QUALITY Open Streets

Evaluation Criteria for *Ciclovías Recreativas*

Open Streets (OS) - known as *Ciclovías Recreativas* in Latin America - are defined as the temporary closure of streets to motorized traffic, creating a safe and pleasant space for walking, jogging, skating, running, or cycling.

"Bikes of Quality" (Bicis de Calidad) is a quality hallmark for the operation of *OS*, endorsed by the Pan-American Health Organization (PAHO), the epidemiology group of Universidad de los Andes (EpiAndes), and the Center for Optimization and Applied Probability (COPA) of Universidad de los Andes.

Bikes of Quality

As a result of the evaluation of multiple criteria, *OS* programs are awarded the following grades:

THREE Bikes of Quality

The best *OS* in the Americas. All criteria in the model are fulfilled and will be evaluated by an expert committee. According to the 2011 evaluation, there are no recommendations for improvement. However, the efficiency score could decrease in the next evaluation, which will include a larger number of *OS* programs and different performances.

TWO Bikes of Quality

OS that stand out for their operational conditions and services offered to users. They do not comply with all the criteria and will be evaluated by an expert committee. According to the 2011 evaluation, there are specific recommendations for improvement, given that the efficiency score is less than 100%.

ONE Bikes of Quality

Programs that cannot be evaluated because they did not report on all the measured criteria. The recommendation is to measure the criteria according to the Evaluation Criteria Manual.

We invite all the *Open Streets* programs to fill in the following survey in order to be part of the 2012 evaluation:

Spanish: https://www.surveymonkey.com/s/ActualizacionCRA
English: https://www.surveymonkey.com/s/CRADataUpdate
Portuguese: https://www.surveymonkey.com/s/AtualizarDados

What benefits are brought by *Open Streets*?

- Recovery of public space
- Social inclusion, social interaction, social cohesion, and equality
- Experience a safe environment in the city
- Economic revival of communities
- Improvement of air quality and protection of the environment
- Opportunities for leisure activities and promotion of healthy lifestyles

Why is it important to evaluate *Open Streets*?

Measuring indicators that allow for the classification of these programs according to their quality and efficiency is a crucial element for strengthening *OS* programs and accelerating the creation of new initiatives. In this way, *OS* programs have an evaluation tool for continuous improvement.

A multi-criteria evaluation method for *OS* was developed based on data envelopment analysis (DEA).

In DEA each program is compared relative to similar programs. Larger programs are thus not given an advantage over smaller ones (or vice versa). The results of the evaluation are relative and dynamic and may vary each year according to the programs evaluated and values reported. The results presented in this report correspond to the first analysis of the *OS* indicators yielded from a self-administered survey conducted in 2011. The measurement of the indicators depends on the evaluation method used by each *OS*. Future studies will require the input data (indicators) to follow a standardized methodology and to be audited by a group of experts.

Some of the advantages of using DEA are:

- Allows an evaluation with multiple criteria.
- Does not require the assignment of weights (subjectively) to each criteria.
- Identifies benchmarks (role models) for the programs.
- Recommends specific goals for the continuous improvement of programs.

What are the evaluation criteria?

The analysis includes the following criteria, which are considered relevant for the realization of the *OS*'s benefits. The values for each criterion were provided by the programs. For further information on the measuring and cut-off points, see the Evaluation Criteria Manual for *Ciclovías Recreativas*.

Target population
Definition: Number of persons living less than 1 km from the *OS* route.
Unit: Persons

Social inclusion
Definition: The *OS* route includes low-socioeconomic areas or areas with residents belonging to ethnic/racial minorities.
Unit: Yes or no

Participants per event
Definition: Average number of persons who attend each event of the *OS* adjusted for the city's or town's population.
Unit: Percentage

Participants per specific activities
Definition: Average number of persons who participate in complementary activities that promote physical activity, art, culture or training, adjusted for the city's or town's population.
Unit: Percentage

Minutes per week
Definition: Time in minutes per week during which the *OS* takes place.
Unit: Minutes

Time spent by participants at each event
Definition: Average time per event spent by participants in the *OS*.
Unit: Minutes

Length of route
Definition: Number of kilometers used during each *OS* event.
Unit: Kilometers

Geographical risk areas
Definition: Number of kilometers of the *OS* route in which there is risk of accidents of a geographical nature (e.g. flooding, fog, landslide, falling trees, collapse of streets) adjusted for the total number of kilometers of the program.
Unit: Percentage

Connectivity to parks or beaches
Definition: The *OS* route is connected to at least one park, square or beach.
Unit: Yes or no

Connectivity to touristic sites
Definition: The *OS* route is connected to at least one tourist or historic site.
Unit: Yes or no

Connectivity to public transport
Definition: The *OS* route is connected to the public transport system.
Unit: Yes or no

Complementary cultural activities
Definition: The *OS* program offers at least one activity that promotes art and culture (e.g. theatre, concerts).
Unit: Yes or no

Complementary activities that promote physical activity
Definition: The *OS* program offers at least one activity that promotes physical activity (e.g. aerobic classes).
Unit: Yes or no

Complementary training activities
Definition: The *OS* program offers at least one training activity (e.g. learning to ride a bike).
Unit: Yes or no

Security services
Definition: The *OS* program offers security services.
Unit: Yes or no

Bike repair services
Definition: The *OS* program offers bike repair services.
Unit: Yes or no

First aid services
Definition: The *OS* program offers first aid services.
Unit: Yes or no

Minor accidents
Definition: Number of accidents attended to by qualified personnel of the *OS* that does not require participants involved to be taken to a health centers. Criterion is standardized by the number of participants per event.
Unit: Annual minor accidents per 100,000 participants

Major accidents
Definition: Number of accidents that require that the participant be taken to a health center. Criterion is standardized by the number of participants per event.
Unit: Annual major accidents per 100,000 participants

Number of thefts
Definition: Number of thefts reported during each *OS* event. Criterion is standardized by the number of participants per event.
Unit: Thefts

Persons involved in organization
Definition: Number of persons who participate in the organization and operation of each *OS* event.
Unit: Persons

Annual cost
Definition: Resources necessary for implementation and operation of the *OS* (in U.S. dollars). Criterion is standardized by the number of participants per event.
Unit: U.S. dollars

Recommendations for your program

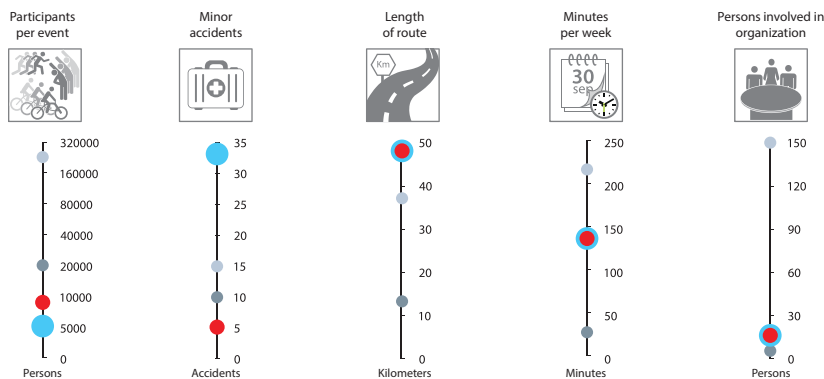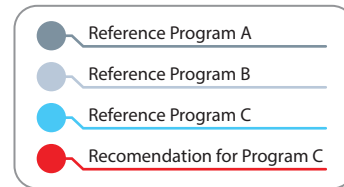Programs awarded two "*Bikes of Quality*" receive specific recommendations, exemplify below:

Figure 1. Minimum quantitative recommendations for program C to potentially obtain 3 *Bikes of Quality*.

Legend:
- Reference Program A
- Reference Program B
- Reference Program C
- Recomendation for Program C

In this example, the following recommendations are given to *OS* program C:

- Increase the number of participants per event from 5,000 to 8,000 *(Figure 1)*.
- Reduce the number of minor accidents from 33 to 5 *(Figure 1)*.
- Offer training activities during the events *(Figure 2)*.

A and B are reference programs.

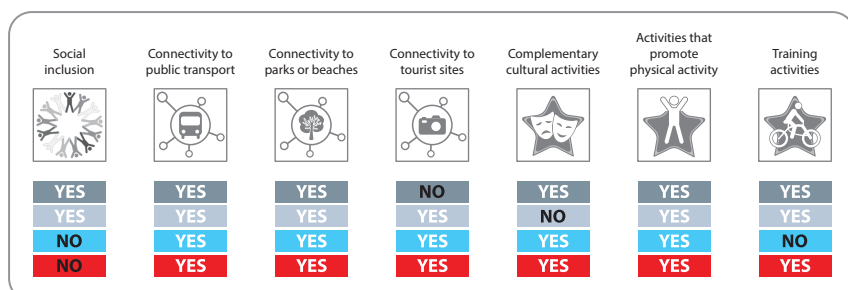Recommendations for indicators are given using the unstandardized units reported by the program.

Social inclusion	Connectivity to public transport	Connectivity to parks or beaches	Connectivity to tourist sites	Complementary cultural activities	Activities that promote physical activity	Training activities
YES	YES	YES	NO	YES	YES	YES
YES	YES	YES	YES	NO	YES	YES
NO	YES	YES	YES	YES	YES	NO
NO	YES	YES	YES	YES	YES	YES

Figure 2. Minimum qualitative recommendations for program C to potentially obtain 3 *Bikes of Quality*.

Awarding of prizes

In 2011, 15 *OS* programs in the Americas were awarded THREE *Bikes of Quality*:

Waterloo, Canada

Portland, United States

San Francisco, United States

Los Angeles, United States

San Pedro Garza García, Mexico

Santiago de Querétaro, Mexico

Mexicali, Mexico

Cuautitlán, Mexico

Chihuahua, Mexico

Ciudad de Guatemala, Guatemala

Cabo San Lucas, Mexico

Bogotá, Colombia

Medellín, Colombia

Cali, Colombia

Lima, Peru

Programs awarded ONE *Bike of Quality*
- London, Canada
- Ottawa, Canada
- Guayaquil, Ecuador
- Pichincha, Ecuador
- Morelia, Mexico
- Montevideo, Uruguay
- Eugene, United States
- Oakland, United States
- Redding and Shasta County, United States
- Lee County-City of Fort Myers, United States
- Wilsonville, United States

Programs awarded TWO *Bikes of Quality*
- Sorocaba, Brazil
- Santiago de Chile, Chile
- Cúcuta, Colombia
- Cuenca, Ecuador
- Quito, Ecuador
- Ciudad de México, Distrito Federal
- Guadalajara, Zapopán, Tlaquepaque, Tonalá, Tlajomulco, El Salto y Jalisco, Mexico
- Saltillo, Mexico

Sources:

Gomez-Sarmiento J, Sarmiento OL, Medaglia AL. "Metodología para el Ranking de la Red de Ciclovías Recreativas de las Américas". Universidad de los Andes, 2012.

Sarmiento OL, Torres A, Jacoby E, Pratt M, Schmid T, Stierling G. The Ciclovía-recreativa: a mass recreational program with public health potential. Journal of Physical Activity & Health 2010, 7 (suppl 2) S163-S180.

Manual para implementar y promocionar la Ciclovía Recreativa. 2009, http://cicloviarecreativa.uniandes.edu.co/

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