



# Counting bicycle deliveries in Copacabana.

Rio de Janeiro

January 2011

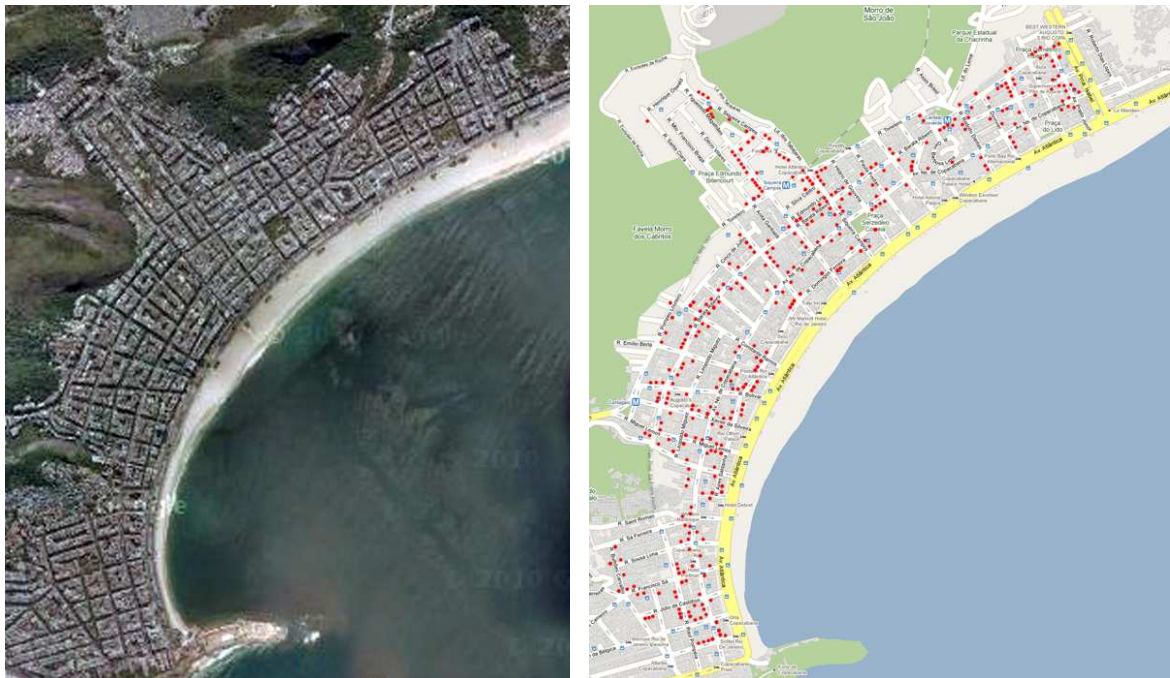




January 2011.

One of the most important and expensive urban freight stages is the last-mile, when the goods are delivered from shops to consumers. Cargo vehicles powered by human propulsion have been used worldwide to reduce cost and air pollution related to the last-mile. Cargo bicycles are the best option for transporting goods over short distances and can easily be integrated into city's busy streets. Its use lightens the burden of motorized transportation, such as congestion, parking issues, air pollution and its impacts on climate change.

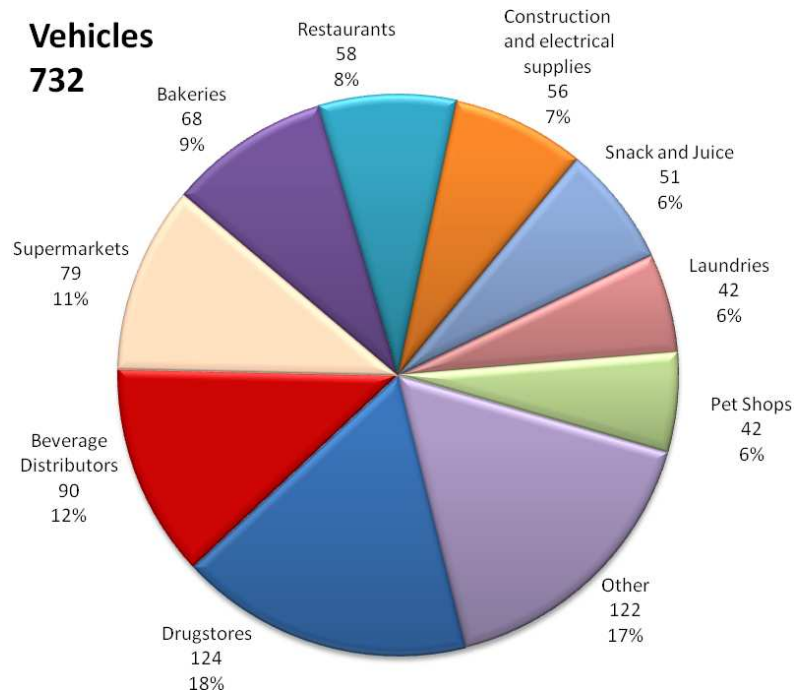
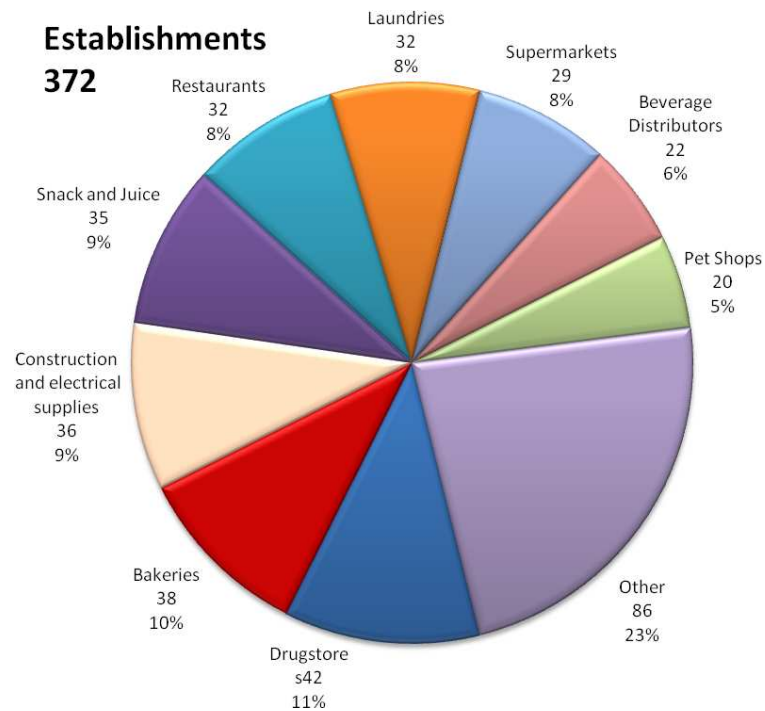
With the purpose of collecting data and information about bicycle deliveries in Copacabana, Rio de Janeiro, Brazil, the Associação Transporte Ativo (Active Transport Association) carried out a survey, from December 2010 to January 2011, in order to plot all businesses that make bicycle deliveries in that famous Rio's district. The collected data provide enough information to confirm the bicycle deliveries benefits to the city, traffic and environment.



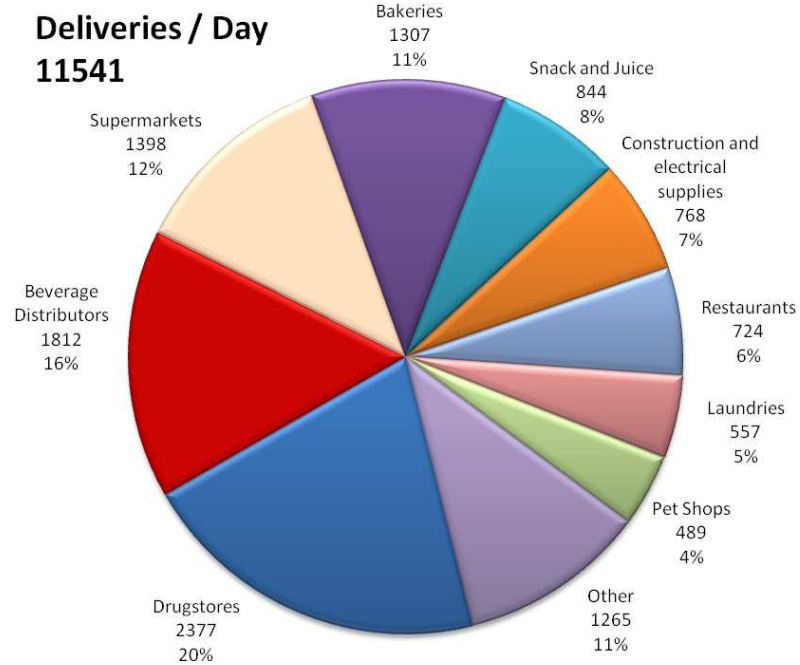
The survey classified types of establishment, number of bicycle workers, quantity and type of bicycles, business' deliveries per day, and area covered by travel.



## 1. Charts

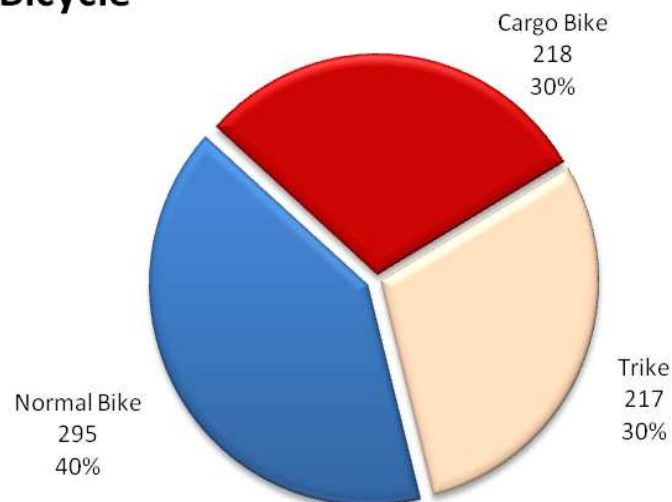


Counting bicycle deliveries in Copacabana.  
Rio de Janeiro, January 2011



Each delivery is equivalent to two trips, one outward and one back.

## Bicycle



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## 2. Photos



**42 Drugstores:** 2377 deliveries/day; 132 cyclists; 124 bicycles.



**38 Bakeries:** 1307 deliveries/day; 71 cyclists; 68 bicycles.



**36 Construction & electrical supplies:** 768 deliveries/day; 60 cyclists; 56 bicycles.



**35 Snack and juice:** 844 deliveries/day; 57 cyclists; 51 bicycles.



**32 Restaurants:** 724 deliveries/day; 59 cyclists; 58 bicycles.



**32 Laundries:** 557 deliveries/day; 41 cyclists; 42 bicycles.



**29 Supermarkets:** 1398 deliveries/day; 86 cyclists; 79 bicycles.



**22 Beverage Distributors:** 1812 deliveries/day; 101 cyclists; 90 bicycles.



**20 Pet Shops:** 489 deliveries/day; 39 cyclists; 42 bicycles.





**11 Retail kiosks:** 96 deliveries/day; 16 cyclists; 14 bicycles.



**11 Bars:** 68 deliveries/day; 10 cyclists; 15 bicycles.



**9 Freelancers:** 160 deliveries/day; 9 cyclists; 9 bicycles.





**9 Mattress stores :** 68 deliveries/day; 9 cyclists; 9 bicycles.



**9 Butcheries:** 378 deliveries/day; 17 cyclists; 17 bicycles.



**6 Electronic workshops:** 52 deliveries/day; 8 cyclists; 8 bicycles.



**5 Video rentals:** 91 deliveries/day; 9 cyclists; 8 bicycles.



**4 Auto parts stores:** 40 deliveries/day; 5 cyclists; 4 bicycles.



**3 Flower shops:** 50 deliveries/day; 5 cyclists; 5 bicycles.



**2 Woodworks:** 34 deliveries/day; 4 cyclists; 4 bicycles.



**2 Cleaning supplies stores:** 26 deliveries/day; 4 cyclists; 4 bicycles.



**2 Cobblers:** 22 deliveries/day; 3 cyclists; 3 bicycles.

**Other:** 180 deliveries/day; 23 cyclists; 22 bicycles.





**297 Bicycles**



**218 Cargo Bicycles**



**217 Trikes**





### 3. Stats:

#### 372 Establishments

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**Other:** 180 deliveries; 23 cyclists; 22 bicycles.

#### 732 Vehicles:

<b>297 Bicycles</b>	40%
<b>218 Cargo Bicycles</b>	30%
<b>217 Trikes</b>	30%

#### 768 Cyclists / Tricyclists

**11.541 deliveries / day**

**23.082 Travels / day**

**Average per establishment:**

**2 bicycles / trikes**

**2 cyclists**

**31 deliveries / day**

**62 travels / day**



#### 4. Curiosities:

- More than half of pet shops travels are for animal transport. Approximately 120 pets are ridden by bicycle per day in Copacabana.
- A pet food manufacturer donates cargo bicycles to best resellers.
- In certain store, flat tires virtually stopped after repairing puncture became rider's responsibility.
- Some tricycles come to move more than 300 kg of cargo.
- A bakery makes 350 deliveries a day; a beverages distributor makes 250; a drugstore, 240; a butchery, 160; and a supermarket makes 128 deliveries a day.
- The largest fleet is owned by a drugstore, with 13 bicycles.
- 95% delivers occurs in a 3 km range.  
4% goes beyond 3 km.  
1% just on surrounding area.
- 95% of bicycles are property of establishments,  
4% are property of employees,  
1% are outsourcing from specialized delivery companies.
- 67% of the tricycles are owned by supermarkets and beverage distributors.
- More than 50% of all travels include food.
- Some establishments deliver 24 hours.
- The beverage distributors have the highest average delivery per establishment: 82 per day.
- Some workers have a formal contract as tricyclists.
- According to other surveys, 38% of cycling trips in Copacabana are for delivery, thus considering the 62% remaining bicycles and using similar calculation method, we could estimate a total of 60,742 travels/day in the district.
- If each travel has 1 km, about 30,371 km will be ridden per day, or 11,085,415 km/year in the district.
- In the evening, there are lots of special-made tricycles selling popcorn, churros, steamed corn and other stuffs, especially food. These tricycles were not counted.





Photos: Transporte Ativo reports and personal collection.

For more information:

**Associação Transporte Ativo**



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# Counting bicycle deliveries in Copacabana. Rio de Janeiro

Fevereiro de 2011

## ANNEX 1

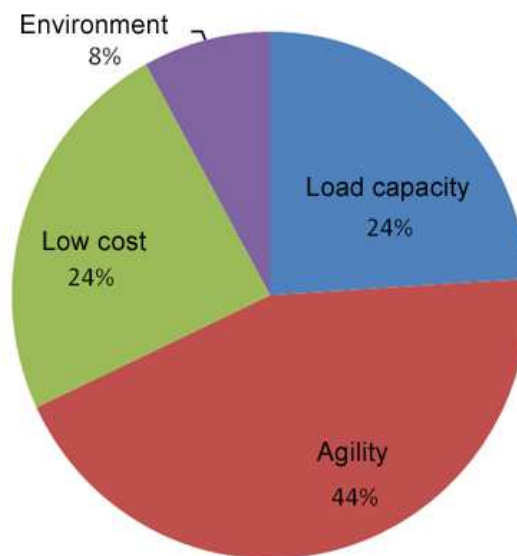




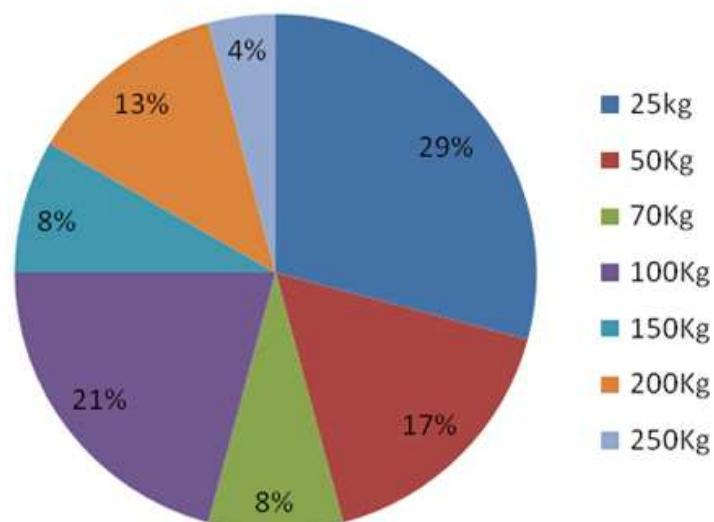


At the same time we did the preceding main survey in Copacabana, a sample survey, in partnership with ITDP, was done in establishments that make deliveries by bicycle and tricycles in Copacabana, Tijuca, Taquara and Santa Cruz districts. The graphs I to IV below show compiled data and synthesize how managers and bicycle deliverers act and think. Item V is a comparison of bicycle counts already done in Copacabana and the district's map (item VI) was made from scattered points.

**I. Main advantages of bicycle and tricycle use on goods delivery, according to the establishments managers.**

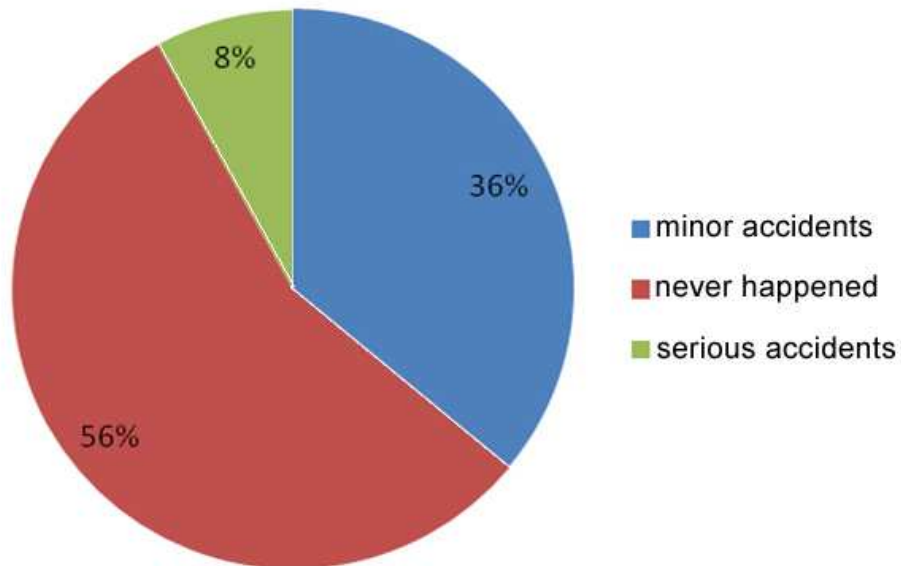


**II. Weight of loads delivered by tricycles and bicycles.**

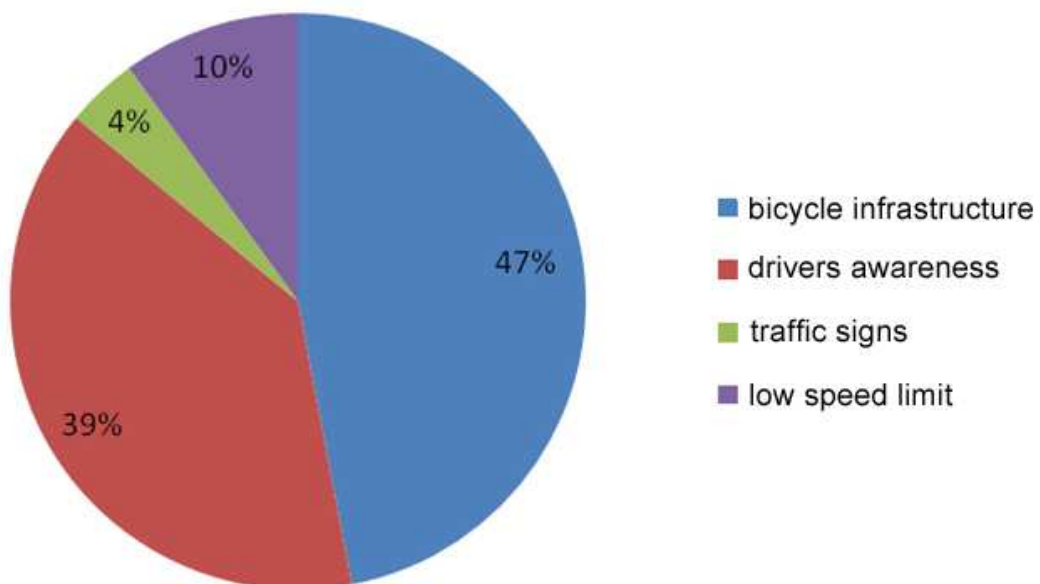




### III. Accidents with the bicycle deliverers.



### IV. Measures needed to provide greater traffic security and visibility, according to bicycle deliverers.





## V. Bicycles counts in Copacabana.

	Corte Cantagalo	Túnel Velho	Rodolfo Dantas	Figueiredo Magalhães	Rodolfo Dantas II	TOTAL	Média : 6*	%		
	9 de JULHO 2008	11 de MARÇO 2009	4 de JUNHO 2009	2 de JULHO 2009	5 de NOVEMBRO 2009		Sempre às quintas feiras.			
<b>Total</b>	779	711	782	1420	784	4476	746,00	100%		
	Rota entre Bairros	Rota entre Bairros	Rota interna do Bairro	Cruzamento NS Copa. Incluído	Rota interna do Bairro		média 62 ciclistas / hora			
<b>Particulares</b>	511	557	412	895	392	2767	461,17	61,82%		
<b>Serviço</b>	268	154	370	525	392	1709	284,83	38,18%		
<b>Sendo:</b>										
<b>Normais</b>	132	68	52	175	80	507	84,50	11,33%	29,67%	das de serviço
<b>Cargueiras</b>	92	68	91	199	115	565	94,17	12,62%	33,06%	
<b>Triciclos</b>	44	18	227	151	197	637	106,17	14,23%	37,27%	

## VI. General map of establishments surveyed in Copacabana.



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