



GREEN INTER-E-MOBILITY

UPatras progress issues

5th Project Meeting

28/03/2022

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UPatras activities

- **Project Management & Communication activities (WP1 & WP2).**
- **Deliverable 3.6.3:** Studies for the most efficient electric minibuses' route schedule (i.e., tourist-route, school-route) per Municipality
- **Contribution to Del. 3.6.4:** Study for the Vehicle-to-Infrastructure (V2I) communication systems & Tender Preparation for their procurement (WP3).
- **Contribution to Del. 6.6.2:** Tender Preparation & Procurement of the specialized equipment (instruments for the surveillance of the consumed energy, tracking of the e-vehicles, etc.) & Technical Evaluation of the whole system (i.e., installed charging-stations, route-network efficiency) (WP6).



University of Patras studies

Deliverable 3.6.3

Studies for the most efficient electric minibuses' route schedule per Municipality

(Bitola, Resen, Prespes & Florina)

Routes

Scheduling



Data Collection(1/2)

**Data on current
mobility needs &
requirements**

**Modes that local
citizens use for
their daily
transport**

**Awareness of
public needs,
including origins
and destinations**

**Positions of stops
and their
popularity**

**Citizen needs and
requirements for
education, fitness,
recreation, health
& markets**



Data Collection(2/2)

Electric vehicles characteristics

1 electric minibus (e-minibus)

- seven seats
- combined cycle autonomy: 389km
- mixed cycle autonomy: 200km
- city cycle autonomy: > 300km

1 electric utility car

- five seats
- combined cycle autonomy: 270km

Charging of electric vehicles

charging station & grid-connected photovoltaic (PV) system



Public Transport Simulation



aimsun.

Next 8.4.0 Software

1. Map importing as a road network

2. Public Transport Routing

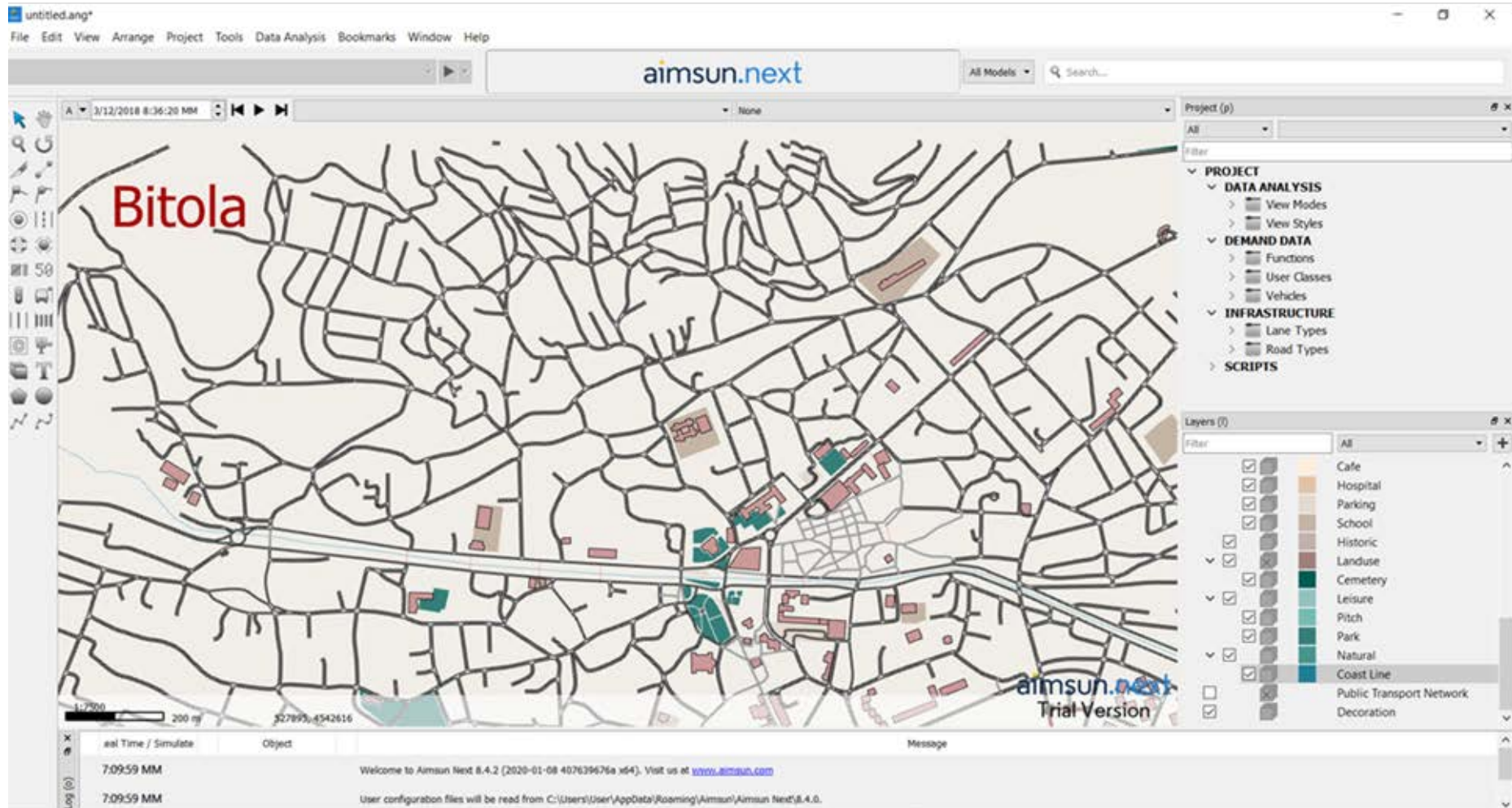
3. E-minibus Scheduling



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Municipality of Bitola

Bitola's map imported as a road network in Aimsun Next software



Municipality of Bitola

Main routes destinations

1. City Library St. Kliment Ohridski

2. City Stadium Tumbe Kafe

3. Trnovo - Baba Mountain village

4. Pretor village- Prespa Lake

5. Krushovo town

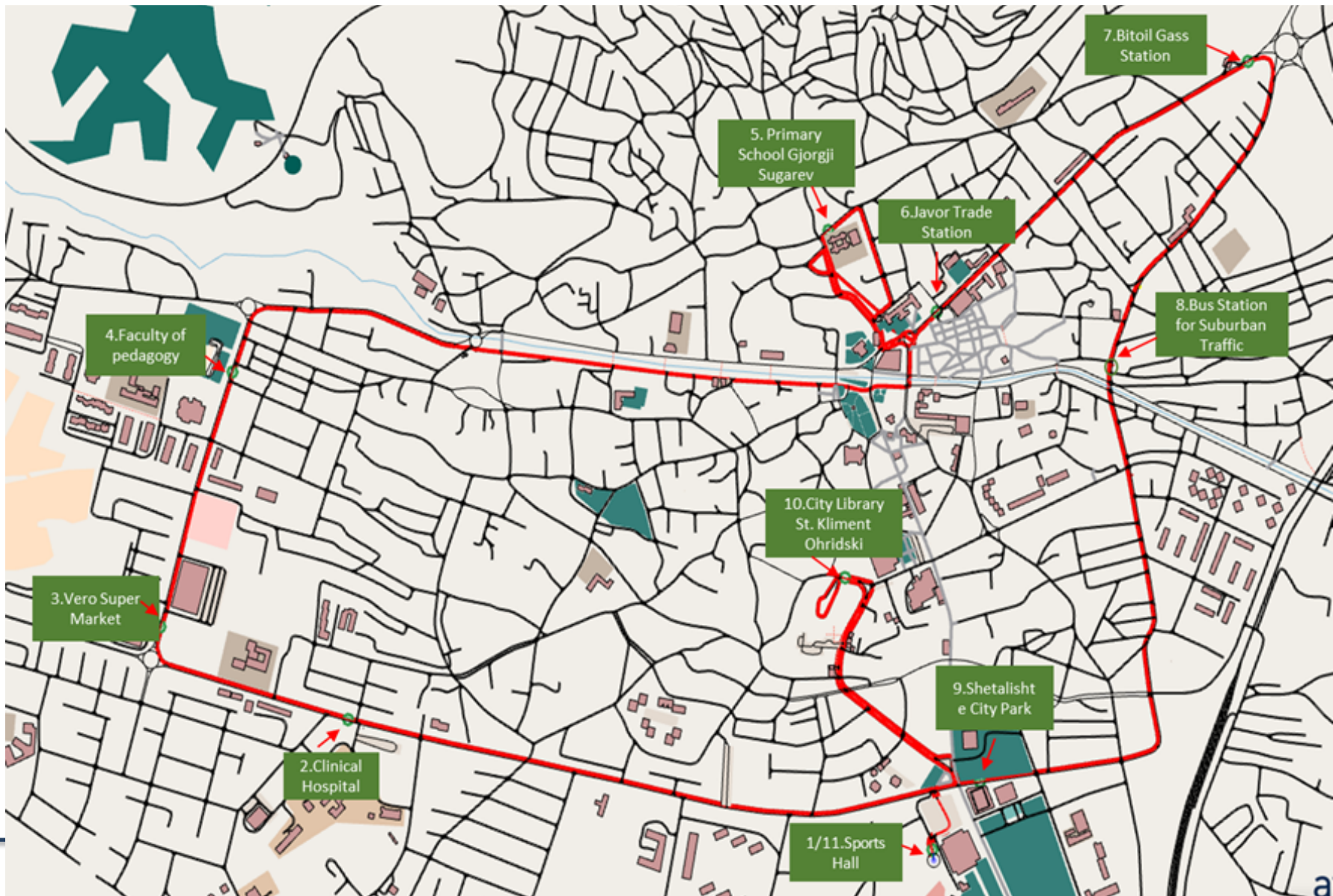
6. Ohrida city

7. to Resen-Prespes-Florina



Municipality of Bitola

Route 1 (City Library St. Kliment Ohridski) and the intermediate stops



Municipality of Bitola

The suggested e-minibus scheduling for the four (tourist) routes

1st Saturday of the month

Time	Stop	
09:00 PM	Sports Hall Boro Churlevski	4
09:05 PM	Vero Super Market	4
09:08 PM	Faculty of Pedagogy	4
09:39 PM	Pretor village-Prespa Lake	4
10:08 PM	Faculty of Pedagogy	4
10:11 PM	Vero Super Market	4
10:17 PM	Sports Hall Boro Churlevski	4

2nd Saturday of the month

Time	Stop	
09:00 PM	Sports Hall Boro Churlevski	6
10:03 PM	Ohrida	6
11:02 PM	Sports Hall Boro Churlevski	6

1st Sunday of the month

Time	Stop	
09:00 PM	Sports Hall Boro Churlevski	5
10:02 PM	Krushevo	5
10:52 PM	Sports Hall Boro Churlevski	5

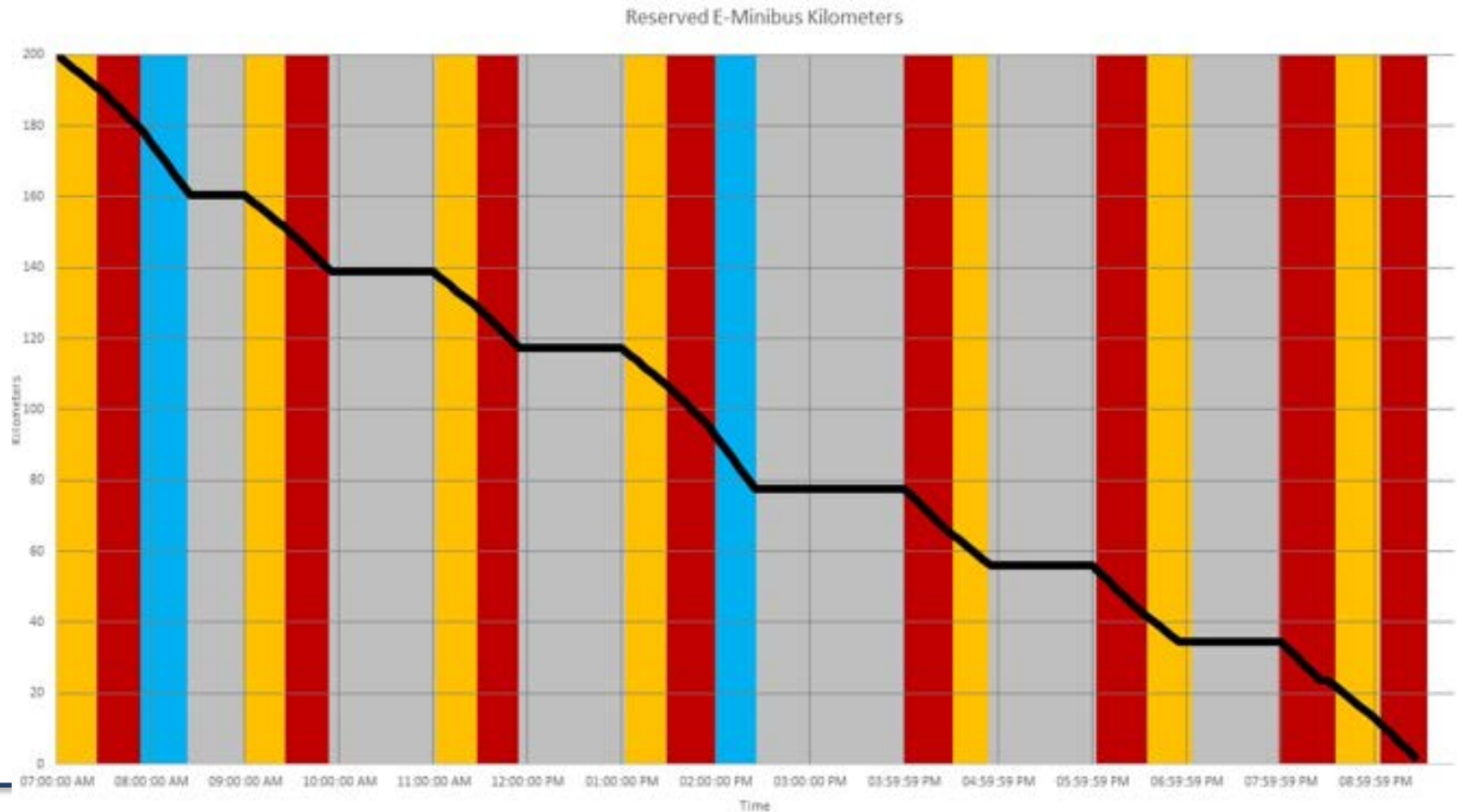
2nd Sunday of the month

Time	Stop	
08:00 PM	Sports Hall Boro Churlevski	7
09:34 PM	Resen Town Hall	7
09:11 PM	Prespes Town Hall	7
09:54 PM	Florina Town Hall	7
10:23 PM	Sports Hall Boro Churlevski	7



Municipality of Bitola

The e-minibus' energy reserve, in kilometers remaining during a day



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Thank you!

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