



ECF gratefully acknowledges financial support from the European Commission.



Investments in cycling and Cost-benefit analysis – overview and new developments

Ádám Bodor, Holger Haubold
ECF AGM Stockholm, 28 May 2016

Benefits of a Bicycle



Why do we need numbers if we have nice pictures?



Structure

- **Quantifying the benefits of cycling:** health, jobs, retail
- **Cost-benefit analysis:** existing approaches and way forward
- **Investment levels:** Is there a „gold standard“?
- **Sources of investments – EU Funds for cycling**

The New Cycling Economy: € 205 bn /year

internal and external benefits of cycling together

7.4% bicycle use (Eurobarometer 2010) + turnover of related industries

> € 400/person EU



The New Cycling Economy: € 205 bn /year

Type of benefit	In € for 2010
1 Health benefits: reduced mortality	€ 114 – 121 bn
2 Congestion-easing	€ 24.2 bn
3 Fuel savings at US\$ 100/ barrel	€ 2.7 – 5.8 bn
4 Reduced CO2 emission	€ 1.4 – 3.0 bn
5 Reduced air pollution	€ 0.9 bn
6 Reduced noise pollution	€ 0.3 bn
Total	€ 143.2 – 155.2 bn

Type of industry	In € for 2010/2011
1 Tourism industry	€ 44 bn
2 Bicycle industry	€ 18 bn
Total	€ 62 bn

THE NEW CYCLING ECONOMY

EUROPEAN CYCLISTS FEDERATION

 **34,000,000**

Europeans had the bicycle as their preferred mode of transportation in 2010

 **200 Billion €**

is the annual value of their cycling's contribution to the EU

 **That equals 100%**

of the GDP of Denmark

- Health benefits have largest share: 114-121 billion €
- Base: 77 billion km/year cycled by adult population
- 7% daily cyclists, 43 % regular/occasional, 50% don't cycle

Calculating health benefits: HEAT tool (WHO)

- estimating the value of reduced mortality resulting from specified amounts of cycling
- www.heatwalkingcycling.org



▲ HEAT for cycling

Q1: Single or before / after

Q2a: Cycling data type

Home ▶ for cycling ▶ Q2a: Cycling data type

HEAT for cycling

Pre-intervention cycling data

Q2: Enter your pre-intervention cycling data

The HEAT model requires an estimate of the average duration spent cycling in the study population in order to calculate the corresponding health benefit (based on a relative risk from a review of the epidemiological literature on the health benefits of cycling). This duration can be entered directly, if available (and this is the most direct data entry route), or calculated based on the distance, number of steps, or number of trips.

- Duration (average time cycled per person)
- Distance (average distance cycled per person)
- Trips (average per person or total observed across a population)

Cancel

Back

Next

Calculating health benefits: HEAT tool (WHO)

- Examples for use:
 - France: Report on cycling reimbursement (11/2013)
 - Austria: National Cycling Master Plan recommends to include HEAT in guidelines for CBA for transport investments



Masterplan Radfahren

Umsetzungserfolge und neue Schwerpunkte
2011 - 2015



New report: Turn up the HEAT



- Assessing use of HEAT across Europe
- Giving recommendations on how to increase use

Jobs and Job Creation in the EU Cycling Economy

- Contribution of cycling sector to green growth in Europe



ECF STUDY: SET-UP

Step 1:
Sector definition

- Bicycle market definition
- Sector and sub-sectors

Step 2:
Economic value

- Turnover
- Investment

Step 3:
FTE Jobs

- FTE jobs/1M turnover
- FTE jobs/1M investment

ECF STUDY: RESULTS

Jobs in the European cycling sector



Today



650,000 JOBS*



Bicycle tourism 524,052



Bicycle retail 80,587



Bicycle infrastructure 23,417



Bicycle industry 22,629



Bicycle services 4,224

Doubling cycling modal share



1,000,000 JOBS*



Bicycle tourism 869,927



Bicycle retail 122,196



Bicycle infrastructure 36,484



Bicycle industry 32,133



Bicycle services 8,448

* Full-time equivalents (EU-27)

ECF STUDY: RESULTS

Cycling means more jobs and an inclusive economy



More jobs

Per € million of turnover, the bicycle manufacturing sector employs **3 times more people** than the car manufacturing sector

Per € million of turnover, the bicycle sale sector employs **More than 4 times more people** than the car sale sector



Inclusive Europe

The study shows that a number of the jobs do not require high levels of qualification. By providing easily accessible employment for groups that are disadvantaged on the labour market because of their low qualification levels, this offers an opportunity to contribute to the objectives of **an inclusive Europe.**



Shopping by bike



In different EU cities:

- Cyclists spend more than car drivers
- Shop-owners overestimate the share of customers coming by car
- Traffic calming most often leads to more turnover for retailers
- More on www.ecf.com

Shopping by bike in EU

In EU28, shoppers that travel by bike account for consumption volume of **111bn** euros



Doubling the cycling modal share in the EU

(excluding Croatia) would generate an additional

27bn euros for local retailers

Cost-Benefit Calculator for Cycling Investments (Fietsberaad/Decisio, NL)

- English explanation:

<http://herberttiemens.wordpress.com/2014/03/04/online-cost-benefit-calculator/>

WEBTOOL MKBA-FIETS

Nieuwe Infrastructuur

Nulalternatief

Gemiddelde afstand per rit	<input type="text"/>	m
Aantal fietsritten	<input type="text"/>	per dag

Projectalternatief

Investeringen	<input type="text"/>	euro
Gemiddelde afstand per rit	<input type="text"/>	m
Aantal fietsritten	<input type="text"/>	per dag

Cost-Benefit Calculator for Cycling Investments (Fietsberaad/Decisio, NL)

- For individual projects
- Including a range of direct/indirect costs/benefits
- Takes also into account externalities (noise, emissions)

Costs	Direct Effects	Indirect Effects	Externalities
Initial investment	Travel time reduction cyclists	Health benefits	Emissions
Maintenance	Travel time reduction and reliability car traffic	Productivity (less job absence)	Noise
		Subsidies public transport	Road Safety
		Tax revenues from fuel taxes	

Cost-Benefit Calculator for Cycling Investments

- Example: Cycling kilometer compared to car and bus kilometers (densely populated urban area)

	Cycling replacing car	Cycling replacing bus
Network effects (congestion)	€ 0.330	€ 0.000
Work productivity	€ 0.046	€ 0.046
Life expectancy	€ 0.025	€ 0.025
Public budgets (taxes/subsidies)	€ -0.030	€ 0.387
Total indirect effects	€ 0.041	€ 0.458
Emissions	€ 0.030	€ 0.029
Noise	€ 0.010	€ 0.016
Road safety	€ -0.001	€ 0.010
Total externalities	€ 0.039	€ 0.055
Total benefits	€ 0.411	€ 0.513

UK: Evaluation of Cycling Grants

- projects in urban and rural areas
- Average cost-benefit ratio: 1:5.5
- split of benefits:
 - 61% physical fitness
 - 18% congestion relief
 - 17% journey ambiance
 - 4% accidents, absenteeism, greenhouse gases, others

Conclusions

- CBA helps cycling to prove its potential
- no standardised methodology yet

➔ We want to work on this!



Investment levels

- Recommendations at national level:
 - UK: ca. 22.5 €/capita/year to double number of cycling stages (stage: trip or part of a trip)
 - Germany: depending on base level:
 - Starter cities: 9-24 €/capita/year
 - Climber cities: 14-24 €/capita/year
 - Champion cities: 22-24 €/capita/year

Good practice examples

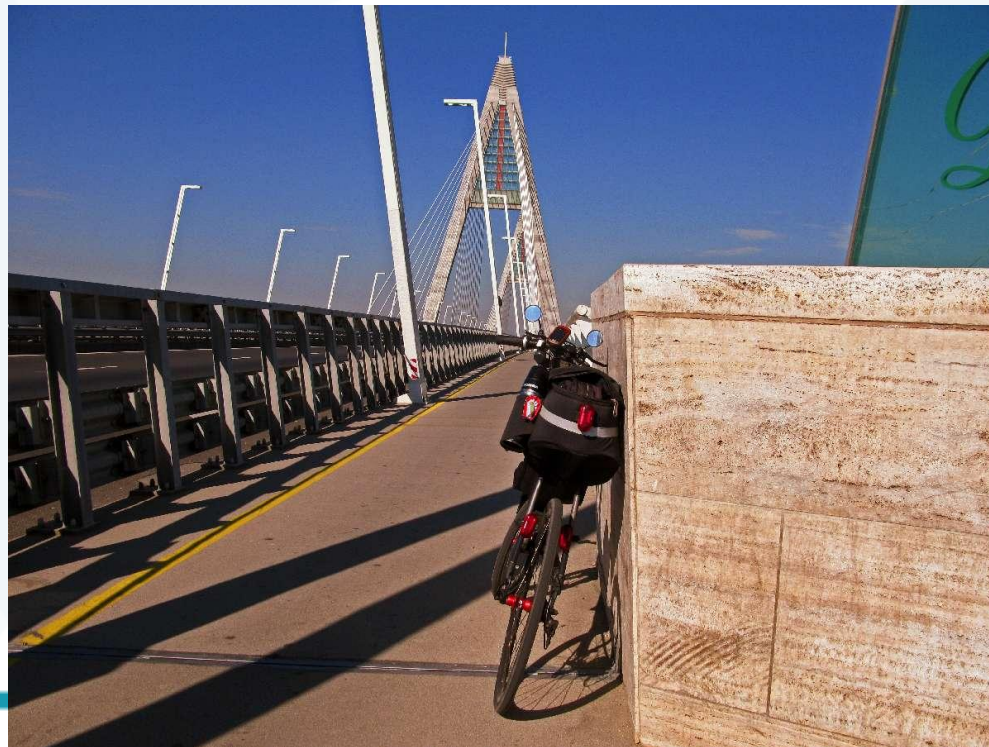
- Total investment in the following countries:
 - Netherlands: 24.5 €/capita/year (modal share: 27%)
 - Hungary: 3.7 €/capita/year (modal share: 19%)
- Total investment in the following regions:
 - Andalusian Cycling Plan: 7.2 €/capita/year
 - Flemish Cycling Policy Plan: 15.5 €/capita/year (goal: cutting car trips with a distance of less than 5 km by half by 2030)

Good practice examples

- Total investment at the local level:
 - Sevilla: 10.5 €/capita/year during 4 years to create city-wide cycling infrastructure network of almost 200 km → rise in modal share from 0.5% to 7%
 - Leipzig: at least 5 €/capita/year for infrastructure, plus ca. 1 €/capita/year for maintenance and “soft measures”; aim is to increase modal split from 14.4% to 20% between 2008 and 2020

Challenges

- Challenges:
 - Investment in combined road/cycling projects



Challenges

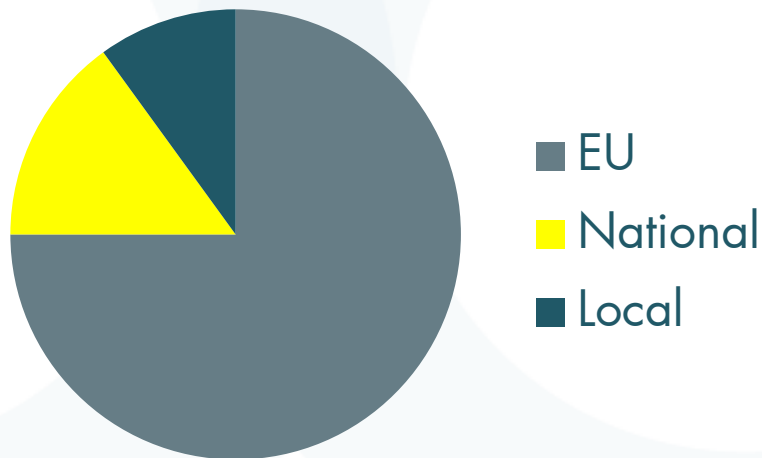
- Challenges:
 - Different costs of planning/construction per country:



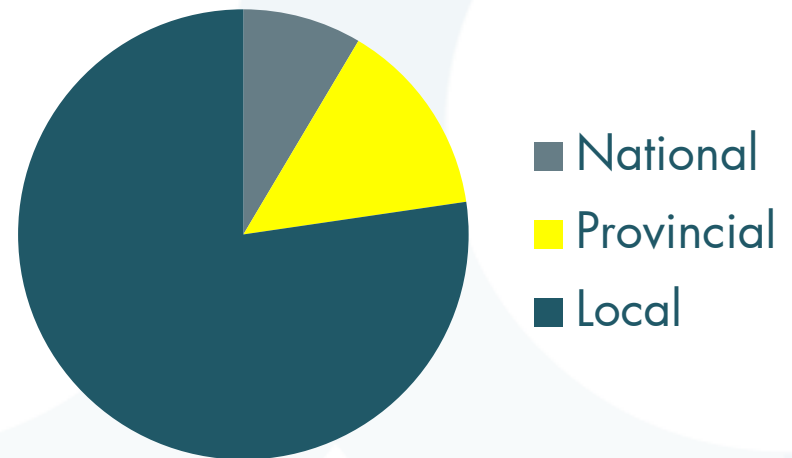
Challenges

- Challenges:
 - Investment at different levels (European, national, regional, local)

Hungary



Netherlands

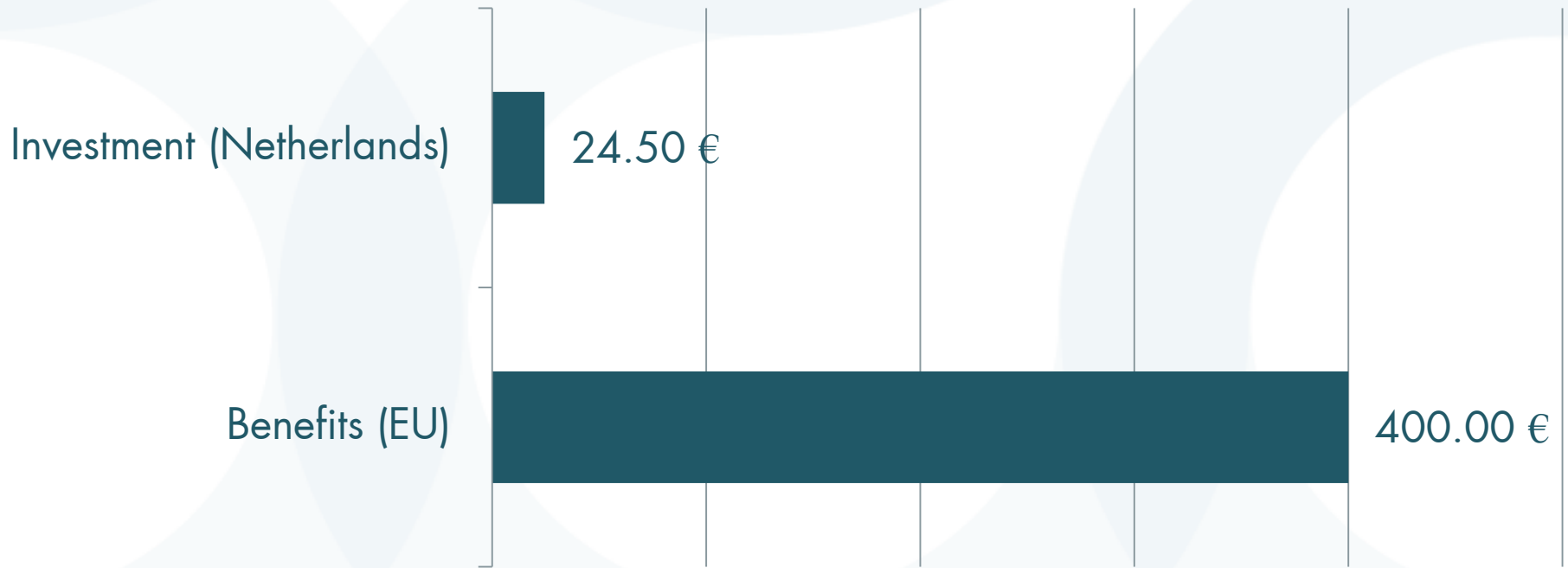


What is the gold standard?

- How much should be invested in your country/region/city in total (European, national, regional, local level together) per year?
- How many inhabitants your country?
- How much should be invested per capita (in total) in your country per year?

Costs vs. Benefits

per capita and year:





Thank you for your attention !

For more information

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European Commission



EU FUNDS OBSERVATORY FOR CYCLING

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28th of May 2016

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2. EU Funds Observatory for Cycling (Q&A)
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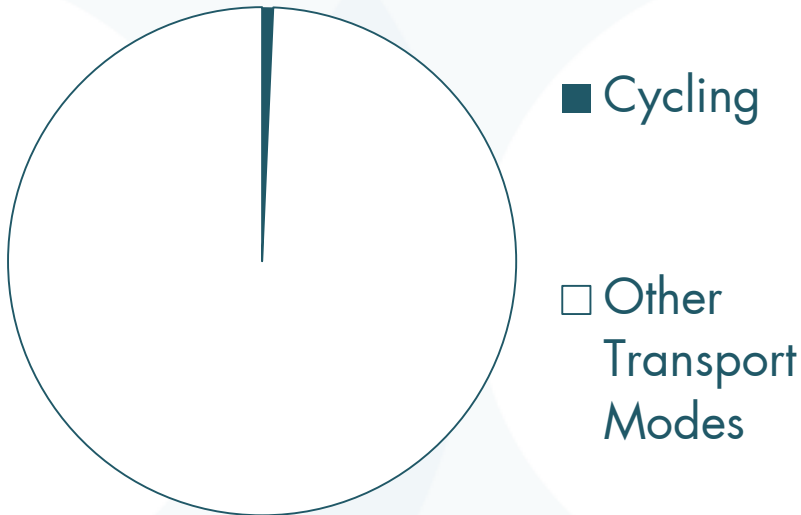
ECF Strategy for EU Funds for Cycling

- Make best use of EU funds dedicated for cycling.
- Realise the potential of the other EU funds for cycling-related projects.
- Ensure the integration of cycling measures in relevant non-cycling projects too.



Introduction to EU Funds

EU Spending on Transport



European funding of cycling-related projects between 2007 – 2013 was 600 million Euros.

Four countries spent over 100 million Euro each:







Bike 2 Work : Smart Choice for Commuters
Successful bid with IEE Steer projects









15 EuroVelo 15 Rhine Cycle Route Nederlands English Français Deutsch



EuroVelo 15 **Countries** Switzerland | Germany | France | Netherlands **Stages** **Services**

EuroVelo 15: From the source of the Rhine to its mouth in the North Sea

"The Rhine combines every quality a river can exhibit. The rapidity of the Rhone, the breadth of the Loire, the rocks of the Meuse, the sinuosity of the Seine, the translucency of the Somme, the historical reminiscences of the Tiber, the regal dignity of the Danube, the mysterious influence of the Nile, the golden sands of the glittering streams of the New World, the phantoms of some Asiatic stream" - Victor Hugo.

Open to cyclists of all capabilities, the Rhine cycle route runs along one of the largest rivers in Europe. From the Swiss Alps to the North Sea, the Rhine has fostered

SAMSUNG



The different types of EU funds

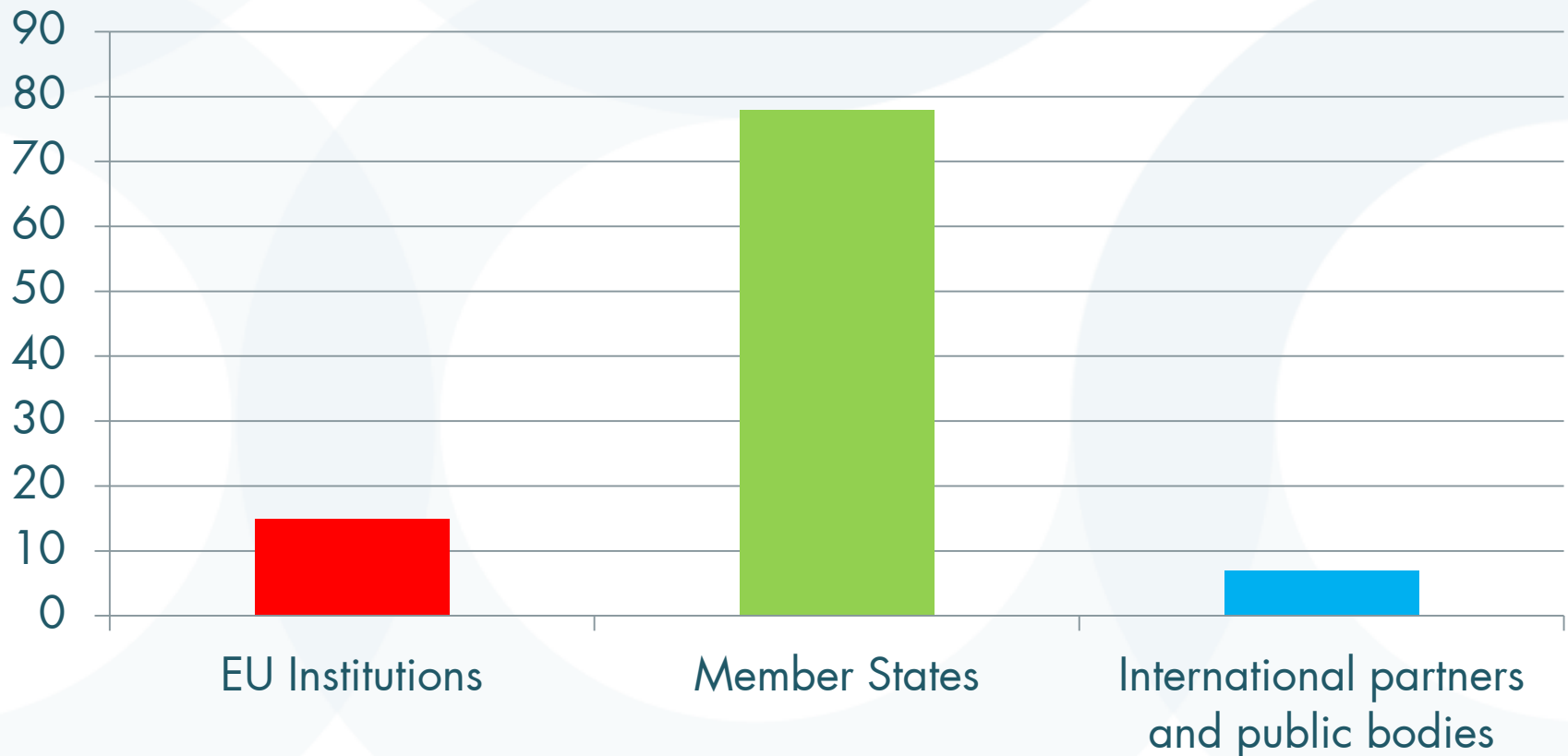
European-level programmes

Transnational and cross-border programmes

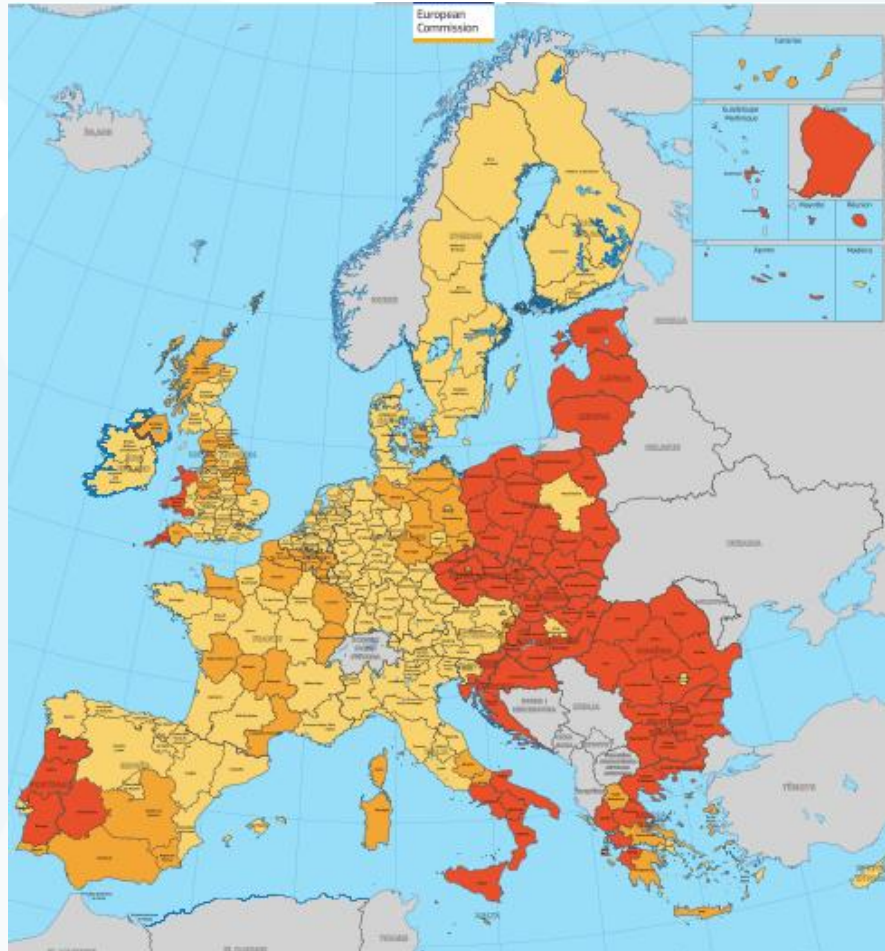
National and regional level programmes

How the funds are managed

Management modes in 2013



Funds coordinated at a national / regional level



Programming documents



Q & A

ECF Strategy for EU Funds for Cycling

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Programming documents



Scanning of the documents



References to cycling in the programming documents

Explicit references

“Implement projects concerning the construction of linear infrastructure of cycling transport”
“Cities, towns developed to be cycling friendly: 38 town”
Length of the realized cycling infrastructure: 970km”

Implicit references

“Clean urban transport infrastructure and promotion”
“Sustainable tourism”

Indirect references

“Investments for the accessibility to the local cultural heritage, which contributes to the valorisation of the local cultural heritage, to the promotion of the rural tourism”

Current status

Based on the explicit references to cycling we estimate that

1.5 billion Euros

of EU Funds are available for cycling between
2014 – 2020.

With implicit and indirect connections:

2 billion Euros

The results of our campaign...

2007-2013

EU Funds
invested in
cycling:
€600 million

Percentage of
total
investments in
transport:
0.7%



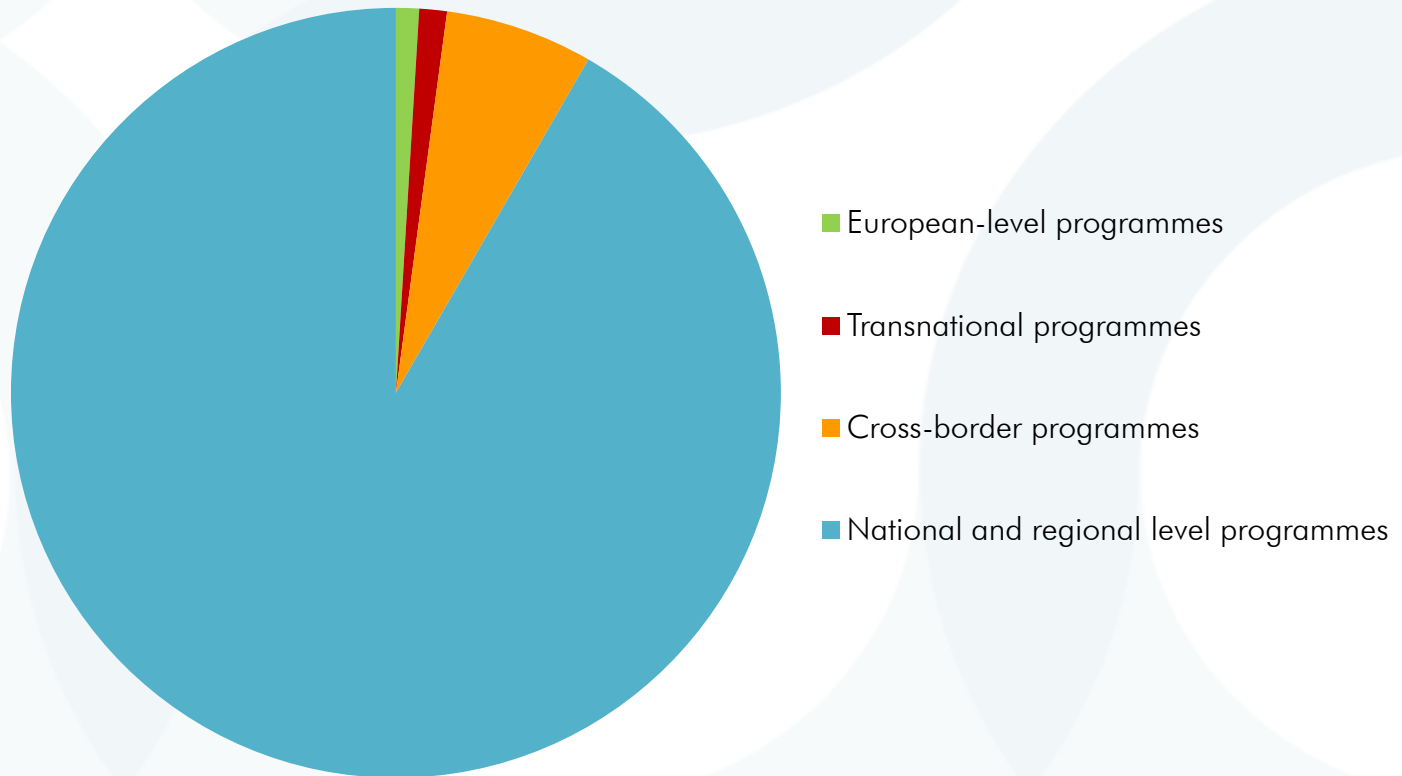
2014-2020

EU Funds
invested in
cycling:
€1.5 billion

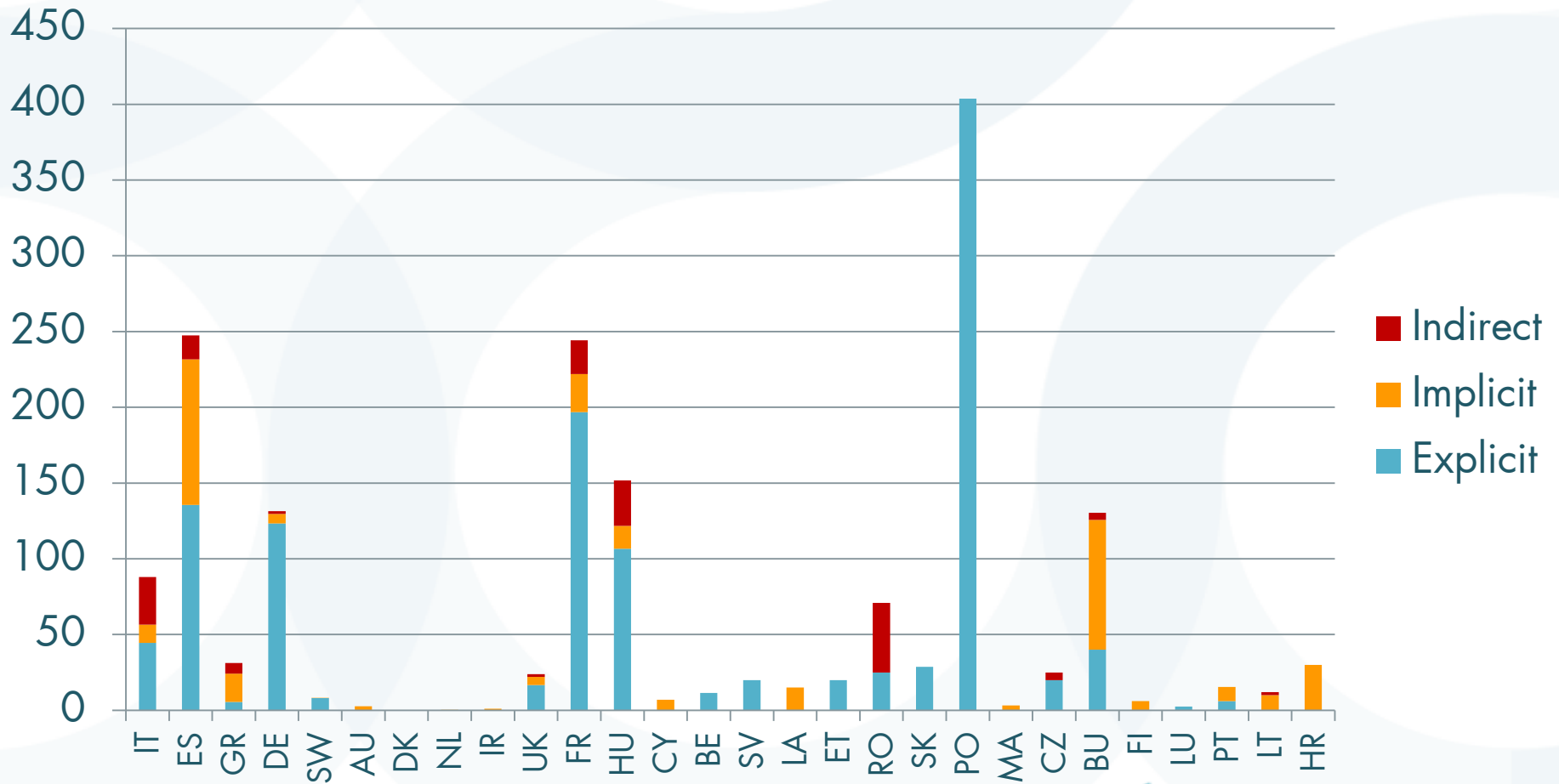
Percentage of
total
investments in
transport:
1.6%

Current status

European funds available for cycling
between 2014 and 2020



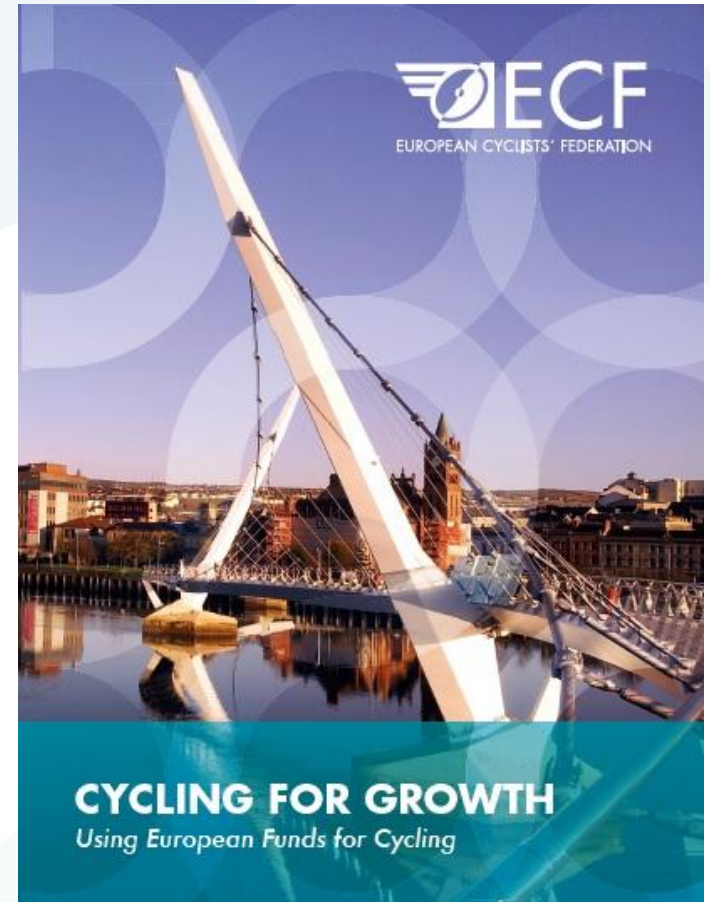
Current status



Cycling for Growth

For more information:

<http://www.ecf.com/advocary/eu-funding-2/eu-funding-opportunities-for-cycling-2014-2020/>



Q & A

EU Funds Observatory for Cycling

2007-2013

EU Funds
invested in
cycling:
€600 million

Percentage of
total
investments in
transport:
0.7%



2014-2020

EU Funds
invested in
cycling:
€1.5 billion

Percentage of
total
investments in
transport:
1.6%

EU Funds Observatory

A stylized illustration of a cyclist is centered in the banner. The cyclist is shown in profile, facing right, wearing a red short-sleeved shirt and blue shorts. They are riding a dark red bicycle. The background of the banner is a light green gradient with a subtle circular pattern.

**EU FUNDS OBSERVATORY
FOR CYCLING**

EU Funds Observatory

<https://ecf.com/what-we-do/european-funding/eu-funds-observatory-cycling>

EU Funds Observatory for Cycling

The aim of the ECF's EU Funds Observatory for Cycling is to help you **find opportunities for using EU funds to invest in cycling-related projects** in your area. This tool will enable you to search for all the relevant EU programmes and identify where there is funding available.

The Observatory provides an overview of over **200 different programming documents** covering the whole of the **2014-2020 EU financial period**. For each document we have checked both the wording, to highlight useful references, and the funding distribution to estimate how much could potentially be spent on cycling-related projects.

While we hope that you will find the Observatory useful to provide an overview of the most relevant programmes for your area, we always encourage you to check the actual documents for yourself (we have provided the links to make this easier) and, if necessary, speak to the authority managing the programme.

Of course, identifying funding opportunities is only the beginning of the process. The next step is to **put together successful applications** and over the coming years the ECF will be providing more tools, advice and suggestions through this section of the website to help you along the way. We have already established a **best practice database** to bring together examples of successful EU-funded cycling-related projects from around Europe.

Use the links below to search for funding programmes or examples of best practice.

[GO TO OPERATIONAL PROGRAMME SEARCH](#)

[GO TO BEST PRACTICE SEARCH](#)

Urban mobility



ABOUT THE AUTHOR



Mr. Adam BODOR
Advocacy and EuroVelo
Director



RELATED CONTENT

[INFO DAY ON USING EU FUNDS FOR CYCLING ORGANIZED IN FRANCE](#)

[EU Funds Observatory for Cycling launched](#)

[EU Funds Observatory for Cycling launched](#)

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EU Funds Observatory

EU Funds Observatory for Cycling



Select a country

Select a Country ▼

Apply

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Select a country

Hungary

All regions

Apply

Reset



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EU Funds Observatory

➤ Explicit references ➤ Implicit references ➤ Indirect references ➤ No references

European programs

- Trans-European Transport Networks (TEN-T)
- Competitiveness of Enterprises and SMEs (COSME)

Cross-border programs

- IPA CBC Hungary - Serbia
- Interreg V-A - Romania-Hungary
- Interreg V-A - Slovakia-Hungary
- IPA CBC Hungary - Croatia
- Interreg V-A - Austria-Hungary
- Interreg V-A - Slovenia-Hungary
- Interreg CENTRAL EUROPE Cooperation Programme - European Territorial Cooperation 2014-2020

National programs

EU Funds Observatory

Territorial and settlement development OP

GO TO BEST PRACTICE

Hungary

General information

Country: Hungary

Region: Dél-Alföld, Dél-Dunántúl, Észak-Alföld, Észak-Magyarország, Közép-Dunántúl, Nyugat-Dunántúl

Title of the document: Territorial and settlement development OP

Thematic objectives chosen: 4. Supporting the shift towards a low-carbon economy, 6. Preserving and protecting the environment and promoting resource efficiency, 8. Promoting sustainable and quality employment and supporting labour mobility, 9. Promoting social inclusion, combating poverty and any discrimination

Link: <https://www.palyazat.gov.hu/download.php>

1st Reference To Cycling details

Type of the reference: *Explicit references*

The reference text copied (in original language):

Az intézkedés hanasúlv t h elvez a kerékpáros közlekedés feltételeinek javítására. A kerékpárforralmi hálózat feillesztése terén

EU Funds Observatory

1st Reference To Cycling details

Type of the reference: *Explicit references*

The reference text copied (in original language):

Az intézkedés hangsúlyt helyez a kerékpáros közlekedés feltételeinek javítására. A kerékpárforgalmi hálózat fejlesztése terén lehetőség nyílik a helyi, helyközi, hivatás-forgalmi és egyéb célú kerékpárforgalmi létesítmények építésére és felújítására, a kerékpáros közlekedési infrastruktúra bővítésére, a műszakilag és forgalomtechnikailag nem megfelelő kerékpárforgalmi létesítmények, balesetveszélyes gócpontok korrekciójára. Jelentős fejlesztési célterület a kerékpáros közlekedés közösségi közlekedéshez való kapcsolódása, így a közlekedési csomópontokban meg kell valósítani a közösségi közlekedési beavatkozásnál is jelzett módváltó rendszerek kialakítását, illetve a közösségi kerékpáros rendszerek kiépítését.

Kialakított kerékpárosbarát települések vagy településrészek száma: $20+21=41$ db

Kialakított kerékpárforgalmi létesítmények hossza: $686+334=1020$ km

The reference text copied (in English):

The measure will focus on the improvement of cycling conditions. It will open possibilities to develop local, micro-regional cycling routes by renewing existing cycling facilities, constructing new bicycle facilities, improving cycling transport facilities, correcting dangerous junctions. Important focus on the intermodality and in order to achieve this its necessary to improve intermodal solutions and develop public bike sharing schemes.

Total budget for action: 813 302 703.00€

Estimated amount for cycling: 94 450 933.00€

Q & A

ECF Strategy for EU Funds for Cycling

- Make best use of EU funds dedicated for cycling.
- Realise the potential of the other EU funds for cycling-related projects.
- Ensure the integration of cycling measures in relevant non-cycling projects too.



“I have seen what the Cohesion Funds and Structural Funds have done for cycling, for example in my own country. We now have some incredible cycling routes, and we use them really well. So I hope that this culture of cycling will be part of our culture as well.”

Violeta Bulc, European Commissioner for Transport

Programming documents



Calls for proposals

- Clearly describe the objectives (greening transport, create jobs etc.) and activities (awareness raising campaigns, construction of a bike path, feasibility studies etc.)
- Define the eligible costs (staff cost, services, goods, works, in-direct etc.)
- Define the level of EU subsidies (in 30-100% of eligible costs) and min.-max. subsidy per project.
- Define the type of subsidy (refundable or not)

Keep in mind!

- Other funding sources available
 - EU Funds – for development only, fixed objectives, activities for 7 years
 - National, regional, local funds – for maintenance operation as well, yearly / biannual budget with more flexibility
- You'll need to contribute your own resources (0% - 70%).

Keep in mind!

- Be prepared for paper work
 - Application phase – detailed proposal and administrative requirements depending on the type of the call
 - Implementation phase – strict procedures (e.g. public procurement) and evidences about all activities and costs (timesheets, invoices etc.)
- Sustainability
 - 3-5 years long obligations to sustain the project results

What ECF will do in 2016

- Continue to update EU Funds Observatory
- Run Webinars on project development and preparing successful applications
- Collect and share good practices.
- Apply for EU funds!

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Q & A



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