A survey proposal to analyze cycling routes

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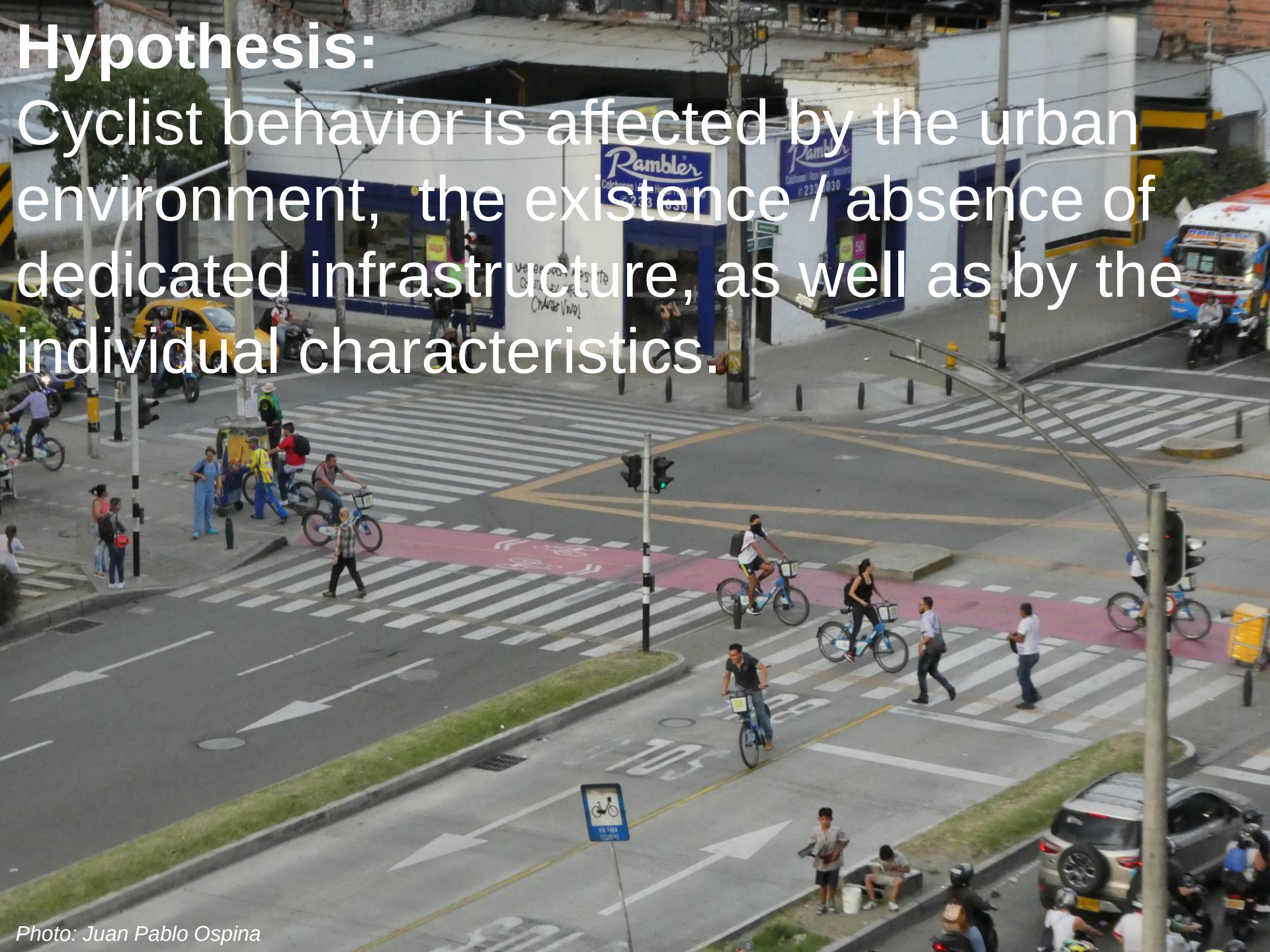


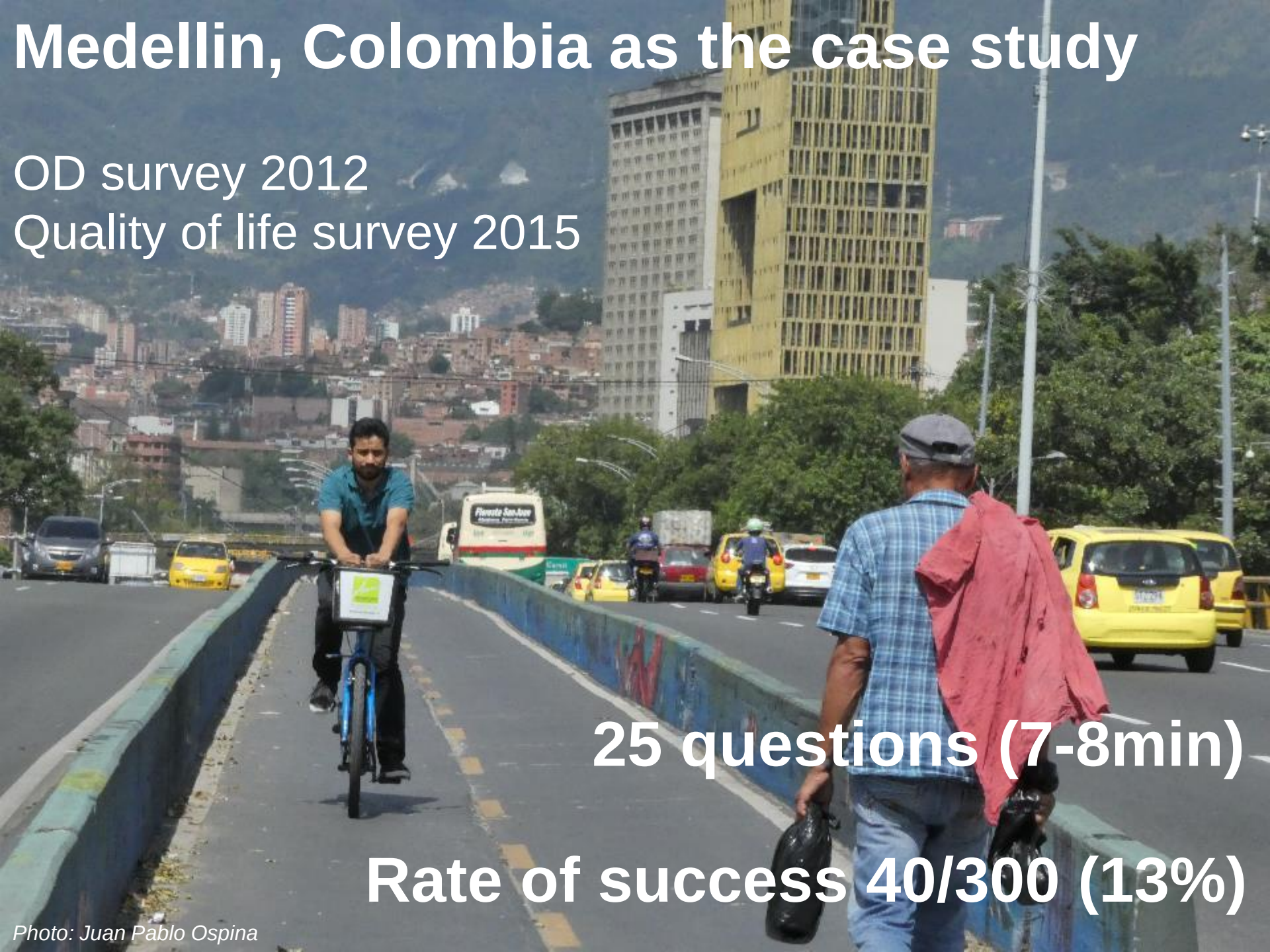
Hypothesis:

Cyclist behavior is affected by the urban environment, the existence / absence of dedicated infrastructure, as well as by the individual characteristics.

Photo: Juan Pablo Ospina

Medellin, Colombia as the case study

OD survey 2012
Quality of life survey 2015



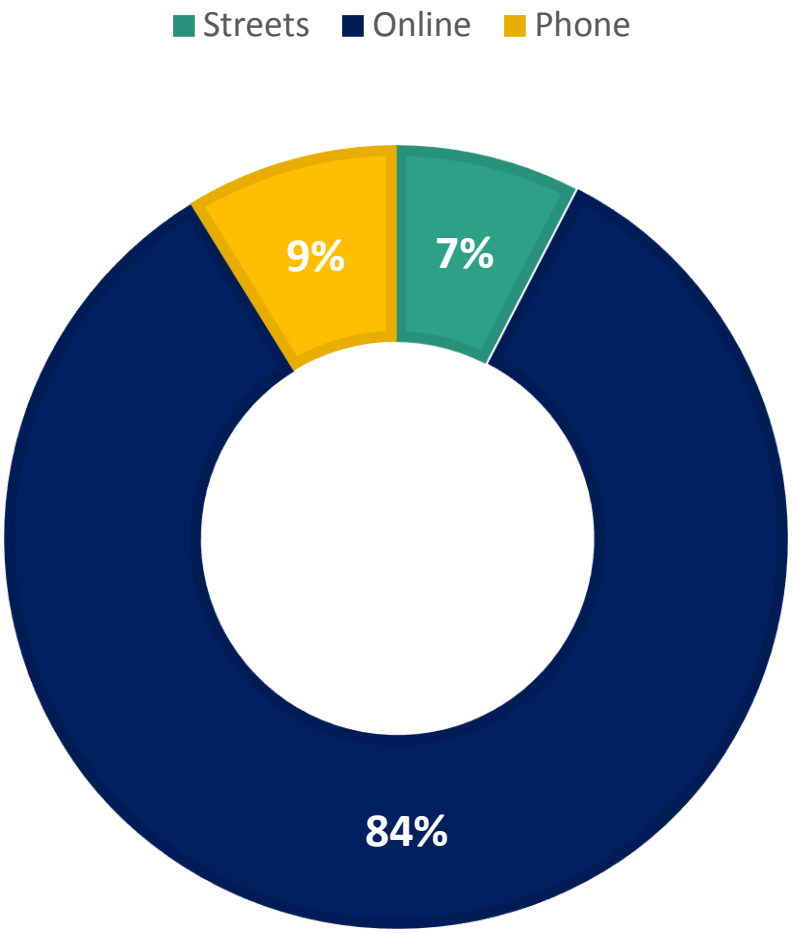
25 questions (7-8min)

Rate of success 40/300 (13%)

Photo: Juan Pablo Ospina

1500 users were surveyed

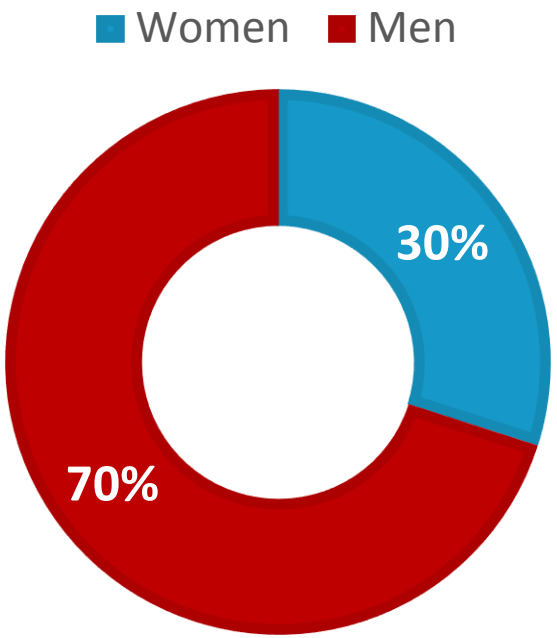
Illustration: Silvana Giraldo

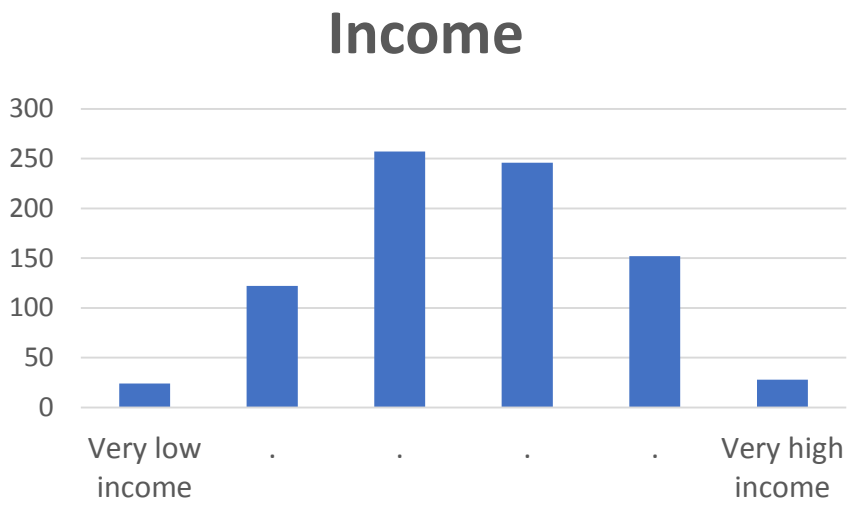


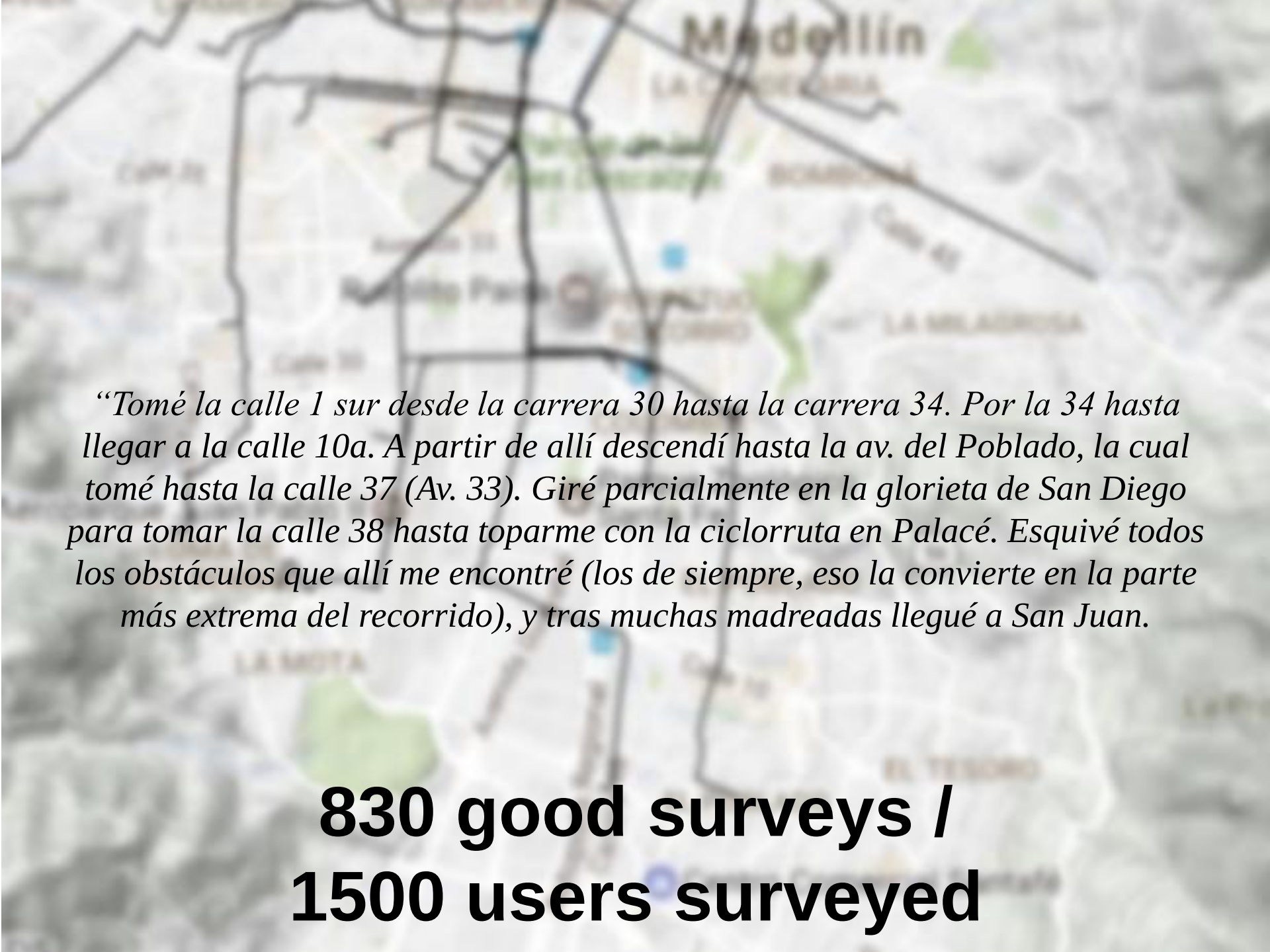
Variables related to the cyclist

Illustration: Silvana Giraldo

Category	Variable
Individual	Gender
	Income
	Age
	Educational profile
	Occupation
	Travel purpose
	Frequency of trips
	Use of infrastructure







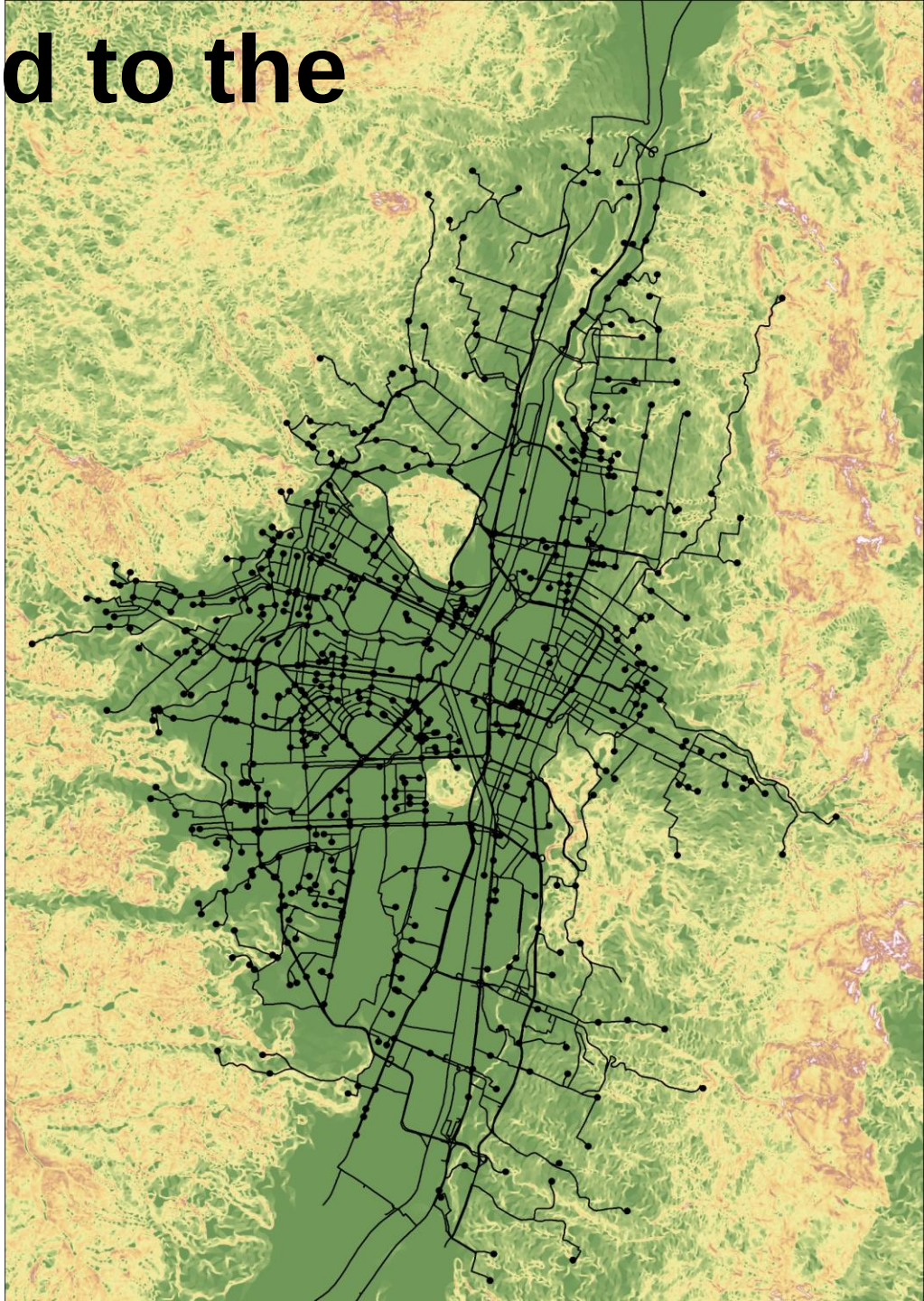
"Tomé la calle 1 sur desde la carrera 30 hasta la carrera 34. Por la 34 hasta llegar a la calle 10a. A partir de allí descendí hasta la av. del Poblado, la cual tomé hasta la calle 37 (Av. 33). Giré parcialmente en la glorieta de San Diego para tomar la calle 38 hasta toparme con la ciclorruta en Palacé. Esquivé todos los obstáculos que allí me encontré (los de siempre, eso la convierte en la parte más extrema del recorrido), y tras muchas madreadas llegué a San Juan.

830 good surveys /
1500 users surveyed

Variables relatated to the routes

Category	Variable
Density	Intersection density
	Street density
Infraestructure	Number of traffic lights
	Speed limit of roads
	Proportion of route with bicycle paths
Directiveness	Route directness
Topography	Proportion of route per range of slope (%)
Safety risk	Index to measure the accident hazard for cyclists

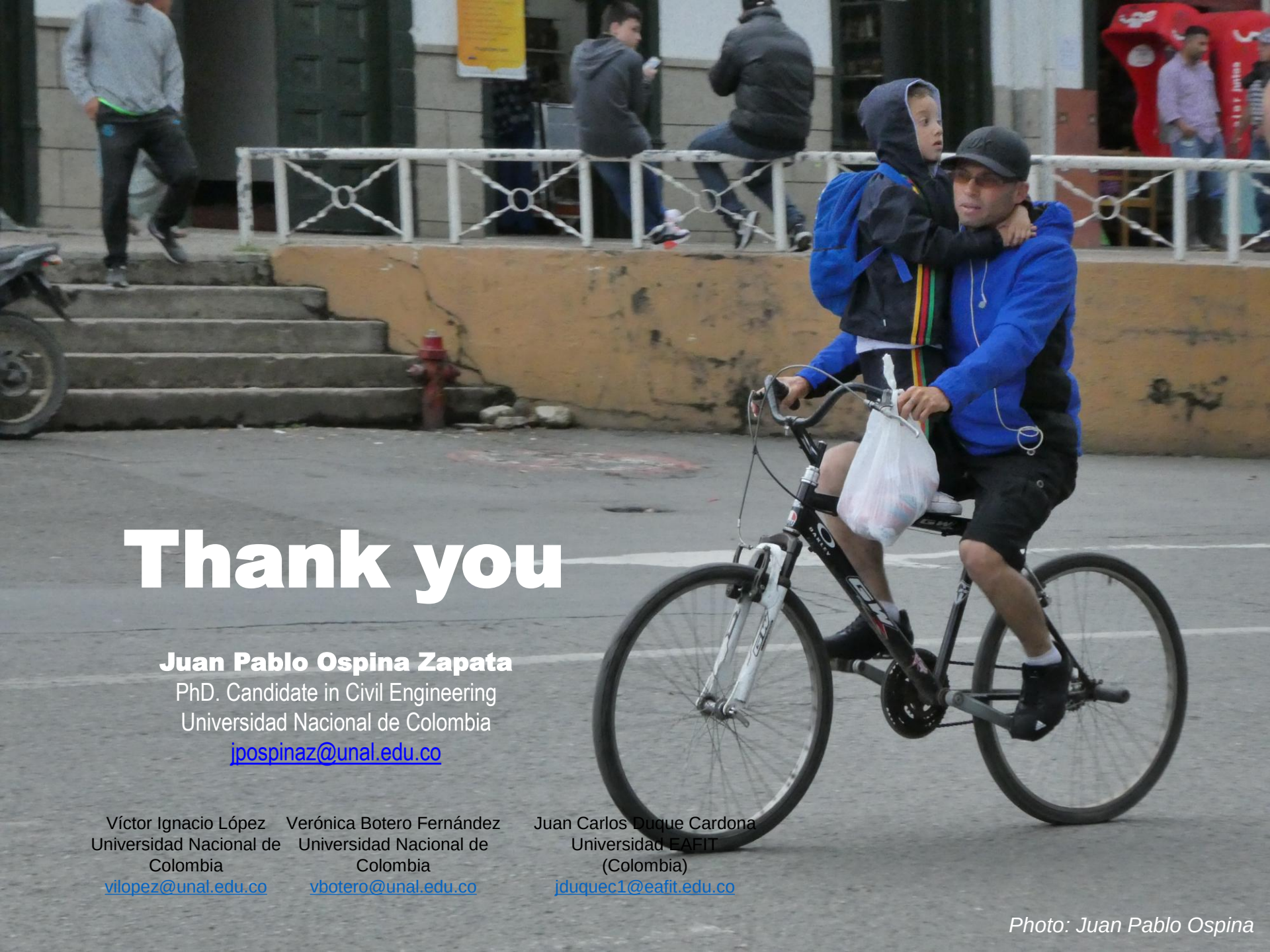
Source: Own elaboration based on the 830 cycle users surveyed.



Conclusions

- **Different profile coverage** (income + location).
- **Time consuming** in terms of route variables construction. Well knowledge of the city.
- **Preliminary findings**:
  - Poster “Measuring accessibility for cycling”

$$f(d_{ij}) = \beta_o + \overbrace{\beta_1 SE}^{\text{Socio Eco}} + \overbrace{\beta_2 BE_i}^{\text{Urban envt. Origin}} + \overbrace{\beta_3 BE_j}^{\text{Urban envt. Dest.}} + \overbrace{\beta_4 BE_{route}}^{\text{Urban envt. Route}} + travel + \varepsilon$$



Thank you

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Photo: Juan Pablo Ospina