Revolutionizing Public Sector Networks with AI-Driven Solutions

SPOT Connect: AI-Powered Network Resilience Platform. NTT DATA Living Lab Hackathon at MWC 2025, Barcelona.

Agenda

1. **Introduction & Context**
2. **Problem Statement**
3. **SPOT Connect Overview**
4. **Core Modules Deep Dive**

From architecture to roadmaps, deep dive into future enhancements.

Introduction & Context

Current Landscape

- Growing complexity in public infrastructure
- Rising operational costs
- Increasing demand for reliable services

Market Need

- Smart city initiatives
- Digital transformation
- Sustainable network operations

Problem Statement

Reactive Maintenance

Extended downtime

Resource Allocation

Inefficient

High Operational Costs

Increasing expenses

Limited Visibility

Lack of real-time data

SPOT Connect Overview

Predictive Maintenance

Real-time Monitoring

Intelligent Routing

Energy Efficiency

Core Modules Deep Dive

1

Predictive Maintenance

Anomaly detection, fault prediction

2

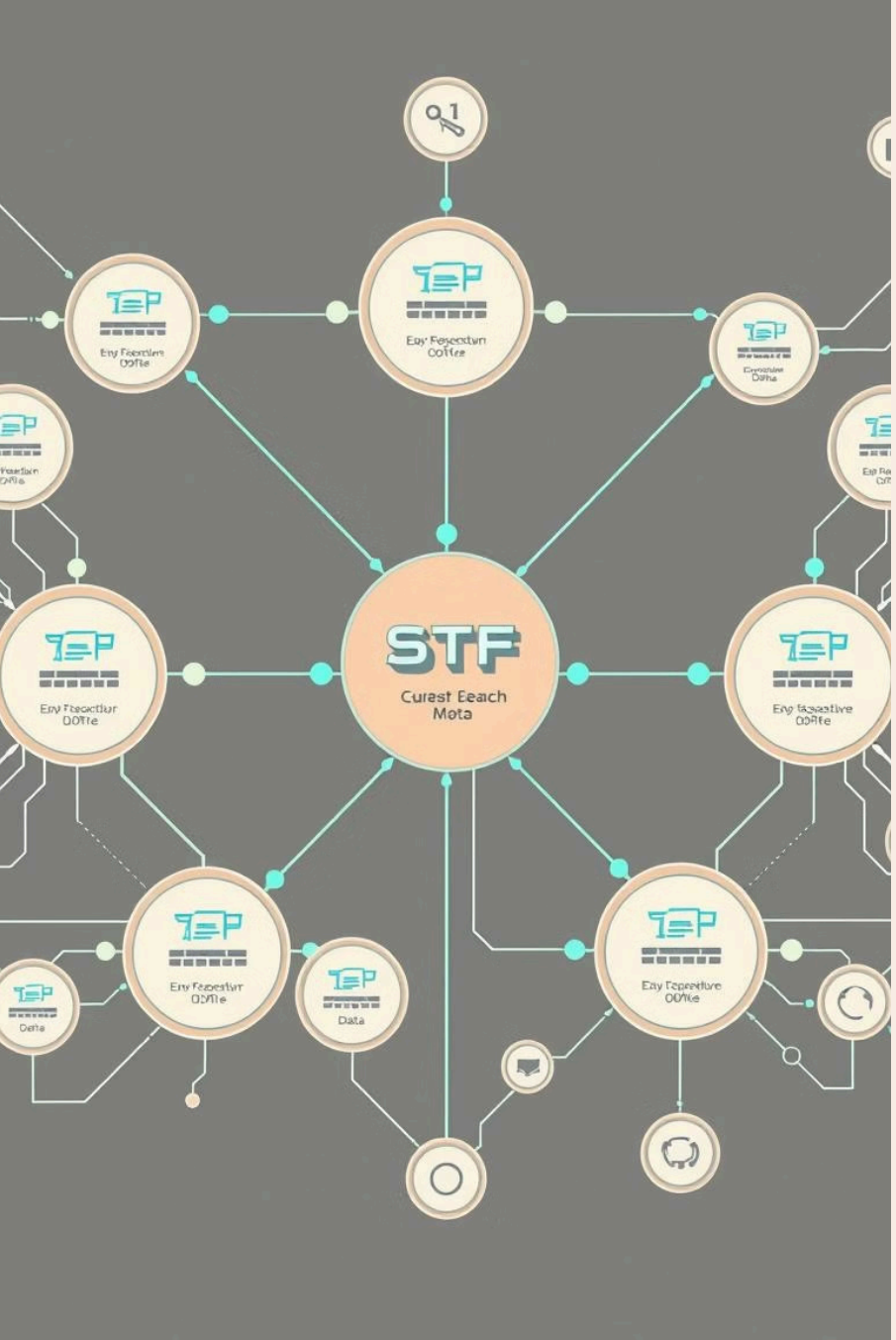
Network Intelligence

Dynamic routing, path optimization

3

Cost & Energy Management

Power monitoring, budget optimization



Technical Architecture

1

Backend

FastAPI, Python ML stack

2

Data Processing

Real-time analytics

3

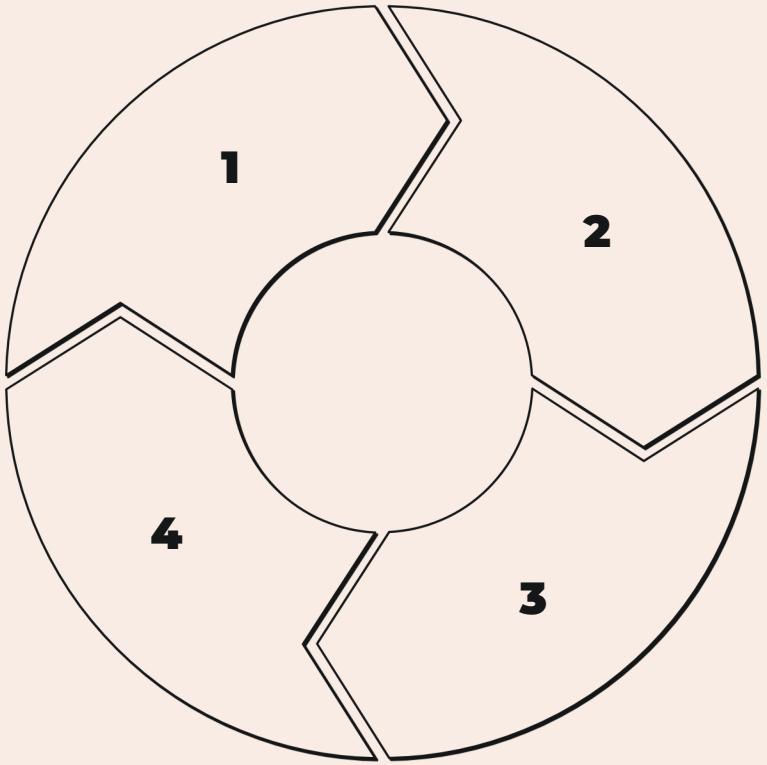
Security

JWT authentication, data encryption

Live Demo

Real-time Monitoring

Anomaly Detection



Cost Analysis

Route Optimization

Impact & Benefits

40

Downtime Reduction

Significant decrease

30

Cost Savings

Optimized expenses

25

Energy Efficiency

Improved performance

Future Roadmap

1 **Advanced ML**

2 **IoT Expansion**

3 **Cloud-Native**