damage/leakage detection system for a oil and gas pipelines integrated with a mobile SMS app to alert and display the issue including time and location of leakage Task 1 : Create a business model canvas of design thinking for the above problem Task 2 : Prepare a UI template using a figma tool Task 3 : Create a customer journey map for the given problem

Existing Alternatives

- Proactive support (regular maintenance and updates)24/7 technical assistance. Training sessions for pipeline operators.
Customizable alert settings.

Solution

- Sensor manufacturers Telecom service providers (SMS alerts)Oil and gas companies Government and regulatory bodies AI/ML solution providers Pipeline maintenance teams Technology integrators for IoT

Key Metrics

- Design and development of smart sensors. Integration of IoT for real-time data collection. Machine learning model for anomaly detection. Development of mobile SMS app. Maintenance of the detection system. Data analysis and visualization. Customer support and training

Unique Value Propositions

- Real-time detection of pipeline damage and leakage Quick and accurate location identification Cost savings through preventive maintenance Environmental safety and compliance Instant alerts via SMS for immediate action Enhanced operational efficiency for oil and gas companies

High-Level Concept

- A real-time IoT-based pipeline monitoring solution that uses advanced sensors.

Unfair Advantage

- 1. Proprietary Sensor Technology: Unique, durable, and self-diagnostic IoT sensors.2. Machine Learning: Custom models for accurate, predictive anomaly detection with minimal false positives.3. Seamless Integration: Compatibility with existing infrastructure, ERP, and SCADA systems.4. User-Centric UX: Intuitive, customizable app with geolocation and actionable alerts.

Channels

- Direct sales to oil and gas companies. Partnerships with regulatory bodies. Industry conferences and expos. Online demonstrations and marketing campaigns.

Customer Segments

- Oil and gas companies. Government environmental agencies. Industrial pipeline operators. Pipeline maintenance contractors.

Early Adopters

- Oil & Gas Companies: Large and small operators needing cost-efective monitoring.2. Pipeline Maintenance Contractors: To enhance service quality.

Cost Structure

- R&D for sensor development. App and IoT platform development. Cloud storage and computational resources. Staf training and salaries. Marketing and customer acquisition costs. 1. Development Costs Hardware: R&D for IoT sensors, material sourcing, and manufacturing .Software: Mobile app development, cloud platform integration, and machine learning model training.2. Operational Costs Sensor Deployment: Installation and calibration of sensors on pipelines. Server/Cloud Hosting: Data storage, real-time processing, and analytics .Monitoring and Maintenance: Routine checks, frmware updates, and customer support.3. Sales and Marketing Customer acquisition, partnerships, advertising, and industry expos.4. Stafng and Training Engineers, data scientists, customer support teams, and sales professionals.5. Regulatory Compliance Certifcations, audits, and adherence to safety and environmental laws.6. Third-Party Integrations APIs for compatibility with ERP, SCADA, and geolocat

Revenue Streams

- sale of IoT sensors and devices Subscription fees for software and monitoring services Maintenance and support contracts Data analytics services. Hardware Sales One-time sales of IoT sensors and associated devices. Subscription Fees Monthly/annual subscription for real-time monitoring, data analytics, and app accessn. Maintenance and Support Contracts Regular system maintenance, frm ware updates, and customer support. Predictive Analytics Services Premium plans for advanced insights, predictive maintenance, and custom reporting. Data Monetization Aggregated, anonymized data sold to third parties for research or benchmarking (with consent).