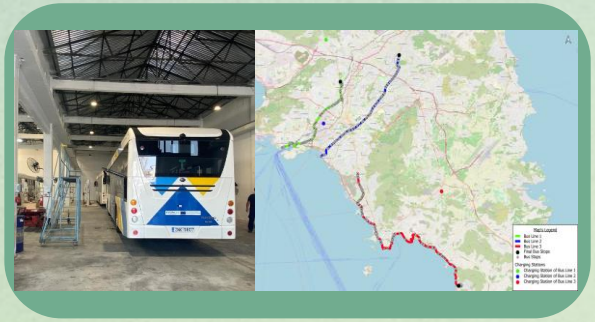
Athens - Greece
Optimised Scheduling and Route Planning for Electric Bus Integration in Athens

Code: AT-UC01
Brief: Optimise scheduling and routing to efficiently integrate new electric buses into Athens' public transport system.



Key Urban Challenges Addressed:

- **Electric bus integration** into Athens' existing bus system.
- **Two deployment phases** complicate fleet management.
- **Deadheading, charging, scheduling inefficiencies.**
- **Need for decision-support tools** to optimise operations and ensure service reliability.

Goals & Anticipated Benefits:

- **Reduce emissions & improve air quality**: Shift freight to electric, autonomous vessels.
- **Relieve roads**: Free space for pedestrians and bikes.
- **Manage traffic:** Use AI to optimise waterway flow and adapt services in real time via smart systems.

Ownership:

- **NTUA** develops scheduling and line planning algorithms
- **OASA** has acquired the funding for the physical infrastructure
- **Anaplassis** will provide data and field-knowledge

Infrastructure:

- 240 e-buses in operation
- 125 more e-buses are expected in April 2026
- Combined line planning modification and vehicle scheduling model
- Electric bus scheduling model based on trip services

Location:
This use case is applied to the area of the Municipality of Athens. Some public transport services are also examined that expand to the Athens metropolitan area and the wider Attica region.

Timeline:

March 2024 - June 2024
Gradual operation of 240 electric buses

April 2026
Full operation of 365 electric buses

June 2026
Testing of new optimised vehicle schedules

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