



# Erasmus+ Green Travel

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# Introduction

- Stefan Baumeister, Ph.D.
- Senior Lecturer at the University of Jyväskylä, School of Business and Economics, Finland
- Adjunct Professor of Aviation at Tampere University, School of Built Environment, Finland
- Program Director of the international Master's Degree program in Corporate Environmental Management
- Member of Finnish IPCC Working Group
- My research centers around the transportation sector and its emissions reduction potentials through behavioral and policy change and the application of new technologies
- Fun fact: I love traveling by train 😊





# Agenda



What is Green Travel and why we need to practice it?



What Green Travel means in terms of Erasmus+



3 concrete examples of how to apply Green Travel

Finland to Sweden  
Finland to Italy  
Finland to Germany



My own experience with Erasmus+ Green Travel

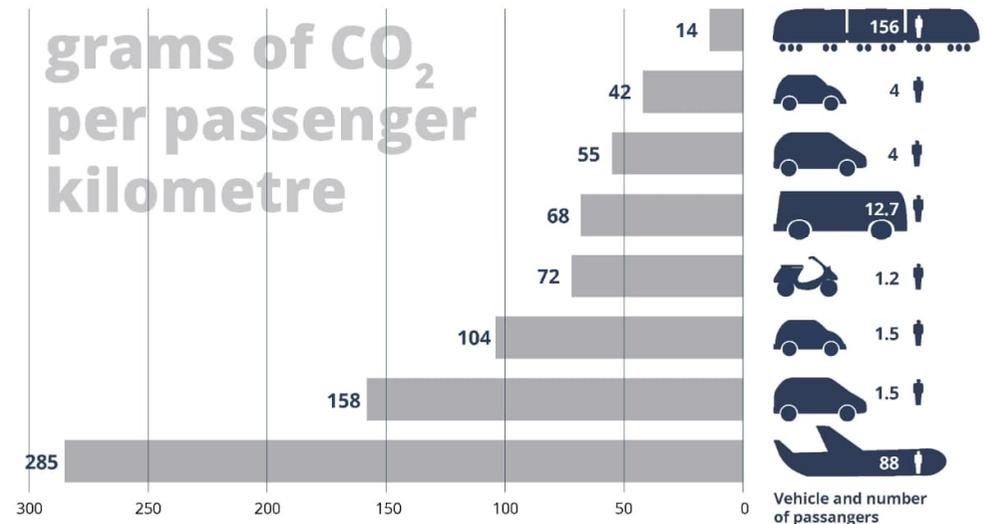


# What is Green Travel?

- Thinking about your impact on the environment when traveling
- Doing your part to minimize your impact on the environment
- Understanding eco-friendly choices you can make
- Making eco-friendly choices when there are options
- Doing your research to be a responsible traveler
- Saving money by making low-impact choices

## CO<sub>2</sub> emissions from passenger transport

European Environment Agency



Note: The figures have been estimated with an average number of passengers per vehicle. The addition of more passengers results in fuel consumption – and hence also CO<sub>2</sub> emissions – penalty as the vehicle becomes heavier, but the final figure in grams of CO<sub>2</sub> per passenger is obviously lower. Inland ship emission factor is estimated to be 245 gCO<sub>2</sub>/pkm but data availability is still not comparable to that of other modes. Estimations based on TRACCs database, 2013 and TERM027 indicator.

Source: EEA report TERM 2014  
eea.europa.eu/transport



# Why do we need Green Travel?

- Our house is on fire!
- We need to cut back on our greenhouse gas emissions!
- Transportation accounts for about 25% of all global greenhouse gas emissions.
- In order to keep global warming below 2 degrees Celsius each of us has to limit our carbon footprint to 2300 kg of CO<sub>2</sub> per year, of which only 25% can be allocated for mobility (575 kg).





# What does Green Travel mean in terms of Erasmus+?

- Selecting low-emissions transportation modes: instead of air travel use train, bus, or car-pools
- In Erasmus+ mobility is considered Green Travel when low-emissions transportation modes are used:
  - For the whole journey (no use of air travel)
  - For the main part of the journey (some use of air travel but less than half of the travelled kilometres)
  - Or at least for one direction of the round trip (one direction without any air travel)
- While Green Travel helps reducing the environmental impacts of Erasmus+ it often takes longer to reach the destination and it is in many cases also more expensive. Therefore, Erasmus+ Green Travel allows:
  - participants for additional travel days (up to 6 travel days, instead of 0-2 when using air travel)
  - provides higher travel grants



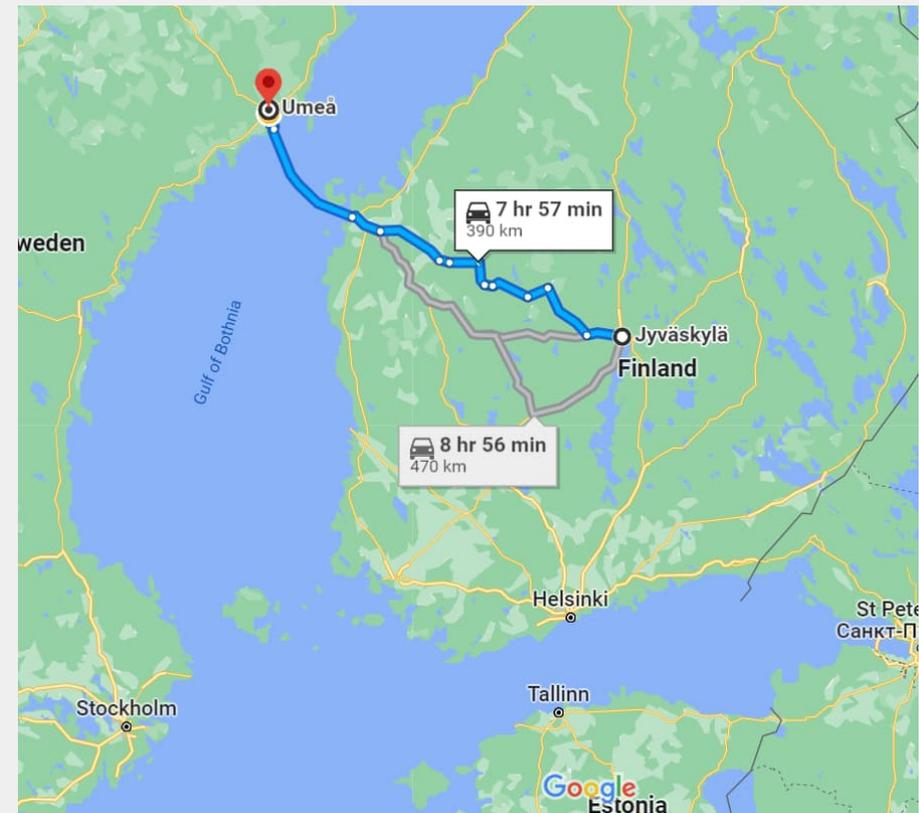
# How to apply Green Travel? The geographic location of Finland...





# Example 1: Green Travel during the whole journey Jyväskylä-Umeå-Jyväskylä

- Regular trip
  - Jyväskylä-Helsinki (train)
  - Helsinki-Stockholm (airplane)
  - Stockholm-Umeå (airplane)
  - Time: 9 hours 21 minutes
  - Emissions: 320.7 kg CO<sub>2</sub>-eq
- Green Travel
  - Jyväskylä-Vaasa (train)
  - Vaasa-Umeå (ferry)
  - Time: 9 hours 26 minutes
  - Emissions: 13.4 kg CO<sub>2</sub>-eq (-96%)





# Example 1: Green Travel during the whole journey Jyväskylä-Umeå-Jyväskylä

## Regular trip:

• Train Jyväskylä (07:19)-Helsinki (10:33)	335 km	34.00€	3.1 kgCO <sub>2</sub> -eq
• Airplane Helsinki (12:30)-Stockholm (12:30)	399 km	82.74€	144.7 kgCO <sub>2</sub> -eq
• Airplane Stockholm (14:40)-Umeå (15:40)	477 km	101.28€	172.9 kgCO <sub>2</sub> -eq
• Total	1211 km	220.00€	320.7 kgCO <sub>2</sub> -eq

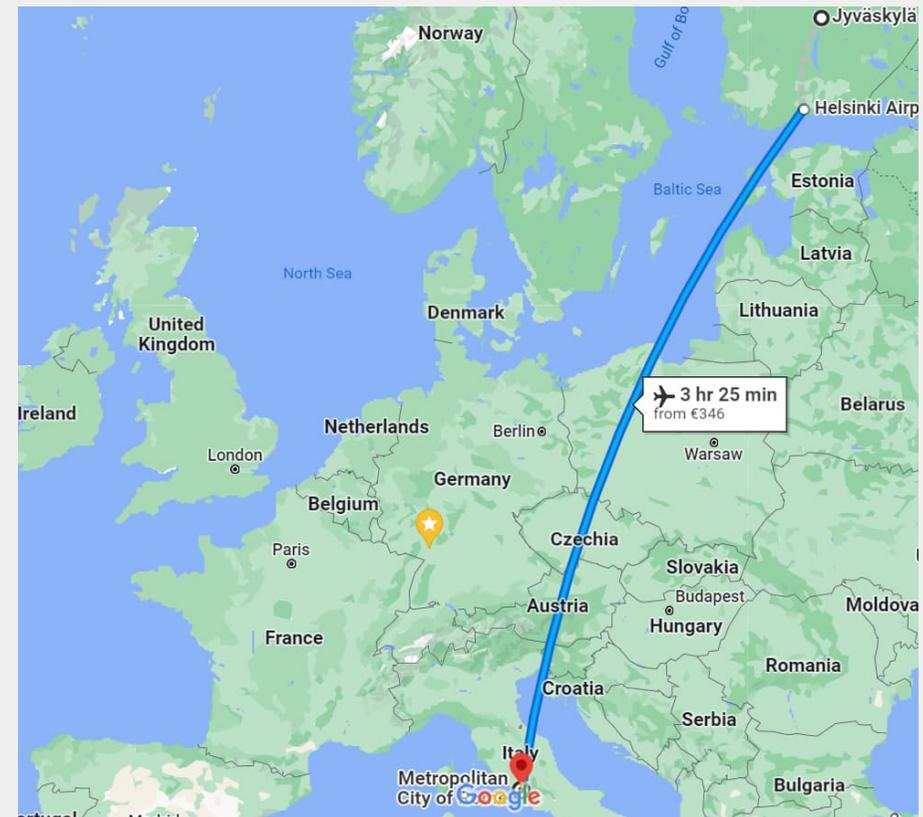
## Green Travel:

• Train Jyväskylä (07:19)-Vaasa (11:07)	388 km	42.00€	3.5 kgCO <sub>2</sub> -eq
• Ferry Vaasa (13:15)-Umeå (15:45)	100 km	40.00€	9.9 kgCO <sub>2</sub> -eq
• Total	488 km	82.00€	13.4 kgCO <sub>2</sub> -eq (-96%)



## Example 2: Green Travel for main part of the journey Jyväskylä-Rome-Jyväskylä

- Regular trip
  - Jyväskylä-Helsinki (train)
  - Helsinki-Rome (airplane)
  - Time: 9 hours 20 minutes
  - Emissions: 813.5 kg CO<sub>2</sub>-eq
- Green Travel
  - Jyväskylä-Helsinki (train)
  - Helsinki-Berlin (airplane)
  - Berlin-Rome (train)
  - Time: 27 hours 13 minutes
  - Emissions: 463.3 kg CO<sub>2</sub>-eq (-43%)





## Example 2: Green Travel for main part of the journey Jyväskylä-Rome-Jyväskylä

### Regular trip:

• Train Jyväskylä (10:15)-Helsinki (13:53)	335 km	34.00€	3.1 kgCO <sub>2</sub> -eq
• Airplane Helsinki (16:10)-Rome (18:35)	2235 km	127.00€	810.4 kgCO <sub>2</sub> -eq
• Total	2570 km	161.00€	813.5 kgCO <sub>2</sub> -eq

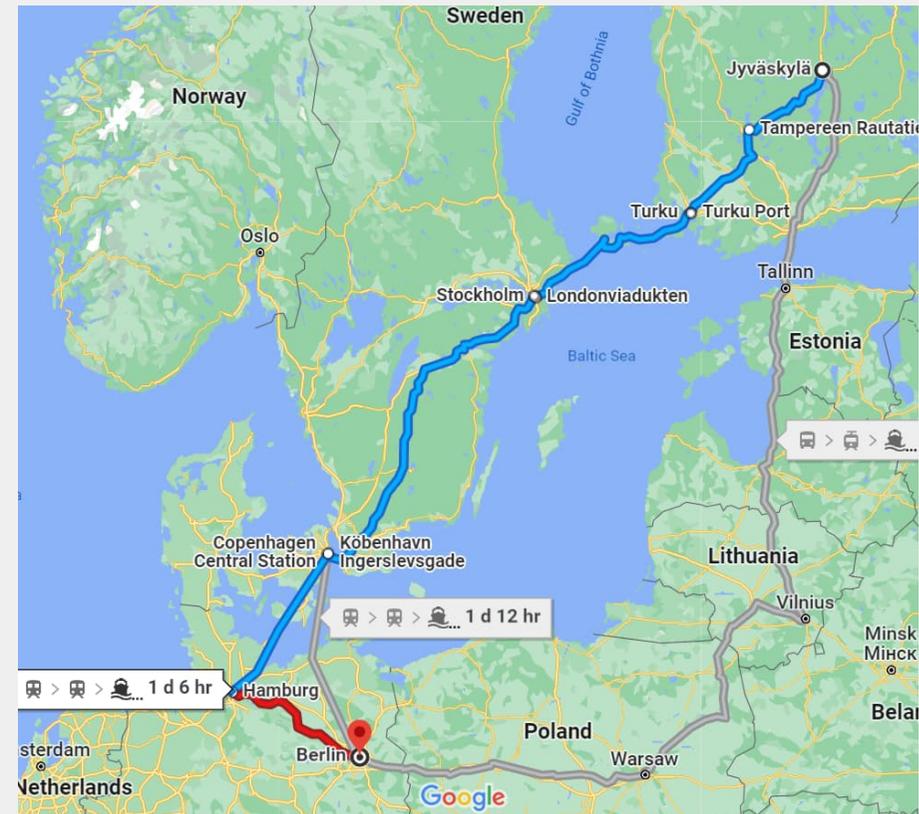
### Green Travel:

• Train Jyväskylä (06:17)-Helsinki (09:33)	335 km	34.00€	3.1 kgCO <sub>2</sub> -eq
• Airplane Helsinki (11:25)-Berlin (12:25)	1131 km	116.00€	410.1 kgCO <sub>2</sub> -eq
• Train Berlin (15:17)-Munich (20:02)	634 km	74.50€	21.7 kgCO <sub>2</sub> -eq
• Train Munich (20:10)-Rome (09:04)	1605 km	188.50€	28.4 kgCO <sub>2</sub> -eq
• Total	3705 km	413.00€	463.3 kgCO <sub>2</sub> -eq (-43%)



## Example 3: Green Travel for one direction of the journey Jyväskylä-Berlin-Jyväskylä

- Regular trip (round trip airplane/airplane)
  - Jyväskylä-Helsinki (train)
  - Helsinki-Berlin (airplane)
  - Time: 7 hours 8 minutes
  - Emissions: 826.4 kg CO<sub>2</sub>-eq
- Green Travel (round trip green travel/airplane)
  - Jyväskylä-Turku (train)
  - Turku-Stockholm (ferry)
  - Stockholm-Berlin (train)
  - Time: 31 hours 9 minutes
  - Emissions: 480.8 kg CO<sub>2</sub>-eq (-42%)





## Example 3: Green Travel for one direction of the journey Jyväskylä-Berlin-Jyväskylä

### Regular trip:

• Train Jyväskylä (06:17)-Helsinki (9:33)	335 km	34.00€	3.1 kgCO <sub>2</sub> -eq
• Airplane Helsinki (11:25)-Berlin (12:25)	1131 km	116.00€	410.1 kgCO <sub>2</sub> -eq
• Total (round trip!)	2932 km	300.00€	826.4 kgCO <sub>2</sub> -eq

### Green Travel:

• Train Jyväskylä (16:12)-Turku (20:07)	326 km	36.00€	3.0 kgCO <sub>2</sub> -eq
• Ferry Turku (20:55)-Stockholm (06:30)	340 km	67.00€	33.7 kgCO <sub>2</sub> -eq
• Train Stockholm (09:22)-Copenhagen (15:09)	642 km	49.00€	2.5 kgCO <sub>2</sub> -eq
• Train Copenhagen (15:26)-Hamburg (20:02)	514 km	39.00€	18.6 kgCO <sub>2</sub> -eq
• Train Hamburg (20:34)-Berlin (22:23)	287 km	22.00€	9.8 kgCO <sub>2</sub> -eq
• Total (round trip!)	3575 km	363.00€	480.8 kgCO <sub>2</sub> -eq (-42%)



# Summary

One way to mitigate our impacts on climate change is the use of Green Travel!

- A one-way flight to Rome would already exceed our annual anticipated carbon footprint (575 kg CO<sub>2</sub> for mobility)

Ideally, we would satisfy our mobility needs without relying on air travel at all.

- For trips to other Nordic Countries and the Baltic States using the ferry can be a good alternative to air travel

However, even replacing parts of the journey by Green Travel or use Green Travel in one direction of the journey can already help reducing our carbon footprint significantly.

- For trips to central and southern Europe a combination of replacing parts of the journey or going one direction by Green Travel is a good alternative
- To shorten travel times the use of night trains and night ferries is recommended

Erasmus+ is supporting Green Travel by allowing participants to use additional travel days and provides higher travel grants.



# My first own experience with Erasmus Green Travel dates actually back to the year 2006...

- In 2006 I was participating for the first time in an Erasmus exchange from Germany to Finland
- Because I didn't want to fly to Finland, I instead decided to take the train:
  - Night train Offenburg-Copenhagen
  - Day train Copenhagen-Stockholm
  - Night ferry Stockholm-Turku
  - Day train Turku-Lappeenranta

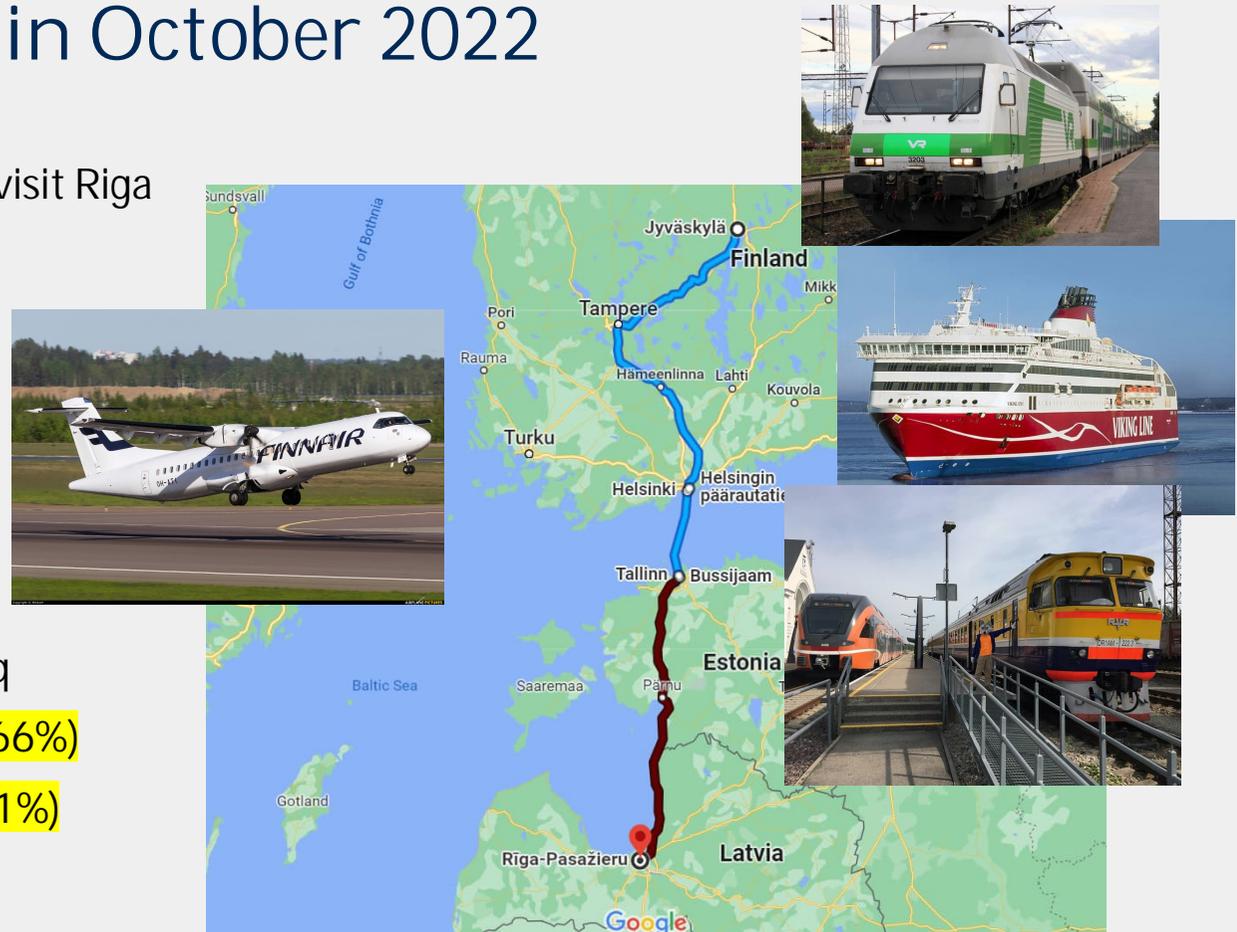




# Green Travel in practice: My Erasmus+ Teaching visit to University of Latvia in October 2022

Instead of flying, I chose Green Travel to visit Riga by:

- Train from Jyväskylä-Helsinki
  - Ferry from Helsinki-Tallinn
  - Train from Tallinn-Valga-Riga
- 
- Regular trip (airplane): 145.0 kgCO<sub>2</sub>-eq
  - Green Travel (train): 49.1 kgCO<sub>2</sub>-eq (-66%)
  - Green Travel (bus): 27.8 kgCO<sub>2</sub>-eq (-81%)

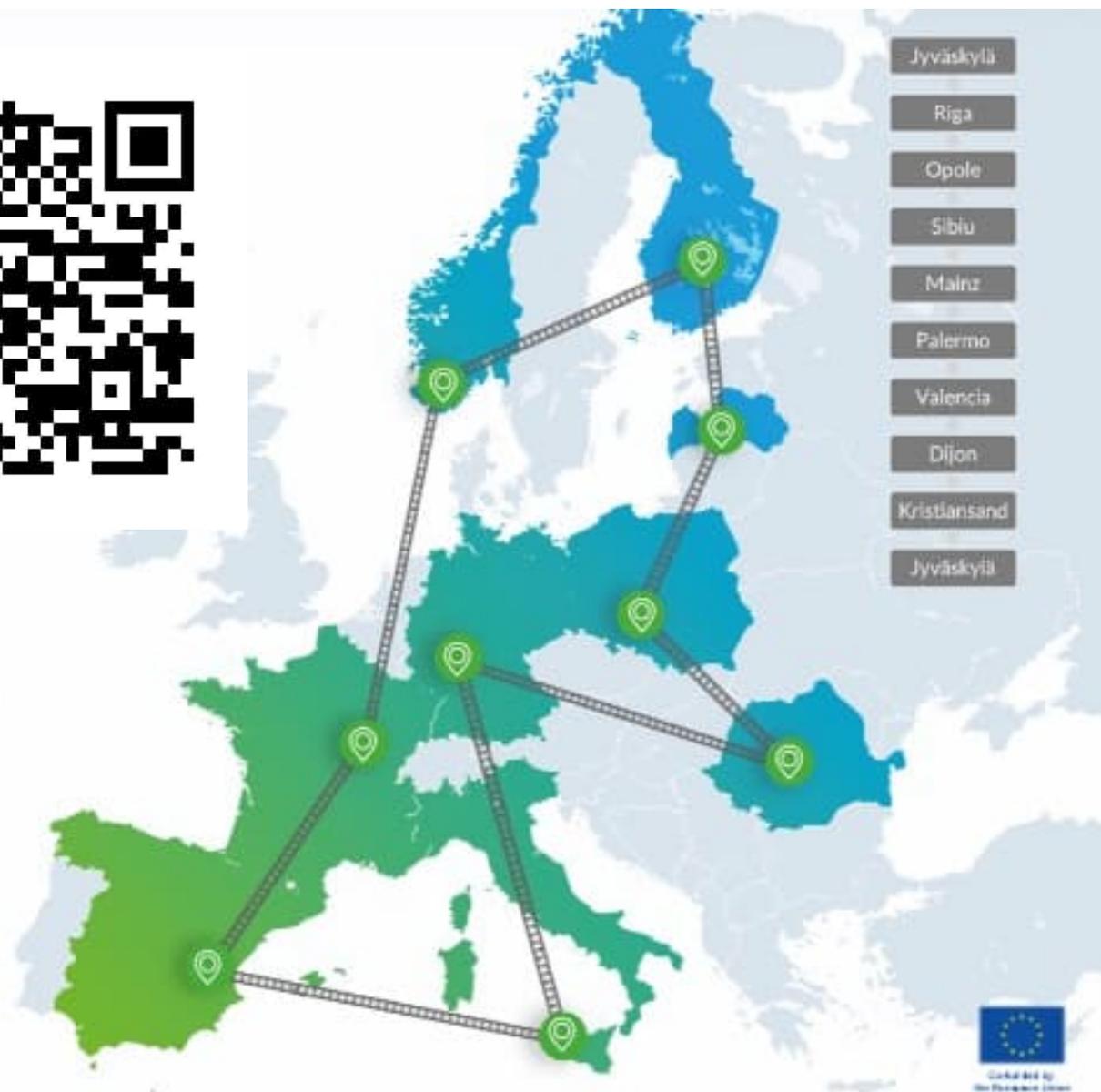


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# Green Travel Roadshow

**30 days**  
Visiting each FORTHEM  
Alliance university  
About **15.000 km** distance travelled  
through **18 countries**



- Jyväskylä
- Riga
- Opole
- Sibiu
- Mainz
- Palermo
- Valencia
- Dijon
- Kristiansand
- Jyväskylä





# How to prepare for Erasmus+ Green Travel mobility?

- Indicate in your application for international staff mobility funding that you want to use Green Travel
- Sign one additional document on Green Travel provided by your International Office
- Find the best route and Green Travel modes how to reach your destination:
  - [www.google.com/maps](http://www.google.com/maps)
  - [www.rome2rio.com](http://www.rome2rio.com)
  - [www.rail.cc](http://www.rail.cc)
- Book train, bus or ferry tickets by yourself





# Thank you for your attention!

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