

# Monitoring and evaluation

## Short summary of EUCS chapter 11

T. Steenberghen

- 1. Policy and project evaluation**
- 2. KPI**
- 3. Common definitions and harmonisation to improve synergy among different cycling statistics**
- 4. Use crowdsourcing and big data collection for monitoring**



# Policy and evaluation

## EU LEVEL

- Improve communication: best practices such as the [cycling barometer](#)
- Provide funding for tools (new + uptake existing)
- Encourage and extend joined initiatives

Key = how far policy measures and projects contribute to targets?

**Monitoring** (over time)

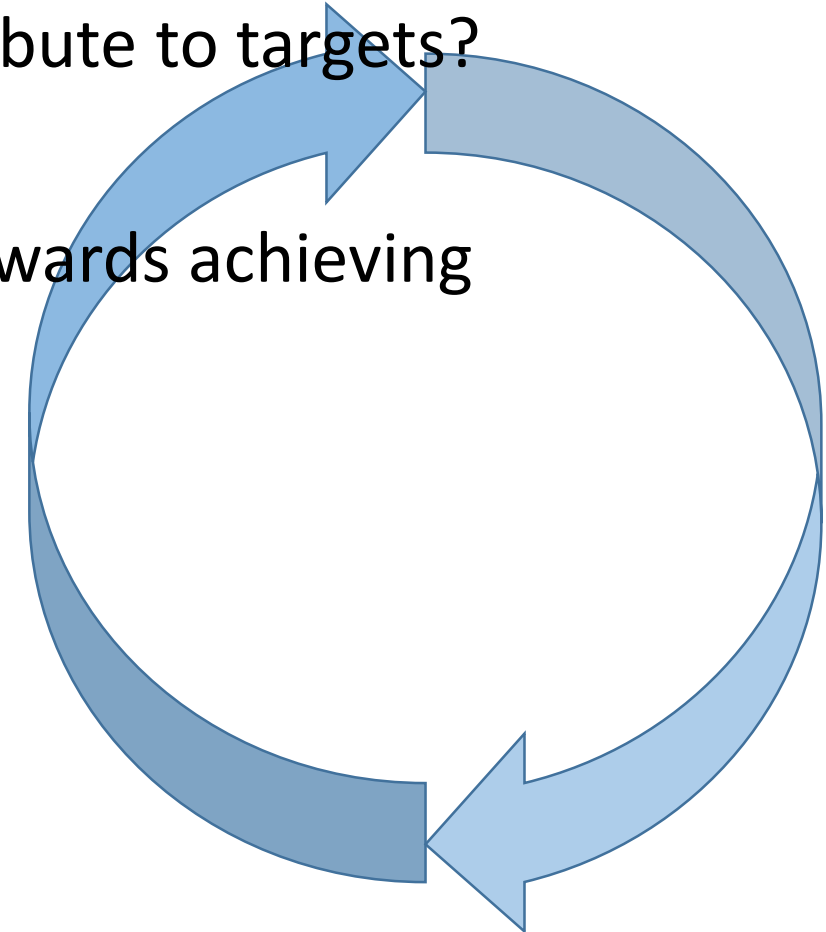
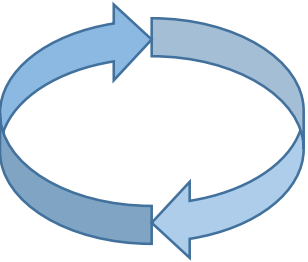
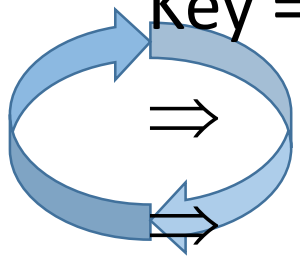
## NATIONAL LEVEL

reflect the current situation and progress towards achieving objectives **from local to global level**

- Provide fora and joint initiatives
- Stimulate comparisons among cities at the national level
- National cycling strategies incl. policy and project evaluation

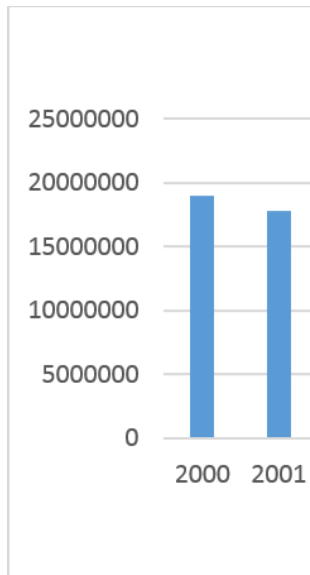
## REGIONAL AND LOCAL LEVEL

- Evaluate policies and projects (using standards)
- [Participate in joint initiatives and fora and share best practices](#)



Policy and project evaluation	KPI	Synergy through common definitions and harmonisation	Crowdsourcing and big data collection for monitoring
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# IBD Statistics and Quality of Life of user climate change mitigation and SD



A general question could be asked to all respondents:

**1 Do you in general like cycling?**

Like extremely     Neither like nor dislike     Dislike extremely  
 Like very much     Dislike very much     refusal to respond

However, questions about satisfaction with the cycling infrastructure and the cycling friendliness should be different for people who cycle regularly and those who don't.

For those answering that they **ride a bike less than a few times a month:**

**2 What are the main reasons for you not to ride a bike in the city more often?**

There are too few dedicated lanes for biking     The way other road users treat cyclists     The bicycle parking facilities in the city are too few and too unsafe     The risk of being involved in an accident  
 Availability of car free streets in the city     The roads are of poor quality for biking     I don't feel safe from physical attacks     None of these

For those answering that they **ride a bike at least a few times a month:**

**3 Please rank the following aspects of cycling in the city starting with the item which is most important to you. (from 1 to 11, being 1 the most important)**

Availability of dedicated lanes for biking     The way other road users treat cyclists when on mixed use roads     Number and the location of shared bicycles     Feeling of personal security  
 Width of bike lanes     Signposting of directions and destinations for biking     Bicycle parking facilities in the city     Security of the bicycle parking facilities  
 Quality of road surface of the bike lanes     Lighting of biking facilities and urban streets at night     Security of the bicycle parking facilities

**4 How do you feel about comfort of cycling? Are you satisfied with the following items: Answer as follows;**

a. Very Satisfied, b. Satisfied, c. Neutral, d. Dissatisfied, e. Very Dissatisfied

Availability of dedicated lanes for biking     The way other road users treat cyclists when on mixed use roads     Number and the location of shared bicycles     Feeling of personal security  
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Source: Own elaboration based on WBCSD, 2016

concept allows the calculation of the opportunity benefits (cycling) emissions. The methodology shows that bicycle mobility is competitive relation of the bicycle with the other modes and

City	Population	Area (km²)	Population Density (inhabitants/km²)	Population Density (inhabitants/mi²)	Population Density (inhabitants/ha)	Population Density (inhabitants/acre)
Amsterdam	741,000	795	932	2,400	2,400	2,400
Brussels	1,051,000	161	6,528	16,900	16,900	16,900
Rotterdam	651,000	638	1,020	2,650	2,650	2,650
London	8,500,000	1,572	5,390	13,900	13,900	13,900
Paris	2,170,000	105	20,667	53,400	53,400	53,400
Barcelona	1,627,000	318	5,116	13,200	13,200	13,200
Madrid	3,265,000	604	5,405	13,900	13,900	13,900
Seville	700,000	128	5,469	14,100	14,100	14,100
Valencia	809,000	139	5,820	15,000	15,000	15,000
Birmingham	1,100,000	1,200	917	2,380	2,380	2,380
Manchester	2,547,000	1,110	2,294	5,930	5,930	5,930
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 Cycle track  
 Cycle street  
 Bus and bicycle lane  
 Contraflow cycling  
 Cycle lane  
 Advisory cycle lane

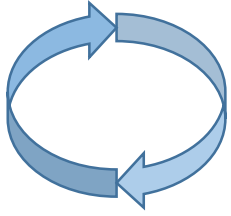
Year	Value
2014	~15,000
2015	~18,000



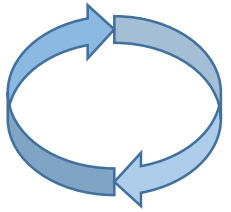
CVoC (data source: MON 2008, emission factors ADB (2010))

# Proposed changes : cycle use KPI

## EU LEVEL



- Collect more cycling use data and statistics in existing European surveys (e.g. European level such as the Eurobarometers and the Health Interview surveys)
- Promote harmonisation NTS
- Create guidelines and recommendations for harmonisation of existing national, regional and local statistics
- Provide additional funding for cycling data collection and analysis



## NATIONAL LEVEL

- Carry out harmonized NTS

## REGIONAL AND LOCAL LEVEL

- Use EU standards in data collections

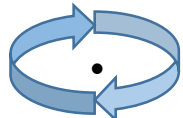


Policy and project evaluation	KPI	Synergy through common definitions and harmonisation	Crowdsourcing and big data collection for monitoring
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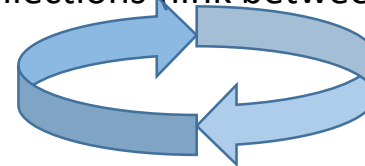
# Proposed changes KPI on cycling infrastructure, environment, QOL

## EU LEVEL

- Measure the quality of infrastructure ↔ quantity and quality in terms of user satisfaction  
 ↓  
 Support further research on cyclists' needs for cycling infrastructure



- More synergy among existing European data collections (link between infrastructure, user satisfaction and QOL)
- Incorporate explicitly SDG goals into EU goals



## NATIONAL, REGIONAL AND LOCAL LEVEL



- Create national, regional and local databases/inventories of cycling infrastructure, including quality indicators



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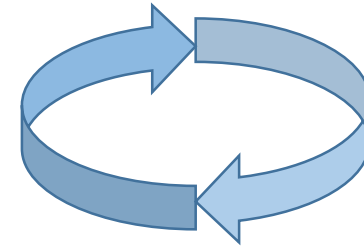
# Proposed changes bicycle business performance KPI

## EU LEVEL

- Develop TSA in Europe, including cycling
- Support more research on the economic impact of cycling
- Short term guidelines for common definitions, harmonisation methods
- More synergies among data collection initiatives

## NATIONAL, REGIONAL AND LOCAL LEVEL

- Collect data according to harmonised European standards



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# Proposed changes safety and health KPI

## EU LEVEL

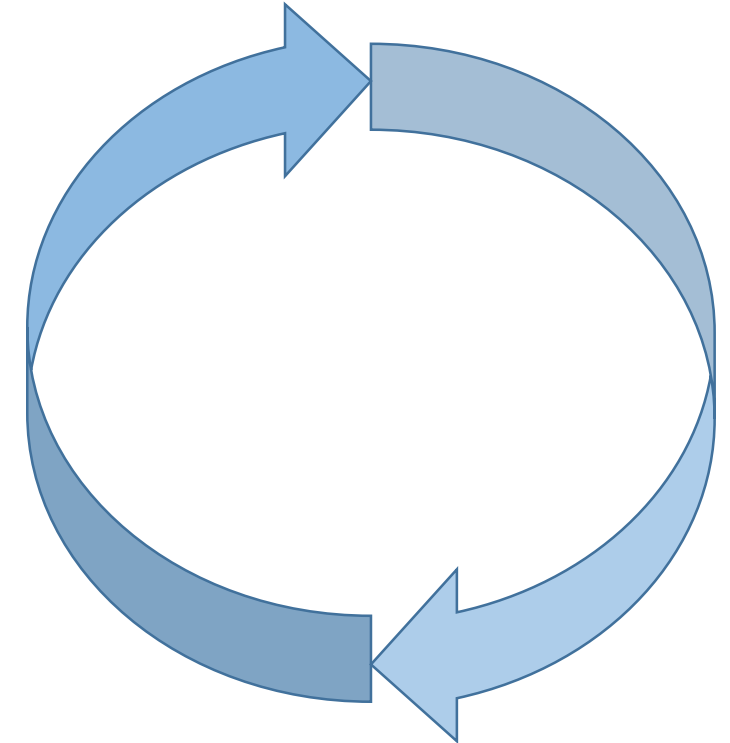
- Guidelines and recommendations to produce comparable statistics
  - cycle use (pkm), modal split, ...
  - combined with cycling accident statistics

○ exposure ↔ where people cycle



in relation to motorized traffic and infrastructure characteristics

- Support more research on the health effects of cycling



## NATIONAL, REGIONAL AND LOCAL LEVEL

- Collect data according to harmonised European standards



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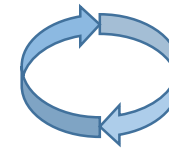
# Proposed changes KPI climate change mitigation and SD

## EU LEVEL

- Research complex relations between cycling, sustainable development and climate change mitigation
- Good practise examples

## NATIONAL, REGIONAL AND LOCAL LEVEL

- Include cycling measures in the monitoring of the achievement of national, regional and local climate goals



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# Common definitions and harmonization to improve synergy among different cycling statistics

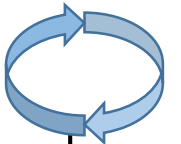
## Proposed changes

### EU LEVEL

- Key =
- Research user satisfaction, safety and security *linked* to cycling infrastructure
  - Absence of definitions = opportunity for short term change
- 1) existing **standards** (what is a bike?) e.g. EN ISO standard 4210 'Cycles — Safety requirements for bicycles', also listed as a harmonised standard (GPSD) **and different types of pedelecs have not yet found their way to data collection**

### NATIONAL, REGIONAL AND LOCAL LEVEL

- 2) lack of **standard approaches to calculate** (mobile population, share of the population cycling regularly, trip stages, ...)
- Apply adopted guidelines and recommendations



cycling tends to be underestimated

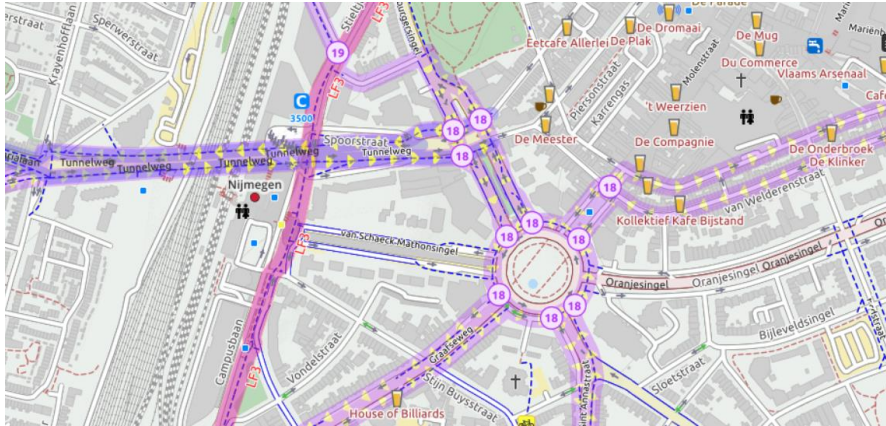


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# Use crowdsourcing and big data collection for infrastructure monitoring

## Infrastructure

Combination tracking, counts, surveys, analytical tools, ...



Proposed changes : **legal framework** and guidelines for harmonised data collection from big data sources like smartphone GPS sources (e.g. Privacy)



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