ACTIVE-SYNC Transit Integrity Platform

Eliminating "ghost buses" through real-time service verification

- Zubair Akhtar

The Ghost Bus Crisis

01

False Promise

Google Maps shows "Bus arriving in 4 mins" but the street sign remains blank.

02

Endless Wait

20 minutes pass. The bus never arrives—it never left the depot.

03

System Failure

Apps broadcast scheduled buses with no cancellation signal when services fail to start.

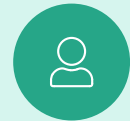## 6K

Complaints

In just 5 months (2025)

165M

Passengers Affected

Trust in public transport eroded

Active-Sync: The "Service Heartbeat"

Before broadcasting any bus to passenger apps, we verify physical reality:

Check 1: Driver Login

Is the driver logged into the onboard system?

Check 2: GPS Movement

Has the bus physically moved from the depot?

1

2

Both Verified

Broadcast to all passenger feeds

Either Fails

Kill signal—remove from all apps immediately

Result: What passengers see = Physical reality. No more ghost buses.

Middleware
Bus system to Passenger apps

Bus system
Pesywatry

Bus
Systeing

Clocert
Ocenzration

How It Works

Technical Architecture

Middleware sits between Dublin Bus data and public APIs, verifying service status before broadcasting.

Real-Time Verification

Continuous heartbeat monitoring ensures only active, moving buses appear in passenger applications.

12-Week Pilot Development Plan

Route 16 Implementation

Weeks 1-4: System Mapping

- Audit 30 days of Route 16 data
- Map current data flow
- Quantify ghost events baseline

Weeks 9-12: Live Deployment

- Connect to public GTFS feed
- Monitor real-time performance
- Measure impact vs baseline

1   **2**   **3**

Weeks 5-8: Build Middleware

- Develop API wrapper
- Code heartbeat verification
- Sandbox testing

80%

Target reduction in ghost bus incidents

Impact & Value

For Passengers

- Synchronised info across all platforms

- No more waiting for ghost buses

- Restored trust in journey planning

For Dublin Bus

- Solves 6,000 annual complaints

- First-time visibility into service failures

- €50k+ savings on NTA penalties

- Foundation for 1,100-bus network rollout

100%

Key Metric

Elimination of app/reality conflicts

Beyond Dublin

🚀 Immediate: Route 16 Pilot

Q1 2026 deployment

Short-Term: All Dublin Bus Routes

Full network integration

Long-Term: Global Transit Operators

Every city with GTFS feeds has this problem

Target Market

London TfL | Paris RATP | New York MTA

50+ major transit authorities globally

Business Model

SaaS licensing: €2k-15k/month

Active-Sync as "Truth-as-a-Service"