Business Model Canvas

Designed via AltexSoft BMC Tool

Key Partnerships

- Siemens Mobility – For metro-specific sensor systems and integration.
- Nokia or Ericsson – For private 5G and secure IoT connectivity.
- AWS / Microsoft Azure – For cloud hosting, AI, and data analytics.
- Bentley Systems – For digital twin modeling and infrastructure simulations.
- Local Metro Authorities (e.g., DMRC) – For deployment, access, and policy collaboration
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Key Activities

- Install IoT sensors across critical structural components of the metro rail network.
- Set up data transmission protocols to transmit sensor data to the cloud for storage and analysis.
- Develop and integrate machine learning models to detect anomalies and predict potential failures.
- Create a real-time dashboard to display sensor data, issue locations, and alert maintenance personnel.

Key Resources

- IoT Sensors for real-time data collection.
- Cloud Platforms (AWS, Azure) for data storage and analysis.
- ML Libraries (TensorFlow, PyTorch) for anomaly detection.
- GIS Software (ArcGIS, QGIS) for visualizing locations.
- Dashboard Frameworks (React, Angular) for real-time monitoring.

Value Propositions

- Real-time Monitoring for proactive maintenance and quick issue detection.
- Cost Reduction through predictive maintenance, reducing downtime.
- Enhanced Safety by identifying potential structural failures early.
- Optimized Resource Allocation by prioritizing repairs based on severity.
- Improved Decision-Making with data-driven insights and reports. 4o mini

Customer Relationships

- 24/7 Support to address technical issues and provide assistance.
- Proactive Alerts to notify customers of potential problems before they escalate.
- Customized Solutions tailored to specific metro network needs.
- Regular Reports to keep customers informed on system performance and maintenance status.

Channels

- Mobile App for real-time monitoring and alerts.
- Web Dashboard for detailed analysis and issue tracking.
- Email Notifications for regular updates and critical alerts.
- SMS Alerts for quick notifications on urgent issues.

Customer Segments

- Metro Rail Operators seeking efficient infrastructure monitoring.
- Government Agencies focused on transportation safety and regulation.
- Maintenance Teams needing real-time issue detection and alerts.
- Engineering Consultants involved in structural assessment and planning.

Cost Structure

- Sensor Deployment for IoT devices and installation.
- Cloud Storage for data hosting and processing.
- Software Development for dashboard and analytics tools.
- Maintenance & Support for system updates and troubleshooting.
- Data Analytics for machine learning model development and operation.

Revenue Streams

- Subscription Fees for access to the monitoring system.
- Pay-per-Use for data analytics and reporting.
- Setup & Installation fees for sensor deployment.
- Maintenance Contracts for ongoing support and updates.
- Custom Solution development for tailored monitoring systems. 4o mini