Use Case: Transit Route Planning AI Assistant in Pristina, Kosovo[1]

Overall Objective

A GenAI Transit Route Assistant that consolidates transport, traffic, urban planning, and resident feedback data to help Pristina's mobility planners make faster and better-informed transit route reviews, ultimately improving public transport reliability, optimizing network coverage, and reducing traffic congestion.

Rationale

Pristina is experiencing rapid urban development. New residential areas, shifting travel patterns and rising traffic mean public transport routes need more frequent review to keep up. Routes that keep pace with these changes could make public transport a more realistic alternative to driving for more residents, helping ease congestion and improve air quality as the city continues to grow. The city has already built strong digital foundations to support this, including the Smart City Platform (prishtinasmartcity.com), the Public Transport Management and Monitoring Platform, including the public smartphone app Trafiku Urban, the Traffic Monitoring Platform and GPS Tracking System. Bringing these sources together through a single tool would let planners draw on all of that evidence at once, rather than working through it system by system, so route reviews can keep pace with the city's growth.

The gap here is evidence synthesis, not data collection. The underlying information largely exists already. Pulling it together into a route-review-ready summary is still a manual process, and that creates delays. This is hardest to keep up with in newly built and rapidly changing neighbourhoods, where conditions shift fastest and the evidence needs updating most often.

Personas

- **Municipal Representative:** Gent, 57, Mobility Planner in Pristina's Mobility Department, working closely with the Head of Digitalization. He is responsible for reviewing whether existing bus routes still match how the city moves, but with multiple systems to check, most of his time goes into gathering and comparing evidence rather than planning itself. He wants a tool that surfaces where routes may need review, with

sources attached, so he can focus on judgment calls rather than data assembly.

- **Resident:** Fatlume, 29, moved with her family to a newly built residential area on Pristina's edge two years ago. With traffic in the city getting worse and parking increasingly hard to find, she would rather rely on public transport than drive to work, but the bus routes near her house don't match her commute. She's not the only one making this commute; many of her neighbours travel the same route every day. A new route could make public transport a real option for all of them, not just her.

Key Features (Minimum Viable Product)

- **Natural-Language Evidence Retrieval:** Authorised planners can ask questions in Albanian, Serbian or English across a defined set of approved municipal sources (transport routes and schedules, traffic data, and resident feedback) and receive a synthesised answer. To keep the MVP within budget, GIS layers and unstructured documents (such as planning documents) are not part of the initial scope.
- **Evidence Summaries with Source Attribution:** Generates an evidence-backed textual summary and situation overview. Generated evidence-backed textual report of information summary and situation overview. Every response links back to the original document, dataset or record, so planners can verify before acting.
- **Route Review Flagging:** The tool highlights locations where current evidence suggests a route may no longer match demand, without recommending or making changes itself.
- **Human-in-the-Loop Decision-Making:** All outputs are treated as preparatory evidence; planners remain responsible for evaluating it and for any operational decision.

Optional Features

- **Multilingual Expansion:** Broader coverage of Albanian-, Serbian- and English-language source documents as they're digitised.
- **Resident Feedback Dashboard:** A structured view of recurring complaint themes by neighbourhood, combined with public sentiment from social media (such as Facebook, Reddit, X and Instagram) on particular routes, public transport and city traffic.
- **Cross-Department Query Support:** Extending retrieval to urban development and permitting records held by other departments.

Target user

Municipal mobility planners and authorised staff responsible for public transport planning in Pristina.

Expected Benefits

- **Faster Route Reviews:** Less time spent manually gathering and cross-referencing evidence.
- **More Consistent Analysis:** Reviews draw on the same defined source set and method each time.
- **Better-Connected Growing Neighbourhoods:** Evidence-based reviews should catch underserved areas sooner.
- **Preserved Institutional Oversight:** Because it only prepares evidence, the tool strengthens existing planning processes rather than displacing them.

Indicative Data Types and Sources

- Public transport route and schedule data
- Traffic monitoring data
- GPS Tracking System
- IoT Hub data (Smart City Platform)
- Urban development and planning documents
- Resident complaints and service requests
- Municipal reports and decisions
- Passenger counts on buses and at bus stops (planned for the future, not part of the initial scope)
- Social media posts on particular routes, public transport and city traffic (for the optional Resident Feedback Dashboard)

Actual sources, access terms and quality will be confirmed with the Municipality before implementation; most existing records are in Albanian, with some in Serbian and English.

This Use Case is subject to change through The GenAI for Good Challenge phases as collaboration shapes preparation for piloting and implementation.

[1] *References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).*