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Gobiernos Locales
por la Sustentabilidad

EcoLogistics
Transporte de carga bajo en carbono
para ciudades sustentables

TRT (Truck Rapid Transit) Pilot Project

Metropolitan Area of the Aburrá Valley

TERRITORY

The Metropolitan Area of the Aburrá Valley has a population close to 4 million inhabitants, it is made up of 10 municipalities, having as its central city the Medellín city.

Due to the topographical conditions (narrow valley) and climate of the Aburrá Valley, it was identified two periods in the year (February – March - April and October – November) that the weather associated with the transition from dry season to rainy season, it is recognized the presence of low altitude clouds that hinders the dispersion of air pollutants generated primarily by mobile sources, these being the responsible for 91% of PM 2.5, and from these 66,6 % from trucks which are associated with urban freight.

PROJECT OBJECTIVE

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For a 6 month period it is desired a greater velocity (cruising speed or constant) to the freight transportation and thereby verify the technical assumptions about improvements in the conditions of circulation and incidentality and other environmental benefits such as reduction of emissions that this implies.

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PROPOSED ACTIVITIES

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- ❑ Survey or obtainment of baseline detail (Incidentality, Volumes or flows, Travel times, Speeds, Emissions estimation).
- ❑ Input and output ITS proposals.
- ❑ Acquisition of devices or reinforcement of existing ITS infrastructure.
- ❑ Informative and pedagogical campaign
- ❑ Site engineering and integration to Integrated Traffic and Transportation Center
- ❑ Pilot operation and monitoring
- ❑ Post-operation, processing, analysis and conclusions

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KEY INDICATORS

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The main indicators will be based on improvements in freight vehicle operating speeds, on the decrease of traffic incidents throughout the road and on the logistics operation competitiveness.

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KEY INDICATORS

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1. The first indicator is the percentage difference between the commercial speed, between the current situation, and during the project operation, only for the study lane; this is for vehicles with typology associated with the transportation of cargo. The objective of this indicator will be to feed the estimation of environmental benefits associated with lower emissions of pollutants and with this an improvement in air quality and the determination of benefits in logistics activity given the reduction in travel times.
2. The second indicator is based on the percentage difference between the number of road incidents during the six months that the project lasts and the average of the previous years for the same six months in which the project is operated.

IMPACT

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The total project will have potential for reduction of up to 7% deaths/year, expecting the pilot to meet that proportional reduction in the implemented stretch. In the same way, an estimated reduction of between 25% and 40% of emissions in the implemented stretch and an increase in competitiveness in the region are expected.

Having the community benefiting from better air, less accidents, and freight transport with greater competitiveness.

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SECONDARY BENEFITS

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The project will be able to be used not only to give priority to freight transport, but also for collective passenger transport. This passenger mobilization can be established not only when the number of cargo vehicles is low, but also in cases of failures or metro system contingencies, to support the mobilization of the passenger system on buses.

The project will also contribute to the improvement of the corporate environment or relationship between government entities and the different actors involved in the regional logistics chain

Given its technological component, this project would reinforce the work that has been done, being one more example of the data science application and in general a good practice in the use of ITS in several sectors.

SCALING POTENTIAL

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Initially, the project is proposed as a pilot to be developed on one side of the road corridor of the Aburrá river in the Medellín municipality, but its final purpose is to be able to be implemented on both sides and throughout the entire Aburra Valley in the area with the greatest conurbation and congestion. Generating the possibility of providing greater benefits because the left lane provided for the transit of vehicles with typology associated with freight transport would not be exposed to high congestion in any segment of the same, which would also lead to facilitate the quantification of benefits.

According to data from the DNP it is estimated that in Colombia about 2% of Gross Domestic Product (GDP) per year is lost due to congestion in cities, which is why it can be found in national entities to promote projects like this in other capital cities.

STAKEHOLDERS

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The stakeholders in the project are the Medellín municipality, the Metropolitan Area of the Aburrá Valley, the Ministry of Transport, as well as the guilds and private members associated with cargo transport and the regional logistics Alliance of Antioquia.

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ECOLOGISTICS AND LCAP-UF

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- The TRT pilot project contributes and adapts to the measure of the Ecologistics project, in which work groups are established between different government entities with the support of the private transport guilds, who were taken into account for the construction of the low carbon logistics action plan, and in the selection of the demonstration project that, if successful, can be a model of national urban logistics policy for other regions of the country.
- Although the LACP-UF is still under construction, the project is part of the axis line traffic of management and logistics, specifically in the action: exclusive lanes for trucks and/or restricted multi-use lanes. that has been configured or adjusted for this.