Batch :- 7

Harsh Raj Singh Rao : - 2 4 C S 0 0 3 1 1 3

Dipesh Jain : - 2 4 C S 0 0 3 1 2 2

Nakkina Kodanda Pani : - 2 4 C S 0 0 3 1 1 5

Chinmayi Bhartiya : - 2 4 C S 0 0 3 1 3 2

Business Model Canvas

Created by Batch :-7

Designed via AltexSoft BMC Tool

Key Partnerships

- 1. IoT Manufacturers:Suppliers of specialized sensors and data transmission equipment.2. Telecommunications Providers:Mobile network operators ensuring reliable SMS notifications and GPS services.3. AI and Analytics Partners:Partnerships with companies providing machine learning and big data analytics platforms to enhance system accuracy.4. Environmental & Safety Regulatory Agencies:Collaboration with government bodies to ensure the system complies with industry regulations.

Key Activities

- 1. System Development and Integration:Continuous R&D to improve the accuracy, reliability, and scalability of the leakage detection system.2. Monitoring & Maintenance:Regular monitoring and software updates to ensure the system performs at optimal levels, preventing false positives and ensuring timely notifications.3. Customer Acquisition:Direct sales efforts, marketing, and attendance at industry conferences to promote the system to potential customers.

Key Resources

- IoT Sensor Technology: Robust and weather-resistant sensors designed to work in remote and harsh environments.Data Analytics Platform: A cloud-based AI system that continuously monitors sensor data.Mobile Application Development: A secure mobile platform with SMS integration for quick notifications.Partnerships: Collaborations with mobile network operators for reliable SMS communication and GPS service providers for location tracking.

Value Propositions

- Real-time Leakage Detection: Immediate alerts minimize response times and reduce environmental damage, financial losses, and safety risks.Cost Savings: Prevents oil or gas spills that can lead to expensive clean-ups, legal penalties, and shutdowns.Environmental Protection: Ensures compliance with environmental regulations by reducing the likelihood of spills.Mobile Connectivity: Alerts and data are delivered instantly through SMS and a mobile app, providing flexibility and reliability.Scalability: The system can be scaled to cover pipelines of any length, making it adaptable for different operational needs.

Customer Relationships

- 1. Long-Term Service Contracts:Establishing service-level agreements (SLAs) with long-term monitoring and maintenance contracts.2. 24/7 Customer Support:Providing around-the-clock support, ensuring quick responses to any technical issues or emergencies with the system.3. Training and Education:Offering on-site and online training programs for operators to learn how to effectively use the system and interpret the data and alerts.

Channels

- Direct Sales to Oil & Gas Companies: Directly approaching companies involved in pipeline operations.Partnerships with Regulatory Bodies: Collaborating with environmental agencies and safety regulators for mandated pipeline safety.Reseller Networks: Partnering with industrial IoT vendors and contractors specializing in oil and gas infrastructure.

Customer Segments

- 1. Oil & Gas Companies: Midstream Companies: Responsible for transporting oil and gas through pipelines.Upstream & Downstream Companies: Focus on exploration, production, refining, and delivery, with a need for pipeline infrastructure protection. 2. Pipeline Operators : Firms that maintain and operate pipelines on behalf of energy companies. 3. Government Agencies & Regulators : Environmental Protection Agencies (EPA): Monitoring for compliance with safety and environmental regulations. Safety Authorities: Organizations ensuring safe pipeline operations to prevent catastrophic failures. 4. Third-Party Service Providers:Pipeline Maintenance Contractors: Companies that provide maintenance services to pipeline owners/operators and could use this system to enhance service efficiency. Consulting Firms: Environmental and safety consulting firms providing pipeline risk assessments.

Cost Structure

- 1. R&D and Product Development:High initial costs for developing sensor technology, AI algorithms, and the mobile platform.2. Manufacturing Costs:Production costs for sensors and control systems, particularly if specialized for harsh environments.3. Cloud and Data Storage:Ongoing costs for maintaining cloud infrastructure for real-time data processing and long-term storage of pipeline data.4. Customer Support and Maintenance:Costs associated with providing 24/7 support, training, and maintenance services to customers.5. Sales & Marketing:Expenditures on customer acquisition, industry partnerships, and promotional activities.

Revenue Streams

- 1. Hardware Sales:IoT Sensors: The initial cost of installing the sensors along the pipeline generates revenue. Sensors are customized depending on pipeline type (oil or gas, pressure ratings, environmental conditions).Control Systems: Centralized control units at pump stations or main hubs for processing data from sensors and sending alerts.2. Subscription Model (SaaS):Monitoring Subscription: Monthly or yearly fees for continuous real-time data monitoring and access to analytics through the mobile app and SMS alert system.Premium Analytics Services: Higher-tier subscription for advanced analytics, risk forecasting, and predictive maintenance recommendations.3. Installation and Maintenance Contracts:System Installation Fees: Professional installation services for customers.Annual Maintenance Fees: Ongoing revenue from system maintenance, sensor calibration, and upgrades.4. Data Analytics and Reporting:Offering periodic reports on pipeline health, compliance status, and performance trends.Integration with government/regulatory reporting systems for automatic submission of compliance reports.