

RITS-Net

Final Conference

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Regional ITS Action Plan

Executive Project

Central Macedonia Region, Greece

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RITS-net

Regions for Intelligent Transport Solutions

ANATOLIKI S.A. / REACM
**Regional Energy Agency of
Central Macedonia**



European Union

European Regional Development Fund

Shareholders



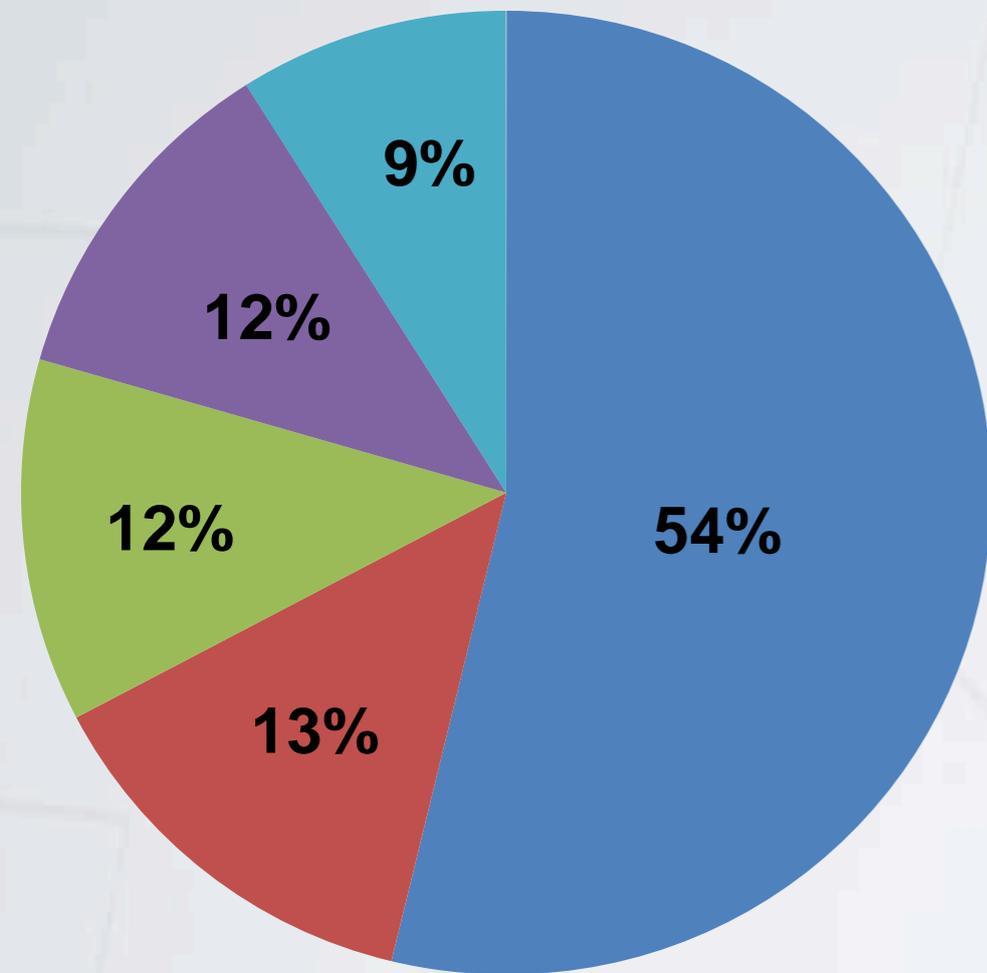
■ LOCAL AUTHORITIES

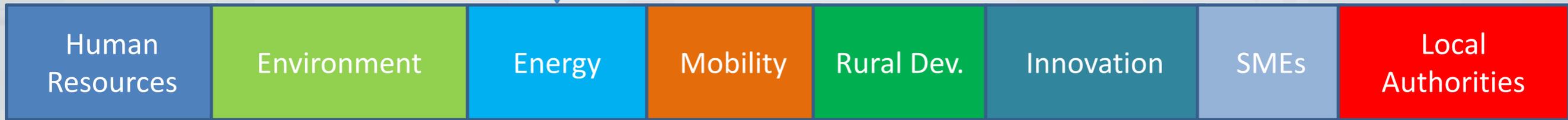
■ CHAMBERS OF COMMERCE

■ ASSOCIATIONS

■ COOPERATIVES

■ REGION OF CENTRAL MACEDONIA





is in constant communication with the key regional transport stakeholders:

Mobility

- the Thessaloniki 's Public Transport Authority (THEPTA),
- the Organization of Urban Transportation of Thessaloniki (OASTh),
- the Hellenic Institute of Transport (HIT),
- local authorities, public bodies, policy makers, research institutes and
- private companies

Initiated the development of the
1st Mobility Centre in the country

“Mobility Centre of Kalamaria”

www.kemdkalamarias.gr

with the aid of the “Mobinet” IEE project



Central Macedonia Region (CMR), Greece

18.811 km²

Central Macedonia



Thessaloniki
(1.110.312)



Serres
(176.430)



Imathia
(140.611)



Pella
(139.680)



Pieria
(126.698)



Chalkidiki
(105.908)



Kilkis
(80.419)

7 Regional Units, 38 Municipalities
1.880.058 inhabitants

Main transport challenges

Road infrastructure

- “EGNATIA Odos” (In the North from East to West 500 Km) and “PATHE” (North to Southwest 650 Km) highways connect areas across mainland.

Railway network

- Part of the railway infrastructure is planned to be used by the suburban railway.
- The rail network lacks of modern infrastructure, such as modern power stations and intermodal service options (car parking, intermodality etc.).

Public Transport

- The interurban areas of the regional unit are served by OASTH and by the Intercity Private Bus Companies (KTEL).
- Connections between the Municipalities of the different regional units of the CMR are realized exclusively with the intercity buses.

Maritime Transport

- The port of Thessaloniki is the centre of the commercial hub of the Balkans and the nearest port of the EU to the Balkan and Black Sea countries.
- Other ports, show strong seasonality traffic and mainly serve tourists during the summer season.

Air Transport

- The airport of Thessaloniki serves both national and international flights (approx. 4 millions passengers/year).

Regional mobility problems

The **rapid increase of cars**

The **improper use of private car**, not justified by the size and structure of the city

The **low use of the urban buses**, the only present public transport mode in the area

The **lack of an integrated transport policy** applied in the area

The **insufficiency of roads and lack of parking spaces**, due to the fact that the land planning of the area did not take into consideration the population surge and the territorial expansion



...traffic delays, increased fuel consumption, air, noise and visual pollution, traffic accidents and time losses which degrade the quality of life

Main ITS applications in Use (1/2)



Intelligent Urban Mobility Management and Traffic Control System in the City of Thessaloniki



The 1st Greek Mobility Info Point (KEM) and the e-Platform of KEM



VMS for User Information in highways and urban roads



e-Platform for Public Transport User Information

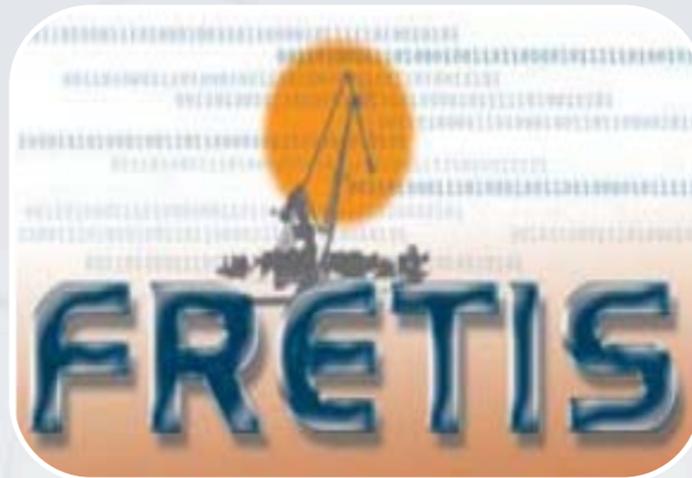


Telematics services of the Organization of Urban Transportation of Thessaloniki (OASTH)

Main ITS applications in Use (1/2)



**Transport Observatory
of Egnatia Motorway**



**Integrated Management
Information System in
the Port of Thessaloniki**



**Integrated Fleet
Management Systems-
Taxis of Thessaloniki**



**Automated Parking
System at a Shopping
Center and at the city
center of Thessaloniki**



E-tolls at motorways

Measures for the Regional ITS Action Plan

Introduction

Priority area 1 - Optimal use of road, traffic and travel data

Priority area 2 - Continuity of traffic and freight management ITS services

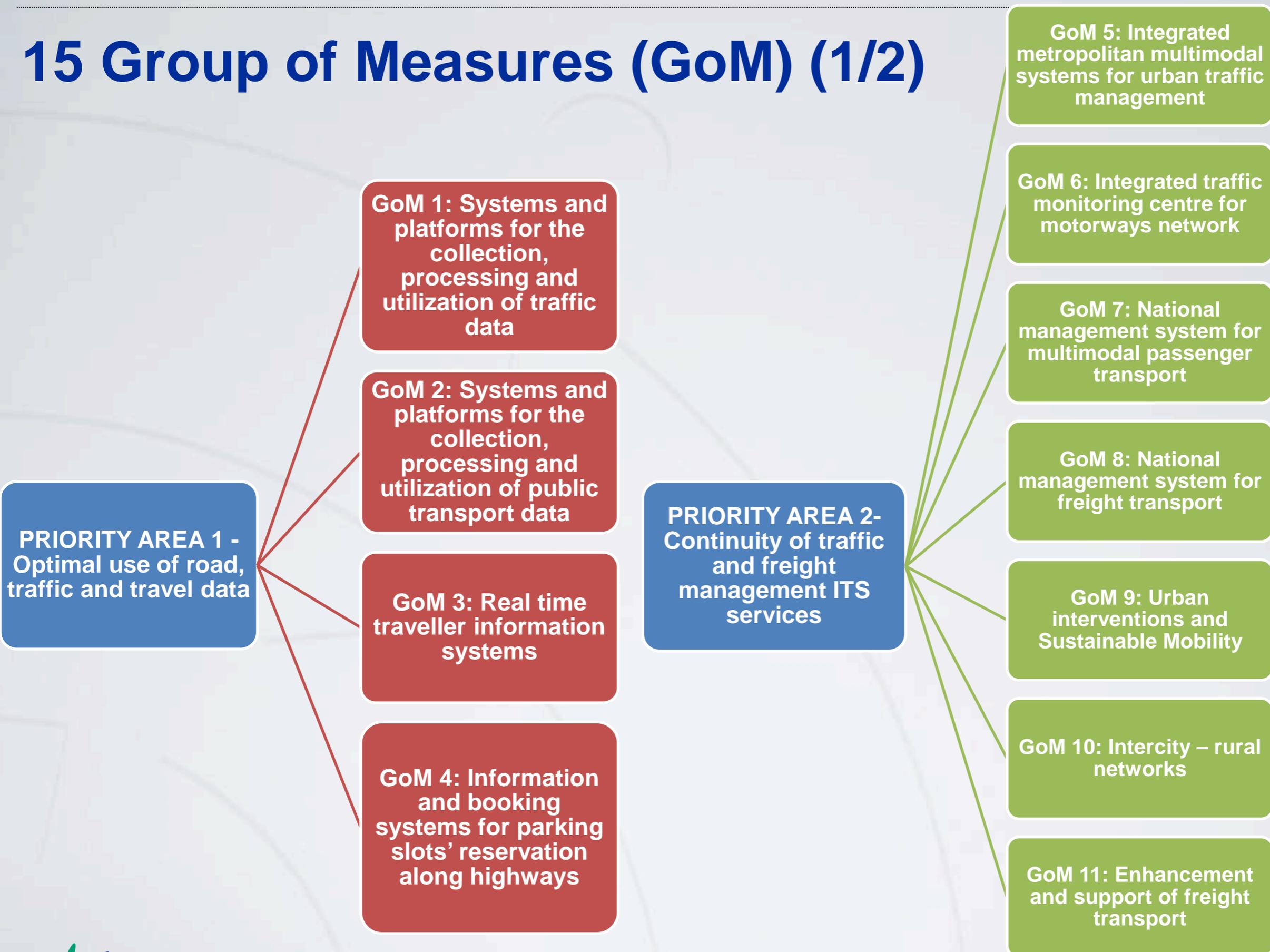
15 groups of measures

Priority area 3 - ITS road safety and security applications

Priority area 4 - Linking the vehicle with the transport infrastructure

- ✓ Evaluation process based on several criteria
- ✓ Assessment of the measures & Prioritization of them (and their groups)
- ✓ Ten specific measures in line with regional needs

15 Group of Measures (GoM) (1/2)



15 Group of Measures (GoM) (2/2)

PRIORITY AREA 3 - ITS road safety and security applications

GoM 12: National actions for accident prevention and suppression

GoM 13: Local road safety applications

GoM 14: In-vehicle safety systems

PRIORITY AREA 4 - Linking the vehicle with the transport infrastructure

GoM 15: Development of Cooperative ITS

Evaluation Method

Assessment Criteria

Questionnaire survey for the evaluation of the measures

20 representatives (local institutions, organizations and companies related to ITS deployment & operation)

Rated in the range of 1-10 **the effectiveness** of the measures based on the seven criteria

Rated in the range of 1-5, **their level of confidence** for their assessment concerning each measure

Optimal period based on their opinion about the **maturity** of each measure

1. Efficiency

2. Financial and social reciprocity

3. Accessibility

4. Environment

5. Safety and security

6. Strengthening of the transport sector

7. ITS-related innovation and technology

Results - Top 10 Measures

Measure (Group and Title)	Average Score
5.A: Development and integration of management systems for urban and peri-urban traffic and public transport, in the metropolitan area of Thessaloniki	8,27
11.C: e-logistic	8,01
11.B: Optimal	7,91
9.D: Integrated	7,89
9.A: Urban pul	7,88
8.B: Integrated sensitive loads	7,84
8.A: Developm	7,78
11.A: Fleet ma (management)	7,77
9.C: Vehicle re bicycles, motorcycles, etc)	7,73
6.A: Integrated traffic monitoring centre for motorways network	7,66

5.A: Development and integration of management systems for urban and peri-urban traffic and public transport, in the metropolitan area of Thessaloniki

Description of top rated measures

1. Description and analysis
2. Expected results and benefits
3. Technological innovation they introduce
4. Involved stakeholders (along with cost - funding elements)
5. Implementation time-plan

**Focused on Priority Area 2:
related to the continuity of
traffic and freight
management ITS services**

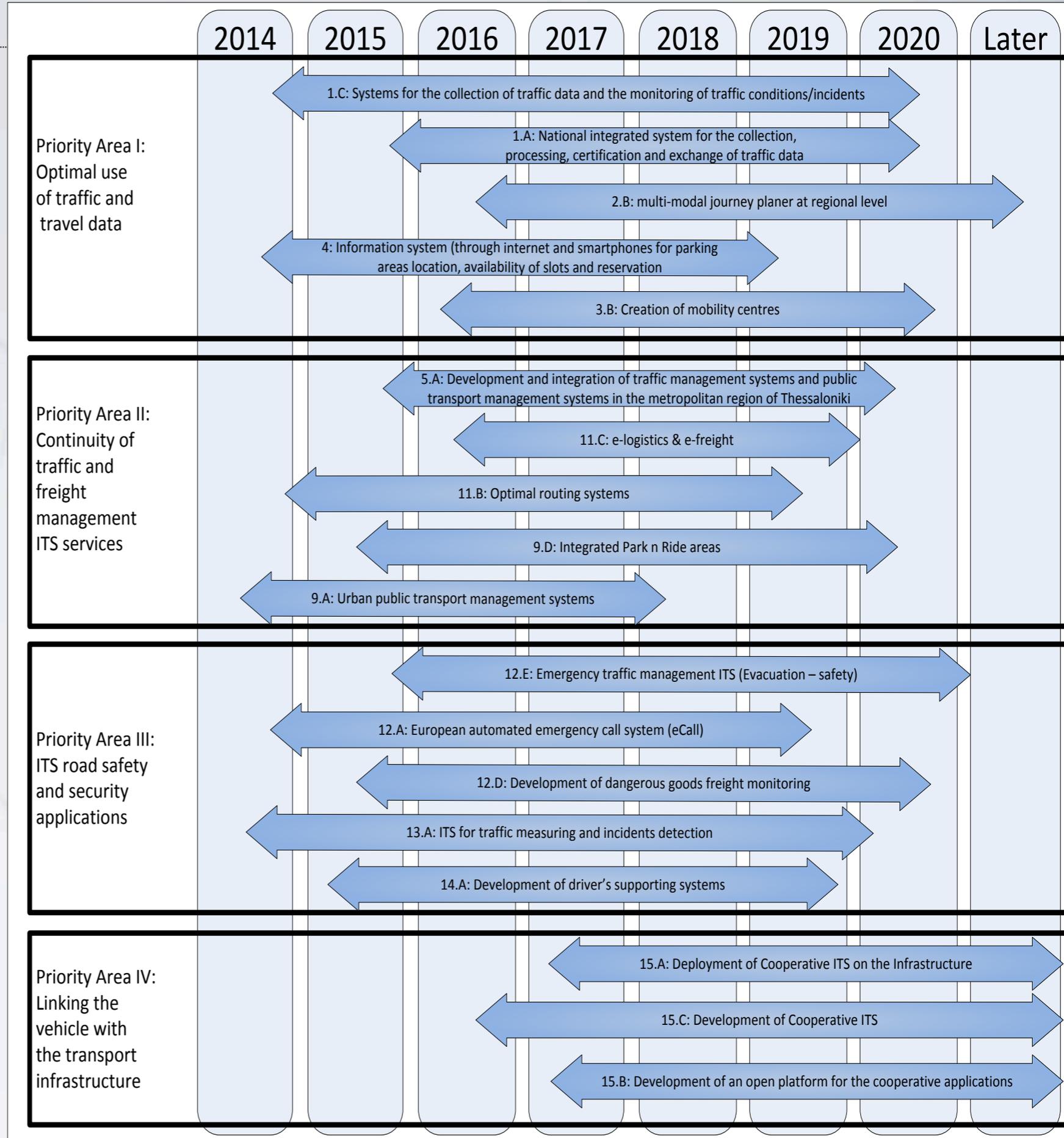
**Highest degree of
maturity because of the
already implemented
investments in the field
of ITS in the Region**

**So the potential positive
effects of these systems
are more obvious
compared to the effects
of the systems belonging
to other priority areas**

Regional Roadmap Time-plan

➤ Presents the optimal period for measure's implementation based on the maturity rate of each measure for the RCM.

➤ Potential for the RCM to further utilize the already deployed ITS infrastructure.



ITS for future implementation

The Roadmap shows that there is the potential for the RCM to proceed directly to the integration and the implementation of systems and services such as:

- 1. The collection of traffic data and the monitoring of traffic conditions/incidents**
- 2. Information system (through internet and smartphones for parking areas location, availability of slots and reservation)**
- 3. Urban public transport management systems**
- 4. The European automated emergency call system (e-Call)**
- 5. Systems for traffic measuring and incidents detections**

Executive Project

Main Objective

Assessment of the feasibility of the development of integrated and interoperable ITS for the provision of Advanced Traveller Information Services within the RCM



Two scenarios



“Extension of dynamic services”

“Integration of existing services”

Existing ITS-ATIS



**Mobility Centre
of Kalamaria**



**Urban Mobility
Centre of
Thessaloniki**



**Telematics
services of the
Organization of
Urban
Transportation
of Thessaloniki
(OASTH)**



**EasyTrip
mobility
platform**

ITS equipment for the systems operating in the RCM

Regional Unit	Roadside urban & rural ITS Infrastructure	Roadside motorway ITS Infrastructure	Floating car data	ATIS Platforms
Thessaloniki	43 BT detectors operated by CERTH/HIT 6 VMS in the urban network and 5 in the peripheral road, both operated by RCM 11 CCTV in the peripheral road and CCTV in the urban network	Sensors operated by Egnatia S.A.	Urban bus fleet floating data (GPS & GPRS) operated by OASTH Taxi fleet floating car data	Mobithess EasyTrip Mobility Centre of Kalamaria OASTH HIT PORTAL
Serres	4 BT detectors operated by Serres Municipality 1 VMS	Sensors operated by Egnatia S.A.	Urban bus fleet floating data in the city of Serres (GPS & GPRS)	EasyTrip
Imathia	-	Sensors operated by Egnatia S.A.	Urban bus fleet floating data in the city of Veroia (GPS & GPRS)	-
Pella	-	-	-	-
Pieria	-	-	Urban bus fleet floating data in Katerini (GPS & GPRS)	-
Kilkis	-	-	-	-
Chalkidiki	-	-	-	-

Two Scenarios

First Scenario “Integration of existing services”

- All the available traveller information provision services of the area are unified in a common architecture and in a unique integrated platform.
- Total Cost: **605.000** euros
- Months of execution after the beginning of the activities: **24**

Second Scenario “Extension of dynamic services”

- The integrated platform is enriched with the function of dynamic services in areas of the region, where real-time data are currently not available and make the provision of traveller information services poor or even non-existent.
- Total Cost: **1.655.000** euros
- Months of execution after the beginning of the activities: **36**

The second scenario requires the purchase and installation of additional equipment in the important areas that are now lacking in providing dynamic or even static information provision

Expected Benefits

✓ The upper scope is to enhance sustainable mobility and contribute to better traffic management.

✓ Positive benefits of the system both for individual user and society:

- Decrease of travel cost
- Increase of driver's safety
- Assurance of sustainable mobility
- Positive environmental effects
- National and regional economic benefits
- Promotion of transport telematics
- Deployment of ITS standards
- Improvement of environmental conditions for the driver-user etc.



Conclusions

- ✓ There is sufficient number of ITS services implemented in the region.
- ✓ However, these services are fragmented due to the fact that different stakeholders have developed distinct services and in most cases there is a low level of cooperation among the stakeholders. This leads to lack of interoperability among the various services and thus lack of integrated information to the travellers.
- ✓ Another drawback of the existing systems is the fact that they are implemented only in the large urban areas of the region and mainly in Greater Thessaloniki Area.
- ✓ The most of the proposed new measures/actions focused on the EU's ITS Action Plan Priority Area 2 (continuity of traffic and freight management).
- ✓ Funding for these actions would come from the new programming period (2014-2020) and other financial mechanisms (SEE, INTERREG, HORIZON 2020 etc.).

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ΑΝΑΤΟΛΙΚΗΣ ΘΕΣΣΑΛΟΝΙΚΗΣ**



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