

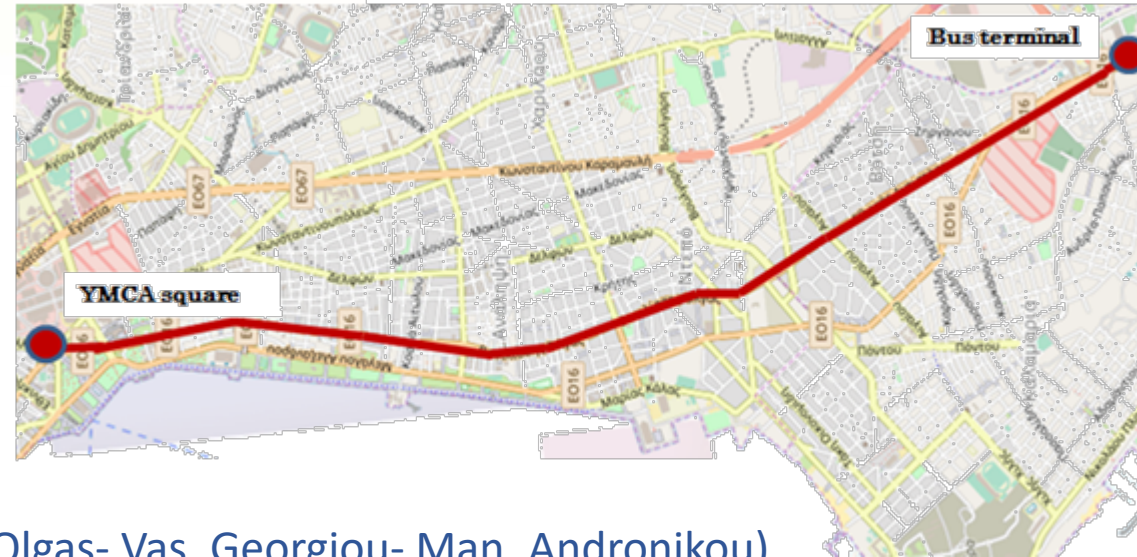
Development of a modulo proposal for the upgrade of the ‘Eastern Horizontal’ Axis of Thessaloniki

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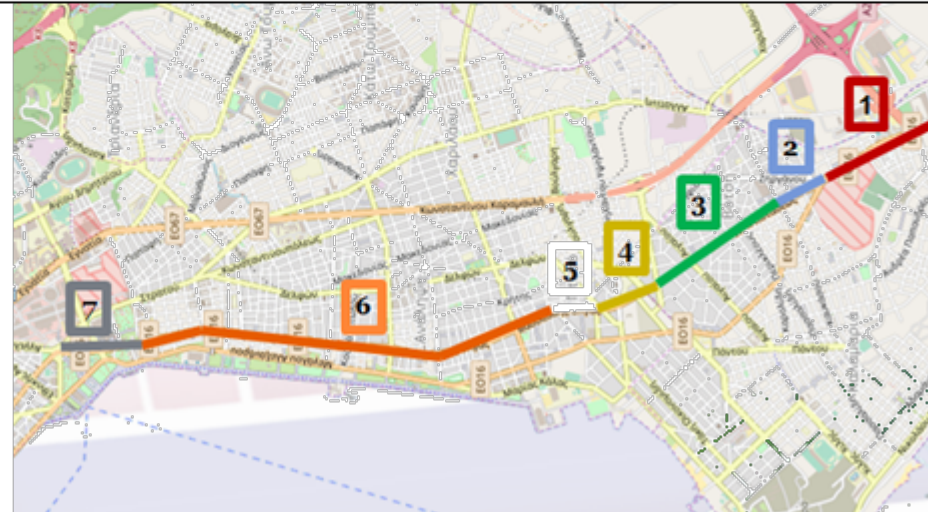
The road axis



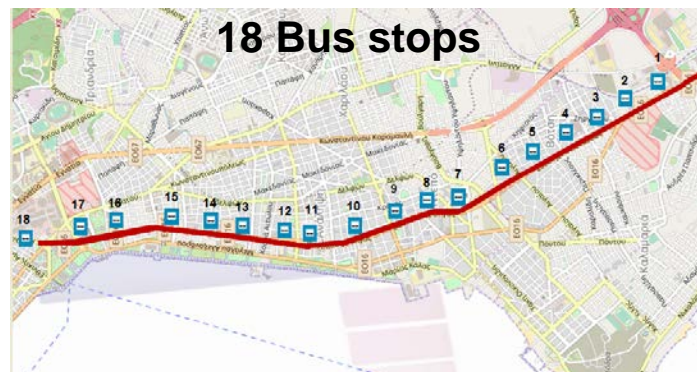
- ❖ **4 streets** (Ethn. Antistaseos – Vas. Olgas- Vas. Georgiou- Man. Andronikou)
- ❖ One of the most **important road axis** of the city of Thessaloniki
 - Connecting the NE parts of the city with the city center
 - With important commercial activity
 - Dense residential area
- ❖ Within the administrative borders of **2 Municipalities**
- ❖ **6,2 km length**

The road axis characteristics

Part	7	6	5	4	3	2	1
Direction	One	One	One	One	One	One	Two
Lanes	4	4	3	4	4	4	3 (2)
Bus lane	No	Yes	Yes	Yes	Yes	No	No
On street parking	No	Yes	No	No	Yes	No	No



The road axis characteristics



8 bus lanes serving the axis

Bus Lane	From	To	Average frequency
2	IKEA	N.Σ. ΣΤΑΘΜΟΣ	13'
3	IKEA	N.Σ. ΣΤΑΘΜΟΣ	8'
5	NEA KPHNH	BENIZEAOY	8'
6	KALAMARIA	BENIZEAOY	10'
8	IKEA	KTEA	13'
30	TRIANAPIA	ΑΠΟΘΗΚΗ	17'
33	ΑΓ. ΠΑΝΤΕΛΕΗΜΟΝ	BENIZEAOY	11'
39	ΚΗΦΙΣΙΑ	ΔΙΚΑΣΤΗΡΙΑ	12'
78	KTEA	ΑΕΡΟΔΡΟΜΙΟ	30'

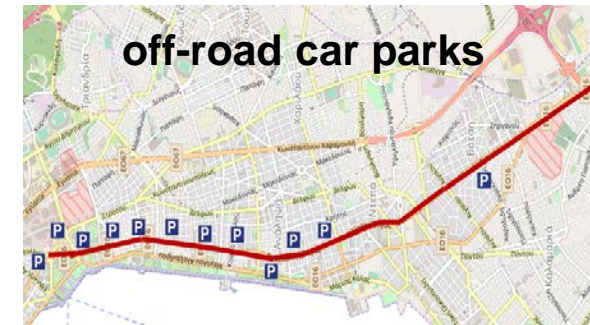
The road axis characteristics



Taxi stops



Loading and unloading spaces



off-road car parks

Intensive illegal and double parking



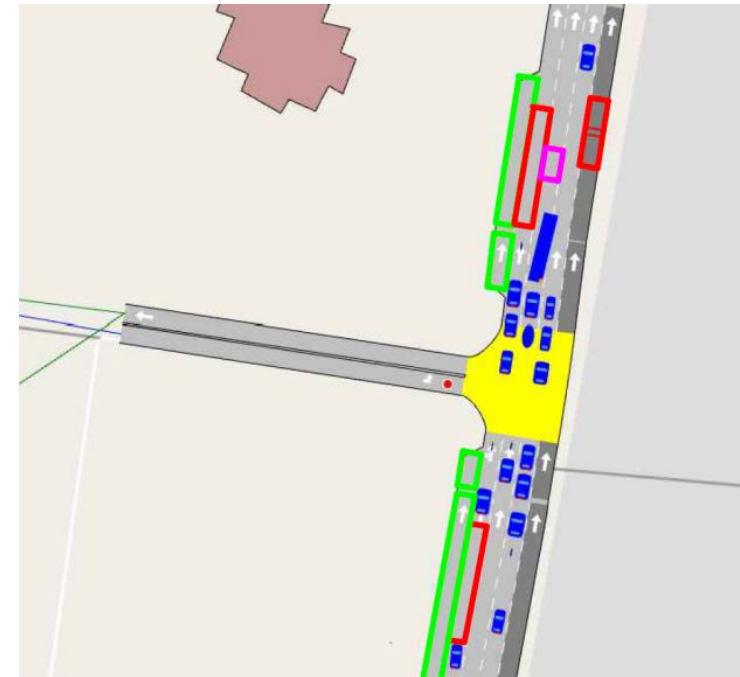
**60 traffic accidents (1 fatal)
recorded on average every year**

Year	Total	Fatal	inv. pedestrian(s)	Injured		
				Dead	Heavily	Wounded
2010	54	2	14	2	2	61
2011	66	2	23	3	4	75
2012	60	0	18	0	2	65
2013	52	1	12	1	1	61
2014	57	1	16	1	0	67
2015	62	1	12	1	1	69
2016	60	1	13	1	3	78

Analysis of current traffic situation along the axis

A. Microsimulation model set up with detailed information about the axis

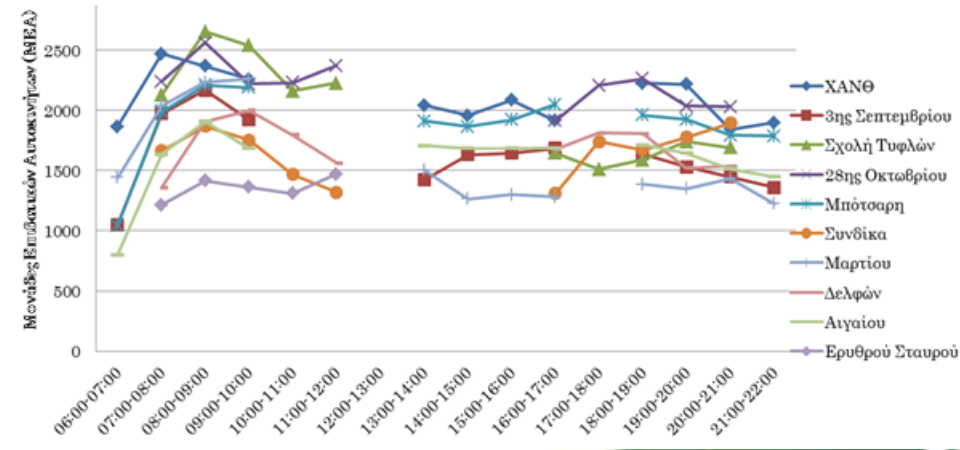
- ❖ **Road sections and intersections** (i.e. geometry, direction, slope, number, width and use of lanes, capacity, max allowed speed, on street parking, pedestrians' crossings, traffic control, etc.),
- ❖ **Public Transport** (i.e. bus stops, bus lines, routes, timetables, etc.)
- ❖ **Vehicle types and characteristics**
- ❖ **Traffic demand and composition with trip O-D data** from the available macrosimulation model of the Metropolitan area of Thessaloniki



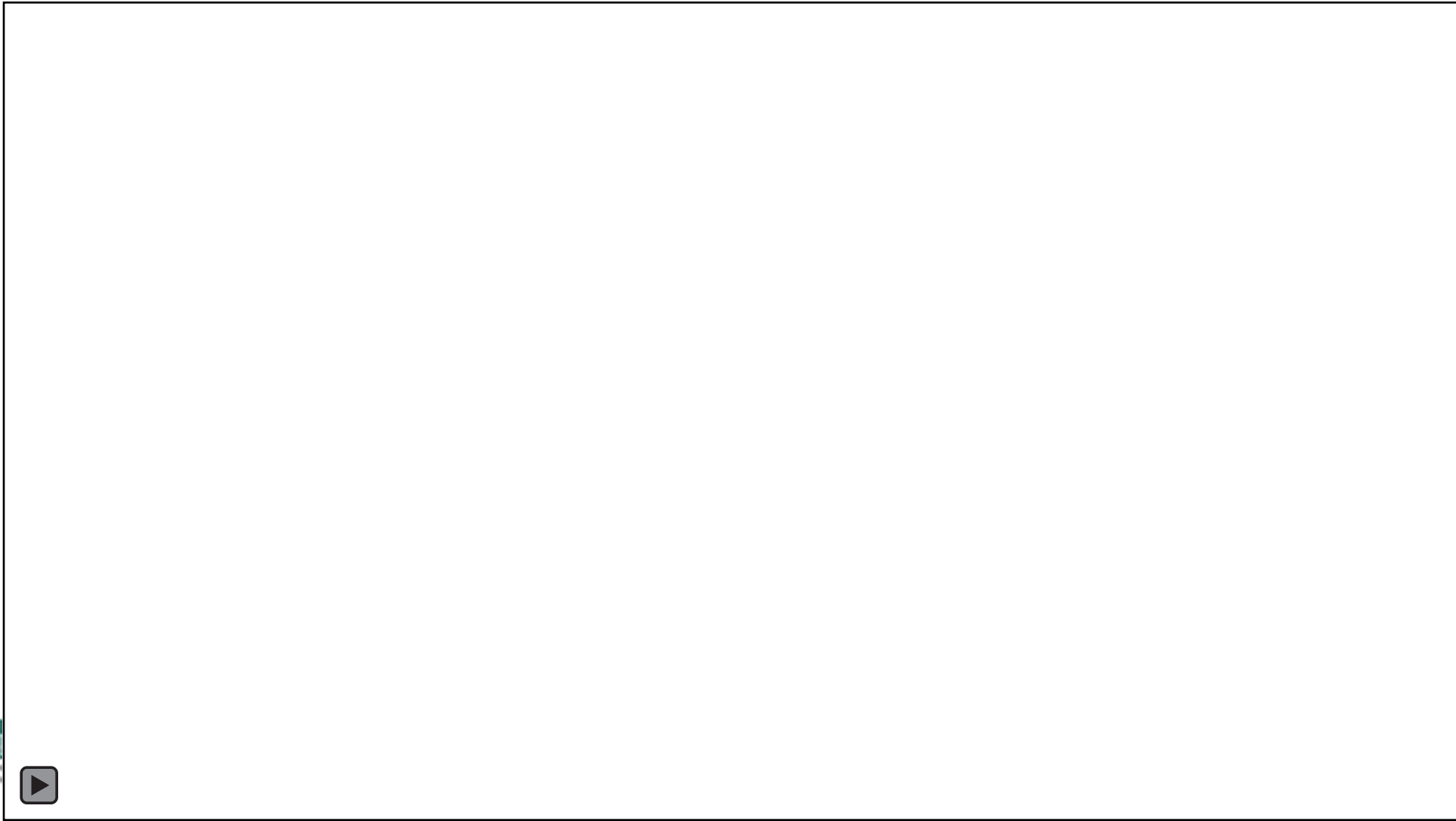
Analysis of current traffic situation along the axis

B. Calibration of the model

with **traffic data**, that were available for the city, and **traffic counts**, that took place in the framework of the SUMP of the municipality of Thessaloniki development, and more, that took place specifically for the needs of REMEDIO.

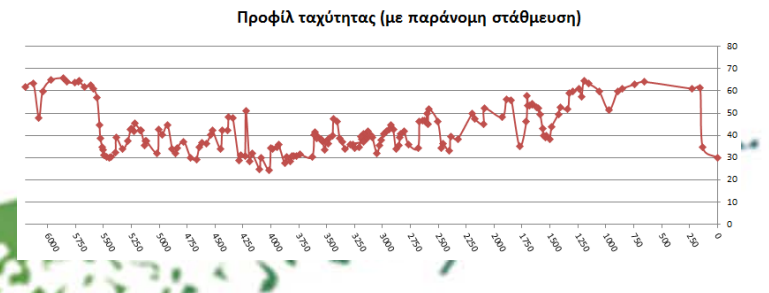
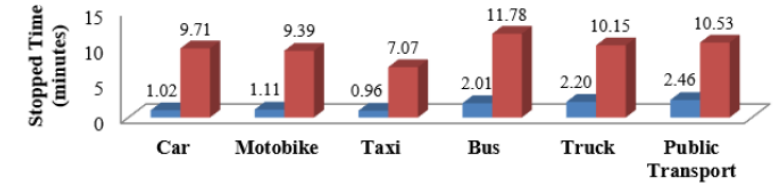
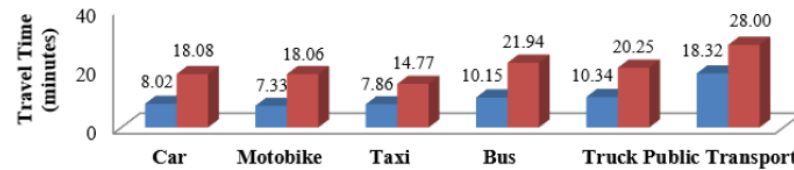
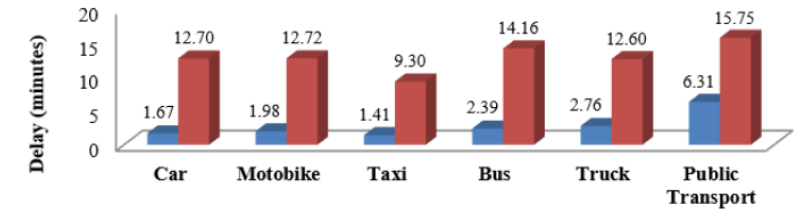
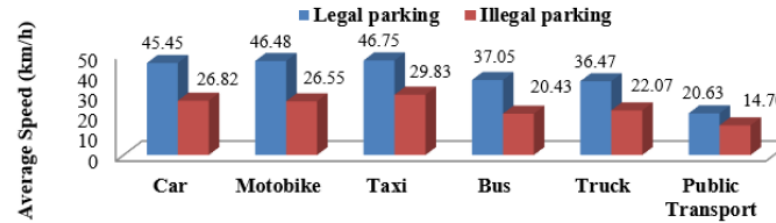


Analysis of current traffic situation along the axis



Analysis of current traffic situation along the axis

- Average speed per vehicle type
- Speed profile per vehicle type
- Travel time
- Delay time
- Stop time



Process for the elaboration of a proposal for the upgrade of the axis

- + *Analysis of the functions and land uses along the axis*
- + *Questionnaire surveys to users and entrepreneurs of the axis*

..., based on the principles of Sustainable Urban Mobility Planning, followed a **high-participatory approach** that included:

- ✓ **OPEN PUBLIC DISCUSSION** for the development of a vision for the axis
 - ✓ **PARTICIPATORY WORKSHOP WITH STAKEHOLDERS OF THE CITY** for the identification of the upgrade objectives and the preparation of preliminary proposals for its redesign
 - ✓ **ONLINE PUBLIC CONSULTATION** to record the opinions and comments of stakeholders on the alternative proposals for the axis redesign
 - ✓ **WORKSHOP WITH RELEVANT EXPERTS** (academics and practitioners) of the city for the definition of the final proposal
- ++other publicity activities (tv appearances, tv spots, etc.)*

Vision for the axis and redesign objectives

"An Urban Operational Axis for all ..."

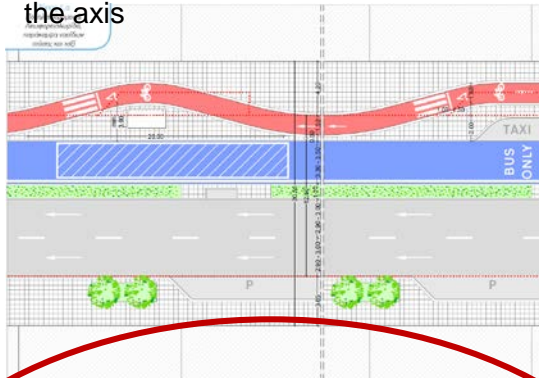
Redesign objectives:

- *Maintain current road capacity with at least 2 lanes for normal traffic*
- *Promote Sustainable Urban Mobility (PuT, bicycle, walking)*
- *Upgrade bus operation*
- *Satisfy parking needs*
- *Discourage illegal parking*
- *Bridge the 'canyon' effect that the motorized traffic creates*

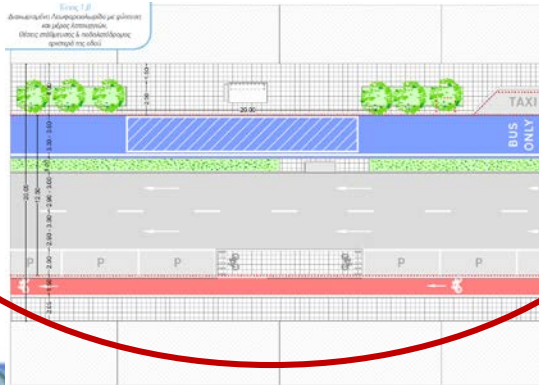
Preliminary proposals for the redesign of the axis

Type 1 proposals

(a) with a separated Bus Lane and a Bicycleway on the right-hand side of the axis



(b) with a separated Bus Lane on the right-hand side and a Bicycleway on the left-hand side of the axis

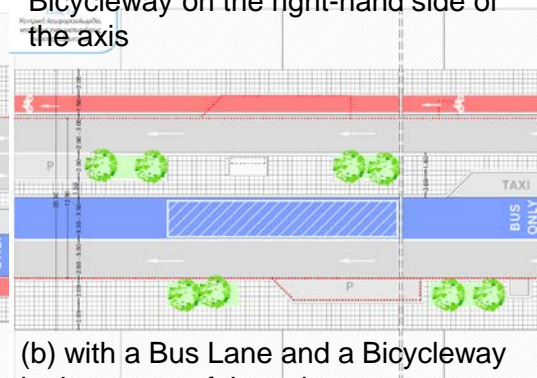


Type 2 proposal with a separated Bus Lane and a Bicycleway on the left-hand side of the axis



Type 3 proposals

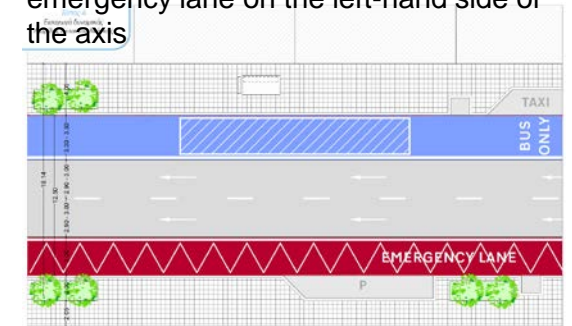
with a Bus Lane in the centre and a Bicycleway on the right-hand side of the axis



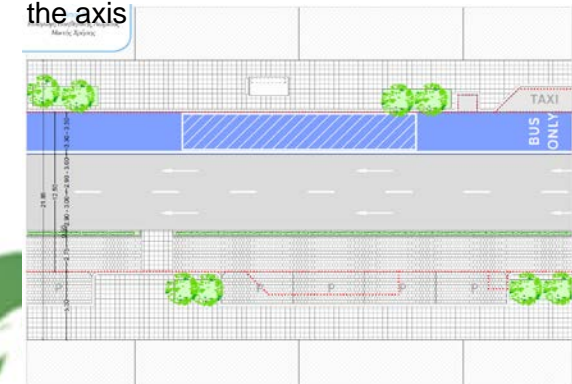
(b) with a Bus Lane and a Bicycleway in the centre of the axis



Type 4 proposal with a multi-purpose emergency lane on the left-hand side of the axis



Type 5 proposal with the creation of a mixed-use lane on the left-hand side of the axis

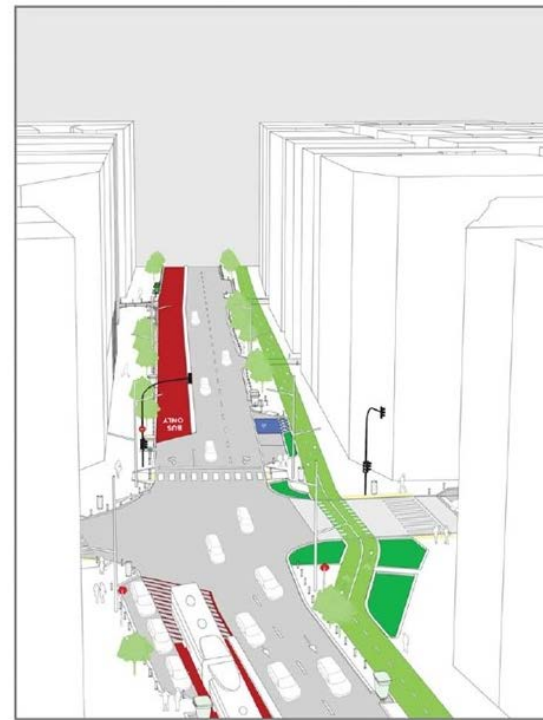


Presentation of final proposal for the upgrade of the axis

Final proposal for the redesign of the axis, that

- ✓ increases the visibility and separation of the bus lane
- ✓ introduces a 2-way, bicycle path of 2,5 meters width
- ✓ serves taxis, waste collection and loading and unloading needs along the axis
- ✓ increases parking spaces (and introduces parking spaces for the disabled)
- ✓ extends the existing pavement and reduces the length of pedestrian crossings by up to 30%

Proposed redesign

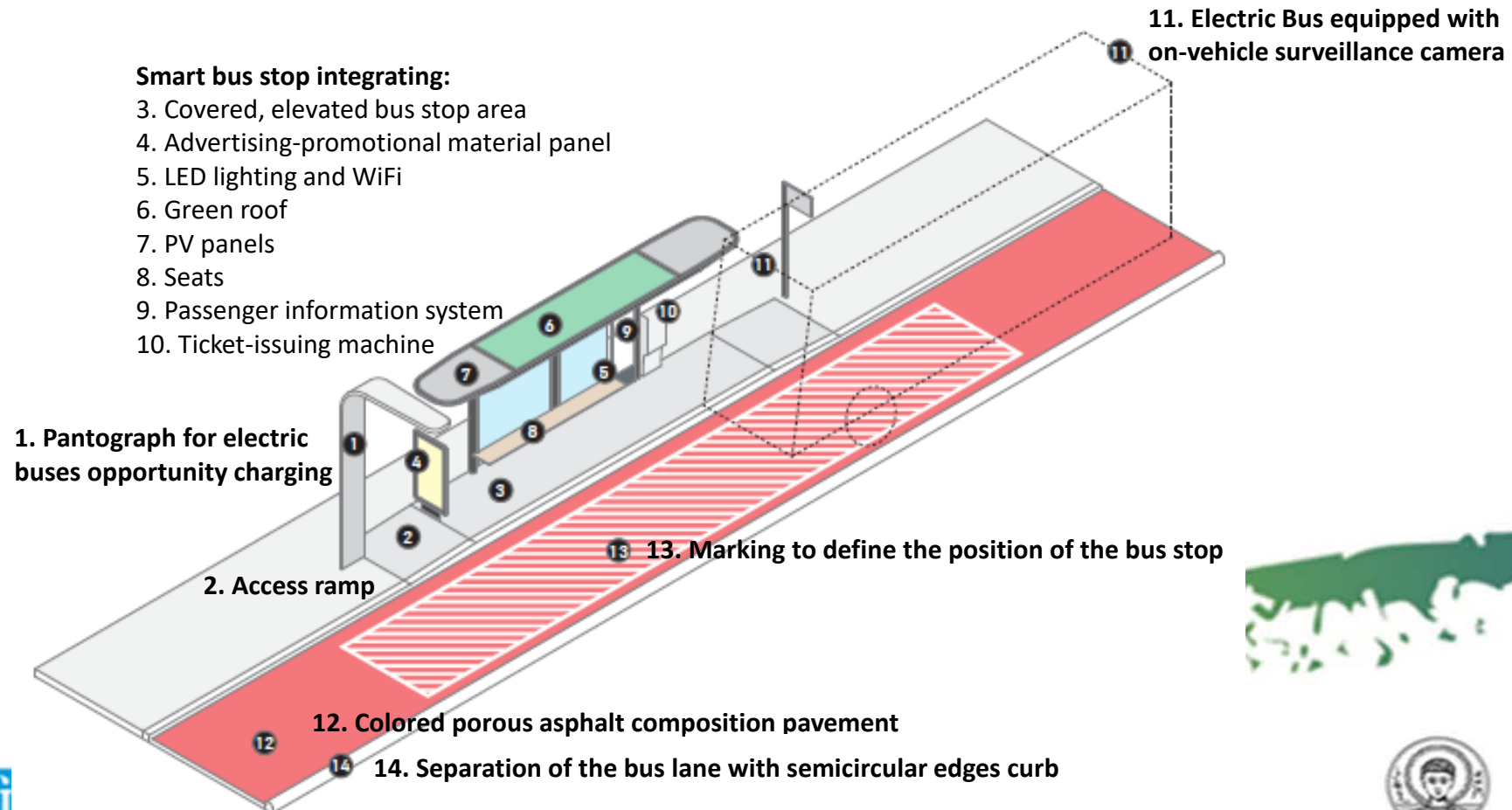


Presentation of final proposal for the upgrade of the axis

Proposals for the upgrade of Public Transport and infrastructures
(technological and physical) of the axis, that include

- ✓ introduction of **electromobility** in public buses
- ✓ construction of **smart bus stops**
- ✓ **bus priority** in traffic signals
- ✓ improvement of **pavement material** quality
- ✓ installment of **surveillance systems** and development of an **immediate intervention mechanism**
- ✓ use of the bus lane in **emergency situations**

Detail of the proposal for the construction of a 2nd generation bus lane



Thank you!

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