



## LIFE GREENYOURMOVE DEVELOPMENT AND PROMOTION OF A CO-MODAL JOURNEY PLANNING PLATFORM TO MINIMIZE GHG EMISSION IN EUROPE

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# GreenYourMove

#### Main outcomes

- ▶ Web and SmartPhone application for green journey planning in Greece, Czech Republic and The Nederland's (or Slovak Republic);
- ▶ Database of Greek transport network;
- ▶ Promotion of co-modality;
- ► Ticketing options;
- ▶ Synchronize the apps with social media;
- ▶ Synchronization of timetables.









## GreenYourMove

#### Consortium

- University of Thessaly, Greece (<u>www.mie.uth.gr</u>)
- ► AVMap, Greece (<u>www.avmap.gr</u>)
- ► CHAPS, Czech Republic (<u>www.chaps.cz</u>)
- ► EMISIA S.A., Greece (www.emisia.com)
- ▶ Plannerstack, Nederlands (<u>www.plannerstack.org</u> -) or INPROP, Slovak Republic (<u>http://www.inprop.sk/</u>)
- ► TRAINOSE, Greece (<u>www.trainose.gr</u>)

#### Co-funded

- ► LIFE (<a href="http://ec.europa.eu/environment/life/">http://ec.europa.eu/environment/life/</a>) the EU financial instrument for the environment
- ► Green Fund Hellas (<a href="http://www.prasinotameio.gr/index.php/el/">http://www.prasinotameio.gr/index.php/el/</a>)

Duration: 35 months

Total budget: 1,245,052 Euro







## $\overline{\mathbf{A}}$ ctions



#### **Implementation Actions**

- ▶ Development of a database of Greek network.
- ▶ Development of emission calculation models.
- ▶ Development of optimization algorithm to solve the green co-modal problem.
- ▶ Timetable synchronization.
- ▶ Development of web and smartphone app for co-modal routing in Greece.

#### **Dissemination Actions**

- ▶ Awareness campaign.
- ▶ Publications, Website, Press Releases, Videos etc.

### **Monitoring Actions**

- ▶ Development of emission inventory methodology.
- ▶ Environmental and socio-economic impact monitoring of the project.









## **Emission Calculation models**

### Novel emission calculation models cater for co-modality

- ► Road gradient
- ► Occupancy rate
- Wind velocity and direction
- ▶ Heat Index A/C use
- Visibility
- ▶ Road condition/quality
- Speed class









# Data Collection and Updating

#### **Data**

- ▶ Development of a data base including GTFS as well as data related to emission calculation.
- ▶ Data updating system web based platform.
- ▶ Cooperation of University of Thessaly and 24 Transport Operators.
- ▶ European GTFS data from 11 difference EU regions.



Improved GTFS editor: <u>link</u>

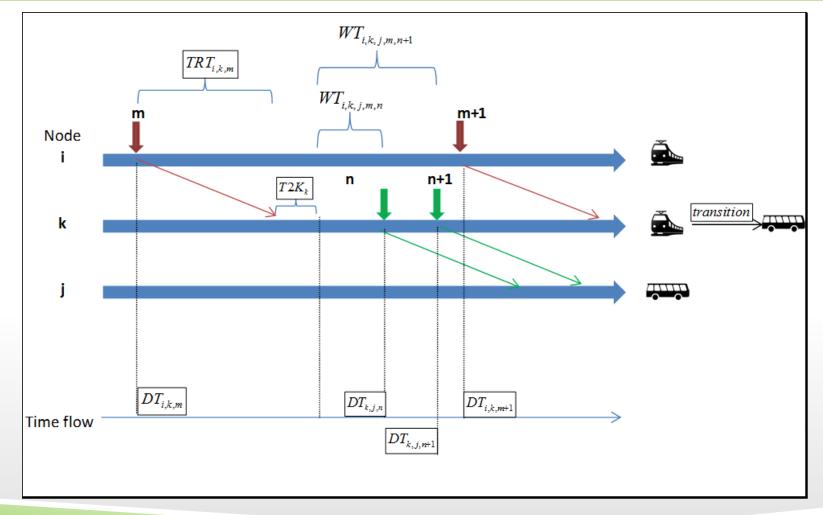








# Timetable synchronization











# Rescheduling Athens to Thessaloniki

	From Athens To Thessaloniki			
	Current	10 min	30 min	90 min
Monday	7:18	7:20	7:33	8:03
	10:18	10:19	10:33	10:41
	14:18	14:19	14:24	13:33
	16:16	16:20	16:24	15:33
	18:18	18:22	18:32	19:03
	Current	10 min	30 min	90 min
Tuesday	7:18	7:13	7:03	6:33
	10:18	10:19	10:33	10:40
	14:18	14:20	14:25	13:33
	16:16	16:20	16:24	15:34
	18:18	18:22	18:33	19:00
	Current	10 min	30 min	90 min
Wednesday	7:19	7:14	7:04	6:34
	10:18	10:23	10:33	10:40
	14:18	14:19	14:24	13:33
	16:16	16:21	16:24	15:34
	18:18	18:23	18:32	19:00
	Current	10 min	30 min	90 min
Thursday	7:18	7:13	7:03	6:33







# Rescheduling Athens to Thessaloniki

	Current	± 5min	± 15min	± 45min
Total waiting time	691,791	681,208	656,860	602,682
Av. Waiting time	275	271	261	240
Feasible transitions	23,768	23,743	23,732	23,469







# Rescheduling Athens to Thessaloniki

	Current	± 5min	± 15min	± 45min
Current	0			
± 5min	0.015	0		
± 15min	0.050	0.036	0	
± 45min	0.13	0.115	0.08	0

The resulting show that more relaxation leads to significantly minimized waiting times. Specifically the 90 minute window, or ±45min case, produces a better solution than the 10 minute window, or ±5min case, by reducing the total waiting time 13%, which means 35 minutes less waiting time on average.







# Rescheduling Athens to Chalkida

	Current	± 5min	± 15min	± 45min
Current	0			
± 5min	0.026	0		
± 15min	0.059	0.034	0	
± 45min	0.158	0.135	0.105	0







# GreenYourMove webapp beta versions

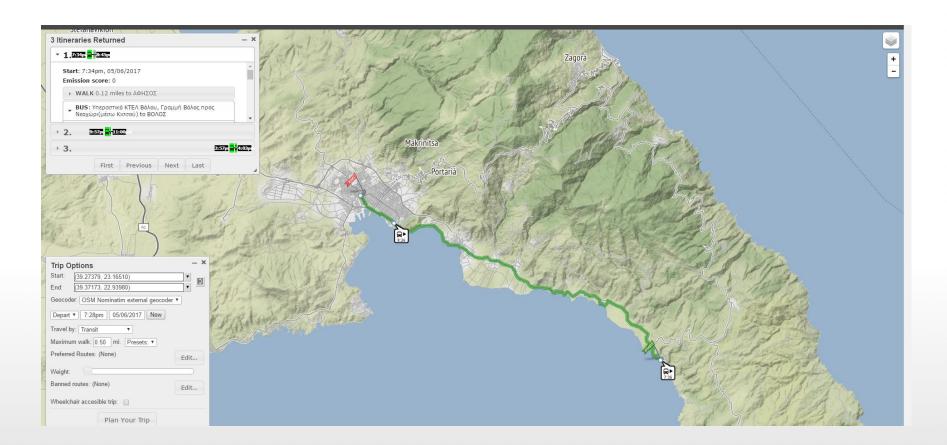
- ► Current Beta version of OTP: <u>http://194.177.201.25</u>
- ▶ 3 points: http://10.64.32.157/ (VPN required)







# GreenYourMove webapp beta versions











#### Stay tuned:

www.greenyourmove.org & www.greenyourmove.eu



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https://twitter.com/GreeenYourMove



www.linkedin.com/company/greenyourmove

# Thank you for your attention!

