EuroVelo

Guidance on usage monitoring

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Objective:

- Improving conditions for cycling across Europe requires investments in new infrastructure and the regular maintenance of existing facilities. There is a clear need to evaluate the costs and benefits of such investments in order to improve their effectiveness; to justify the expense; and to convince stakeholders and the public of their value.
- It is also important to have information and analyses on a European level for benchmarking and to compare results, methods, tools and investments.

This document aims to:

- Provide reliable and comparable information about the use of EuroVelo routes which enables estimations of the social, economic and environmental impact of work to be undertaken on long distance cycle routes.
- Define the necessary minimum level of usage monitoring activities and methods to apply.

Definitions:

Usage monitoring – The collection and processing of data relating to cyclists using the EuroVelo routes.

Content, structure of the manual

- Quantitative monitoring – automatic counters, manual counting
- Qualitative monitoring - interviews and questionnaires
- Data entry, aggregation and breakdown
- Tasks and responsibilities
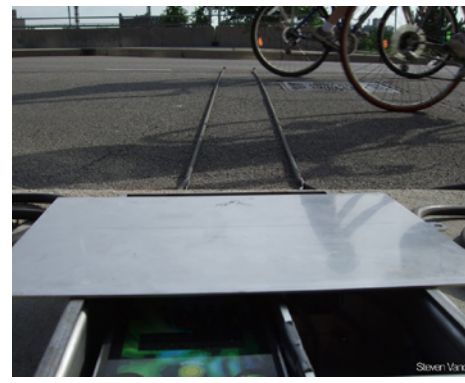
Automatic bicycle counters

Automatic bicycle counters are an ideal tool for estimating the total amount of users along EuroVelo routes. There are different technical solutions (pneumatic tubes laid across the roadway, piezo-electric sensors embedded in the roadway, inductive loops cut into the roadway, devices using some sort of transmitted energy such as radar waves or infrared beams to detect vehicles passing over the roadway, camera systems with automatic user recognition etc.) but it is important to ensure that the chosen solution:

*   works 24h every day, all year round;
*   counts the number of cyclists with at least 90% accuracy (backed up by academic research);
*   makes a clear distinction between the main types of road users (as a minimum between cyclists, pedestrians and motorized vehicles);
*   is waterproof, dustproof (International Protection Marking 69), works on the surface (asphalt, soil etc.) and in all possible weather conditions (temperature, wind) in the place of counting.

Manual counting

Manual counting is a short term, temporary solution in case there is/are:
*   a lack of resources for the installation of automatic counters (although in the medium-term, manual counting costs more than an automatic counter, perhaps with the exception of some countries with very low labour costs);
*   a detour introduced temporarily or prior to the opening of a new section, to estimate the changes locally. In this case mobile automatic counters are the right solution;
*   a significant number of "bicycles" with multiple users (e.g. tandems, children in special seats, etc.) which are only counted as one vehicle on automatic counters.
*   a need to calibrate automatic counters.

In case of manual counting:
*   the counts should be conducted between the hours of 07:00 and 22:00;
*   counting should take place over a minimum period of 2 weeks per year at least 3 times per year. These should be chosen carefully depending on the climatic / touristic characteristics of the area;
*   At least 20%, but not more than 40% of the counting days should fall on weekends or usual school holidays.

Frequency of the counting places:

- In order to have a reliable source of information, at least one counting place should be provided per daily section but it is recommended to have more.
- In the case of homogenous, rarely used, sporadically populated sections, one counting spot can represent a maximum of 5 daily sections.

Location

In order to have a clear picture of the profile of route users, it is advised to install counting points in different settings such as:

- urban (in the core of major settlements – mostly urban, utility cyclists measured),
- suburban (on commuter routes) and
- rural (countryside surrounding settlements or outside any settlement, away from main towns – mostly leisure, touristic cyclists measured).

Positions

Regarding the precise positioning of the automatic counters, it is recommended that sites be chosen where the traffic and course of cyclists is uninterrupted (i.e. avoid junctions, attractions, rest areas etc. where the cyclists may stop, turn around or go around the counter).

Cost of counters

The cost of the counters depends on the chosen technical solution and the density of the counting places. The exact number of counters should be identified based on the homogeneity of the route (see above), the chosen technical solution should be cost-effective (besides fulfilling the technical requirements described on the previous page). The investment, the maintenance cost and the necessary resources required of the host organisation (which depends on the user friendliness) should be taken into account.

Brief interviews

Interviews should, at the very minimum:
- be carried out at least one day per year, per route
- take place in the same locations where automatic/manual counters are installed
- include a minimum of 100 participants, equally distributed throughout the day (07:00-22:00). If it is not possible to do 100 interview in one place, they can be carried out at multiple places.
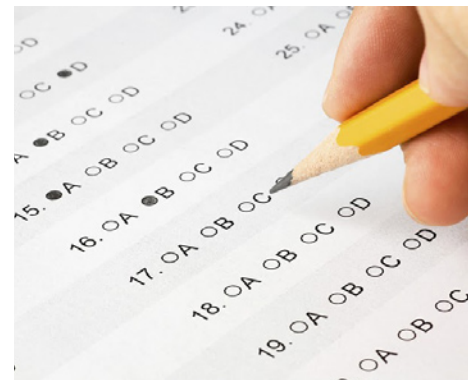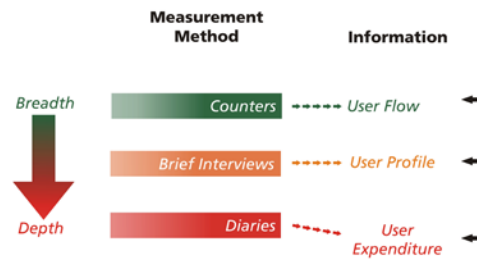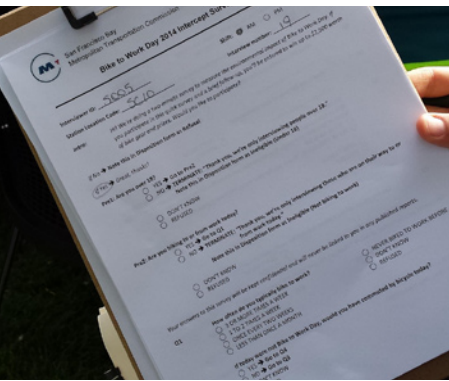
It is advised to repeat this survey more frequently and in more locations (e.g. each daily section).

It is obligatory for the interview questions to establish the following:
- The purpose of the cycle trip: Tourism (with overnight) /leisure (daytrips) /daily mobility
- Where the cyclists come from: Country (NUTS1), region (NUTS2), locality (NUTS3, NUTS4 or postcode within the local region only).
- How much the cyclists spend: estimate cost of the current trip in Euro (in the case of different currency, convert it using the medium rate of the ECB on the given day) including all services (travel, accommodation, food etc.) excluding the price of the bicycle and the equipment (unless purchased during the trip).
- The length of stay of the cyclists: indicate the length of the current trip: less than 30 mins / 30 mins – 1 hour / 1 hour - 4 hours / 4 hours – 1 day excluding overnight / 2-3 days incl. 1-2 nights / more than 3 days - 2 nights.

The following questions can be included optionally in brief interviews or in detailed questionnaire:
- Distance cycled per day and length of current trip in km.
- The gender and age group of the cyclists: Male / Female. Age: 0-14 / 15-35 / 36 -64 / over 65. These categories can be applied during the processing.
- The kind of vehicle the cyclists use to reach the start / destination: bicycle/car/bus/train/ ship or ferry/airplane.
- The kind of services the cyclists use / intend to use during the trip: Accommodation / food and beverage / transportation / bicycle repair and spare parts / entertainment and culture / souvenirs.
- How satisfied the cyclists are: Very much / expectations met / disappointed.

Measurement Method **Information**

Breadth

Depth

Counters ----> User Flow

Brief Interviews ----> User Profile

Diaries ----> User Expenditure

Detailed questionnaires and travel-spending diaries are optional and can go into more detail regarding:

Motivation

- Reason for choosing the specific route/ country;
- The interviewee's favorite destination;
- The interviewee's next destination.

Organisation

- Whether the trip is an individual tour or one organised by tour operators; the size of the group;
- What sources of information and/or communication tools were used (e.g. web, guide book, other cyclists etc.).

Customer profile

- Education
- Income
- Age Group

Spending

- Overnight, accomodation
- Food, drink
- Gifts
- Fuel, car costs, parking
- Cycle costs (hire and repair)
- Public transport
- Tickets, maps

In the case of multiple day surveys, the days of the week (weekday/weekend and school holidays/term-time) should be taken into account and weighted when calculating the results.
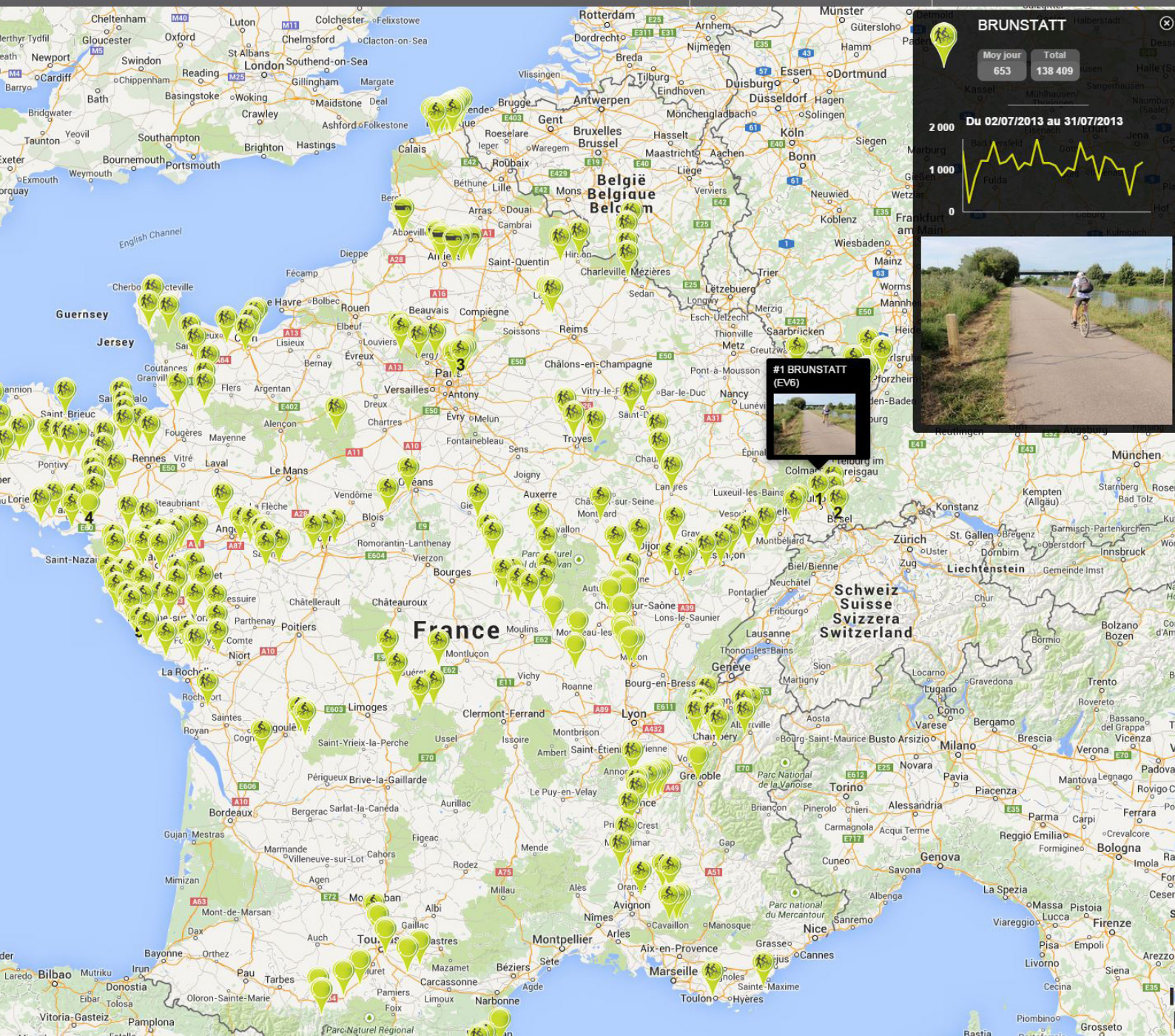
Format to enter and store information

Each country (or in exceptional cases, region) should develop their own system to enter and store detailed information.
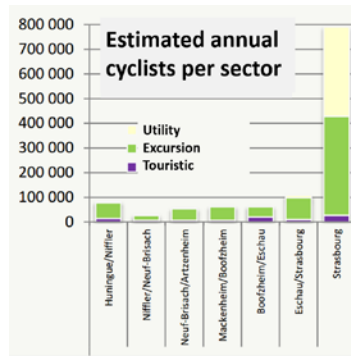
A European database can only accommodate overview information collected using the same methodology. The ECF should develop a user friendly, secure online reporting format and tool for National EuroVelo Coordination Centres and Coordinators to report on the usage and the user characteristics along the EuroVelo routes.

In the case of usage numbers (the result of counting), the expected format is the counted/ estimated number of cyclists (absolute number), whilst in the case of user profiles (the result of brief interviews / detailed questionnaires) the format is the % breakdown of different responses.

Level of breakdown and aggregation

The basic geographical unit to provide information for the European level should be the route per country, which means the collected information should be aggregated to this level.

The basic time unit in which information should be provided to the European system is one calendar year. In the case of counting, brief interviews and detailed questionnaires, the results should be aggregated for a year and be weighted (using the appropriate statistical methodology) according to the length of the sections with different route characteristics (urban / rural / suburban etc.) and road users (tourism / leisure / mobility).

Estimated annual cyclists per sector

Utility
Excursion
Touristic

Huningue/Niffier
Niffier/Neuf-Brisach
Neuf-Brisach/Artzenheim
Mackenheim/Boofzheim
Boofzheim/Eschau
Eschau/Strasbourg
Strasbourg

European level:

•   Create a European database providing an online data entry interface
•   Aggregate and process the information; publish a yearly report on the European level.

National level:

•   Operate national systems to survey and process detailed usage monitoring information
•   Publish national standards in accordance with the current manual
•   Report and provide information for the European level
•   *Brief interviews and detailed questionnaires*

Local, regional level:

•   Install counting equipment and provide information to the national level
•   *Brief interviews and detailed questionnaires*

Publishing credits

This publication is part of the ECF EuroVelo publication series. It should be read in conjunction with following publications:
*   EuroVelo, the European cycle route network
*   EuroVelo, Development Strategy 2012-2020
*   EuroVelo, National Coordination Centres, guidance on application process
*   EuroVelo, Signing of EuroVelo cycle routes
*   EuroVelo, Corporate design of EuroVelo cycle routes
*   EuroVelo, Web solutions for EuroVelo cycle routes
*   EuroVelo, European Certification Standard
*   Additional guidelines over time