Financing Sustainable Mobility

REMEDIO

REgenerating mixed-use MED urban communities congested by traffic through Innovative low carbon mobility solutions

The Thessaloniki case study:
Redesign and upgrade of a major urban axis within a high-participatory approach for the development of the proposal

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High Level Training Courses on Sustainable Mobility
11-13 June 2019 | Barcelona, Spain
GO SUMP Community Building and Capitalization activities

Remedio Pilot-Areas

**Loures**
158 km²
205’000 inhabitants

**Treviso**
56 km²
84’500 inhabitants

**Split**
79 km²
179’000 inhabitants

**Thessaloniki**
1,455 km²
1’110’312 inhabitants

ARPA Veneto
Instituto Superior Tecnico
Municipality of Loures
City of Split
Metropolitan Development Agency of Thessaloniki
Municipality of Treviso
Aristotle University of Thessaloniki
University of Seville
**REMEDIO Small scale investments - Soft actions on Low Carbon Mobility Solutions**

- redesign of the major penetration axis with a 2nd generation bus lane
- mixed *e-bike* sharing network
- Bike sharing network serving the pilot road
- renewal of a urban street toward an upgraded pedestrian and cycling profile of the area
The road axis

- 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

<table>
<thead>
<tr>
<th>Part</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction</td>
<td>One</td>
<td>One</td>
<td>One</td>
<td>One</td>
<td>One</td>
<td>One</td>
<td>Two</td>
</tr>
<tr>
<td>Lanes</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3 (2)</td>
</tr>
<tr>
<td>Bus lane</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>On street parking</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
The road axis characteristics

86 intersections/
20 with 2-way roads

31 signalised intersections

18 Bus stops

8 bus lanes serving the axis

<table>
<thead>
<tr>
<th>Bus Lane</th>
<th>From</th>
<th>To</th>
<th>Average frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>IKEA</td>
<td>N.S. ΣΤΑΘΜΟΣ</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>IKEA</td>
<td>N.S. ΣΤΑΘΜΟΣ</td>
<td>8'</td>
</tr>
<tr>
<td>5</td>
<td>ΝΕΑ ΚΡΗΧΗ</td>
<td>ΒΕΝΙΖΕΛΟΥ</td>
<td>8'</td>
</tr>
<tr>
<td>6</td>
<td>ΚΑΛΑΜΑΡΙΑ</td>
<td>ΒΕΝΙΖΕΛΟΥ</td>
<td>10'</td>
</tr>
<tr>
<td>8</td>
<td>IKEA</td>
<td>ΚΤΕΛ</td>
<td>13'</td>
</tr>
<tr>
<td>20</td>
<td>ΤΡΙΑΝΔΡΙΑ</td>
<td>ΑΠΟΘΗΚΗ</td>
<td>12'</td>
</tr>
<tr>
<td>33</td>
<td>ΑΓ. ΠΑΝΤΕΛΕΗΜΩΝ</td>
<td>ΒΕΝΙΖΕΛΟΥ</td>
<td>11'</td>
</tr>
<tr>
<td>39</td>
<td>ΚΗΦΙΣΙΑ</td>
<td>ΔΙΚΑΣΤΗΡΙΑ</td>
<td>12'</td>
</tr>
<tr>
<td>78</td>
<td>ΚΤΕΛ</td>
<td>ΑΕΡΟΔΡΟΜΙΟ</td>
<td>30'</td>
</tr>
</tbody>
</table>
The road axis characteristics

- Taxi stops
- Loading and unloading spaces
- Car parks

Intensive illegal and double parking

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

Traffic accidents along the axis

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Fatal</th>
<th>inv. pedestrian(s)</th>
<th>Dead</th>
<th>Heavily Wounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>54</td>
<td>2</td>
<td>14</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2011</td>
<td>66</td>
<td>2</td>
<td>23</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>60</td>
<td>0</td>
<td>16</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>52</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>57</td>
<td>1</td>
<td>16</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>63</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2016</td>
<td>60</td>
<td>1</td>
<td>13</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Analysis of the functions and land uses along the axis

1. Land use Mapping according to the main planning function
   - Main characteristic: the mixed use character of the axis with a multiplicity of uses (residential, commercial, leisure, services etc.)
   - Number of inhabitants who live along the axis (first Building Square): 21,682
   - Average brutto residential density along the axis (first Building Square): 285 inhabitants/hectare
Analysis of the functions and land uses along the axis

2. Mapping of the ground floor uses and classification by branches

- Total number of recorded shops: 939 (retail stores 37.8%, vacant stores 19.8%, cafes & restaurants 12.9%)
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.
Process for the elaboration of a proposal for the upgrade of the axis

Based on the principles of Sustainable Urban Mobility Planning, a high-participatory approach followed:

✓ OPEN PUBLIC DISCUSSION for the development of a vision for the axis, "An Urban Operational Axis for all ..."

✓ PARTICIPATORY WORKSHOP WITH STAKEHOLDERS OF THE CITY for the identification 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
**Preliminary proposals for the redesign of the axis**

**Type 1 proposals**
1. (a) with a separated Bus Lane and a Bicycleway on the right-hand side of the axis
2. (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**
1. with a Bus Lane in the centre and a Bicycleway on the right-hand side of the axis
2. (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

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PARTICIPATORY WORKSHOP WITH STAKEHOLDERS OF THE CITY
ONLINE PUBLIC CONSULTATION

http://hello.crowdapps.net/participation-thessalonikh/
Presentation of final proposal for the upgrade of the axis

Current situation of the axis

Proposed redesign
Presentation of final proposal for the upgrade of the axis

A proposal for the redesign of the axis

- 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%
Presentation of final proposal for the upgrade of the axis
Existing situation of the axis
Technological solutions to be applied to the Eastern Horizontal Axis, by developing the chosen redesign solution

The solutions cover the following areas:

1. Public charging of electric vehicles
2. Smart control of parking irregularities
3. Bus lane surveillance, using smart cameras
4. Smart street lighting
5. Emergency and civil protection lanes
6. Smart pedestrian crossings
From Planning to Implementation - Call for Proposals

Directorate General for Regional Policy Development
Programming & Public Investments’
Publication of Calls for Proposals
High Level Training Courses on Sustainable Mobility
11-13 June 2019 | Barcelona, Spain
GO SUMP Community Building and Capitalization activities

From Planning to Implementation - Call for Proposals
From Planning to Implementation – Application for financing the studies

ΤΕΧΝΙΚΟ ΔΕΛΤΙΟ ΠΡΟΤΕΙΝΟΜΕΝΩΝ ΜΕΛΕΤΩΝ ΕΡΓΟΥ

ΤΙΤΛΟΣ ΤΟΥ ΕΡΓΟΥ ΠΡΟΣ ΟΡΙΣΜΑΝΗ:
Ολοκληρωμένος Επανασχεδιασμός Ανατολικού Οριζόντιου Άξονα Κυκλοφορίας της Θεσσαλονίκης (Δ. Καλαμαράς/οδός Εθνικής Αντιπροσώπευσης - Δ. Θεσσαλονίκης/οδός Βασίλ. Άνδρος, Βασ. Γεωργίου Α', Μανδή Ανδρώνικου, πλατεία ΧΑΝΘ).

ΠΕΡΙΦΕΡΕΙΑ ΚΑΙ ΠΕΡΙΦΕΡΕΙΑΚΗ ΕΝΟΤΗΤΑ:
ΠΕΡΙΦΕΡΕΙΑ ΚΕΝΤΡΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ
ΠΕΡΙΦΕΡΕΙΑΚΗ ΕΝΟΤΗΤΑ ΘΕΣΣΑΛΟΝΙΚΗΣ

ΑΝΑΘΕΤΟΥΣ ΑΡΧΗ:
ΑΝΑΠΤΥΞΙΑΚΗ ΜΕΣΙΖΟΝΟΣ ΑΣΤΙΚΗΣ ΘΕΣΣΑΛΟΝΙΚΗΣ – (ΠΡΩΤΗ ΜΗΤΡΟΠΟΛΙΤΙΚΗ ΑΝΑΠΤΥΞΙΑΚΗ ΘΕΣΣΑΛΟΝΙΚΗΣ) - ΑΝΑΠΤΥΞΙΑΚΗ ΑΝΩΝΥΜΗ ΕΤΑΙΡΙΑ Ο.Τ.Α.

ΗΜ/ΝΙΑ ΣΥΜΠΛΗΡΩΣΗΣ: 24/01/2019

ΣΤΟΙΧΕΙΑ ΣΥΝΤΑΚΤΗ ΤΟΥ ΤΕΧΝΙΚΟΥ ΔΕΛΤΙΟΥ
ΟΝΟΜΑΤΕΠΩΝΥΜΟ: ΣΙΑΚΕΣ ΚΑΝΔΙΛΑΡΗΣ
ΘΕΣΗ ΣΤΟ ΦΟΡΕΑ: ΠΡ/ΝΟΣ Δ/ΣΗΣ ΤΕΧΝΙΚΗΣ ΥΠΗΡΕΣΙΑΣ
Τηλ.: 2313317359
FAX : E-MAIL : kandilaris@mdat.gr

ΕΡΓΟ:
«ΕΦΑΡΜΟΓΗ ΚΑΙΝΟΤΟΜΩΝ ΣΥΓΧΩΝΟΝΙΑΚΩΝ ΛΥΣΕΩΝ ΧΑΜΗΛΟΥ ΑΝΘΡΩΠΙΚΟΥ ΑΠΟΔΟΤΙΜΑΤΟΣ ΣΕ ΠΟΛΕΙΣ ΤΗΣ ΜΕΣΟΓΕΙΟΥ»
“Regenerating mixed-use MED urban communities congested by traffic through Innovative low carbon mobility solutions” (REMEDIO)
το οποίο εντάσσεται στο Ευρωπαϊκό Πρόγραμμα Μεσογειακής Συνεργασίας Interreg MED 2014 - 2020

ΤΕΥΧΟΣ ΚΑΝΟΝΙΣΜΟΥ ΜΕΛΕΤΩΝ & ΠΡΟΕΚΤΙΜΗΣΗΣ ΑΜΟΙΒΩΝ

ΘΕΣΣΑΛΟΝΙΚΗ
ΔΕΚΕΜΒΡΙΟΣ 2018
From Planning to Implementation – Application for financing the studies
From Planning to Implementation – Application for financing the studies

2.1 Τίτλος της μελέτης/ τών μελετών (Εάν πρόκειται για περισσότερες διακήτες μελέτες, ποιος δικαστήριος συμβάνει σε αντίθετο πλήρωμα)

Μελέτη Ολοκληρωμένου Επανασχεδιασμού Αναλογικού Οριζόντιου Άξονα Κυκλοφορίας της Θεσσαλονίκης (Δ. Καλαμάρια/όδος Εθνικής Αντιπόλεως - Δ. Θεσσαλονίκης/όδος Βασ. Ολύμπου, Βασίλ. Γεωργίου Α. Μ. Ανδρικονόκου, πλατεία ΧΑΝΙ).

2.2 ΣΥΝΤΟΜΗ ΠΕΡΙΓΡΑΦΗ ΜΕΛΕΤΩΝ (Περιγράφονται όλες οι μελέτες για τις οποίες ο φορέας υπείρεθε χρηματοδότηση)

Περιβαλλοντική, Τοπογραφική, Συγκοινωνιακή, Αρχιτεκτονική, Φυτοτεκνική, Υδραυλική (Άμβρος), Στοιχεία (Τεχνική Όργανων υποδομής), Οδοδοτικά, Ηλεκτρομηχανολογικά (Ηλεκτρικών εγκαταστάσεων, φωτορειών), Ηλεκτρικών/ηλεκτρονικών εφαρμογών.

2.3 ΑΝΑΓΚΑΙΟΤΗΤΑ ΧΡΗΜΑΤΟΔΟΤΗΣΗΣ ΤΩΝ ΜΕΛΕΤΩΝ (αφού και όλες τις μελέτες)

Οι μελέτες θα αναπτύσσει ανάλογα με την προκύπτηση αμοιβών τους σύμφωνα με το εθνικό ή διεθνές δίκαιο και την νομοθεσία που κάθε φορά ισχύει. Οι μελέτες κάτω των ορίων θα δημιουργηθούν με ανοικτή διαγωνισμό και οι μελέτες άνω των ορίων θα δημιουργηθούν με ανοικτή διεθνή διαγωνισμό. Η εκπόνηση των μελετών θα συντηρεθεί στην ωρίμανση των έργων και την ένταξή τους στο πρόγραμμα της περιόδου 2021-2027.

2.4 Άλλες υφίσταμες μελέτες για το συγκεκριμένο έργο

Δεν έχουν εκπονηθεί τουρικές μελέτες για το συγκεκριμένο έργο.
From Planning to Implementation – Memorandum of understanding (MoU)

Ongoing:
- Drafting the Memorandum of Understanding between the Municipalities of Thessaloniki and Kalamaria, Transport Authority of Thessaloniki S.A. and MDAT with the structure below:
  - Section 1: Introduction
  - Section 2: Purpose
  - Section 3: Scope
  - Section 4: Definitions
  - Section 5: User Procedure Requirements
  - Section 7: Maintenance
  - Section 8: Oversight
  - Section 9: Updates to the MOU

In progress and until the end of the project:
- Drafting the (Pre)Feasibility study, in order to support an application for EIB financing
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