SIBUS

Sevilla: a successful experience of promotion of urban cycling in the south of Europe

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SIBUS (University of Sevilla)
“A Contramano” - ECF

What is SIBUS?

- Integrated Bike-System of the University of Sevilla (SIBUS)
  - Parking facilities in closed and open areas (2.389 parking places: 1/36 US members)
  - Long term bike sharing system (400 bikes)
  - Educational activities (courses, workshops...)
  - Web: http://bicicletas.us.es
  - Research group
    - University
    - The City area

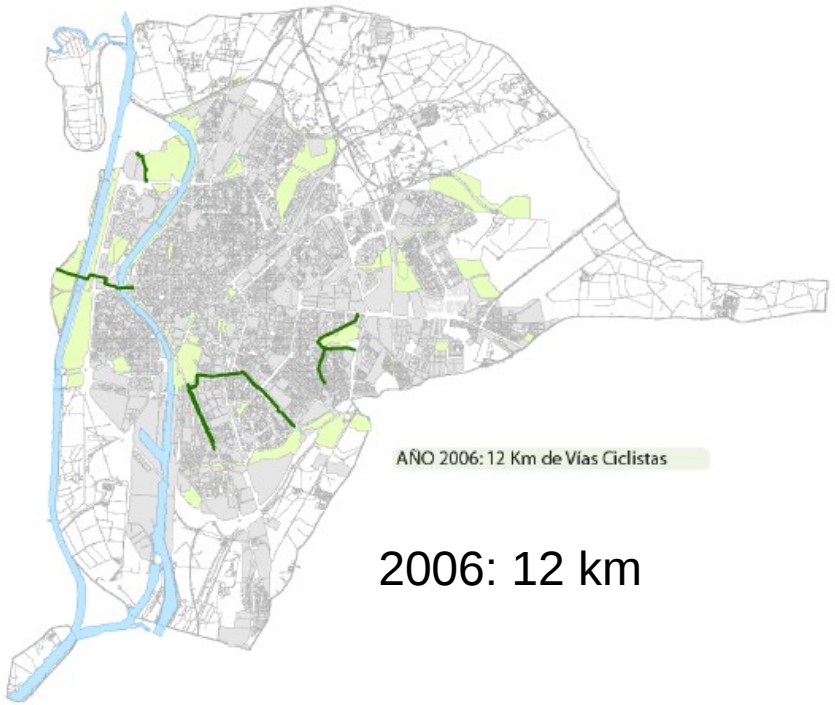
Goals

- To evaluate the use of the bike as a mode of transport in Sevilla (700.000 hab., central area)
- To evaluate the profile (gender...) of urban cyclists and the motivation of trips.
- To evaluate the use of the public bike system
- To evaluate the evolution of the use of the bike
- To evaluate environmental and health benefits.
- To evaluate the main characteristics of the process and to obtain practical conclusions.

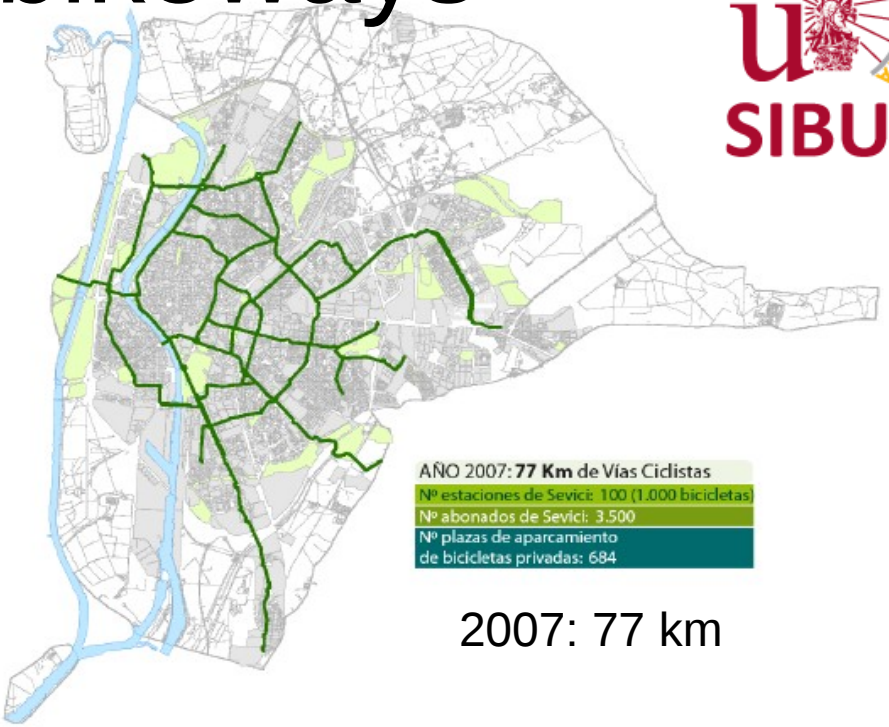
Methodology

- Direct counting of bikes in 22 relevant points in the city (both public and private bikes).
- Indirect estimation of modal share
- Direct polls to cyclists in the street
- Estimation of CO2-equiv emissions from previous data.
- Estimation of health benefits using HEAT: http://www.heatwalkingcycling.org/

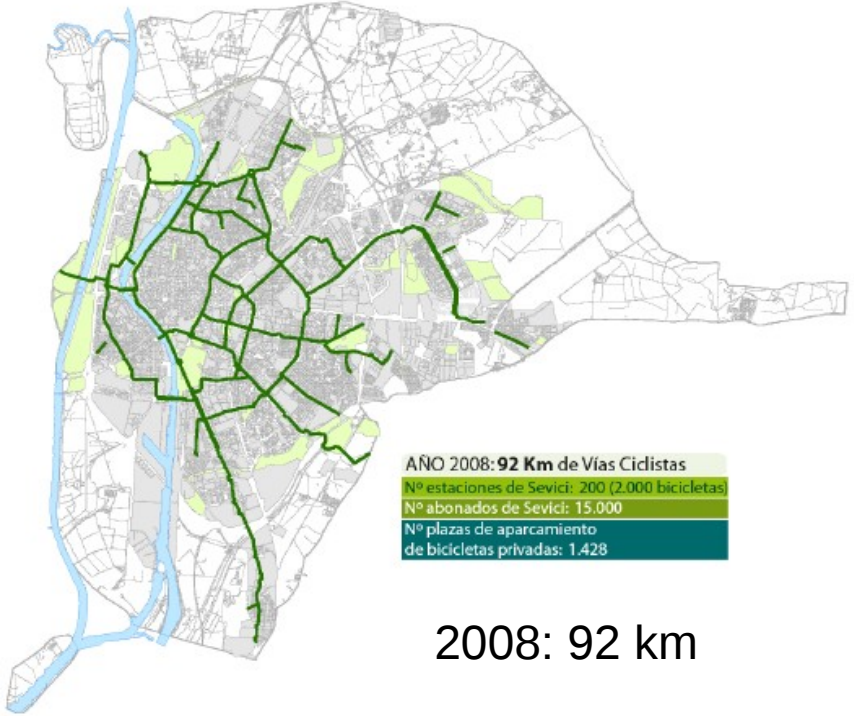
Evolution of bikeways



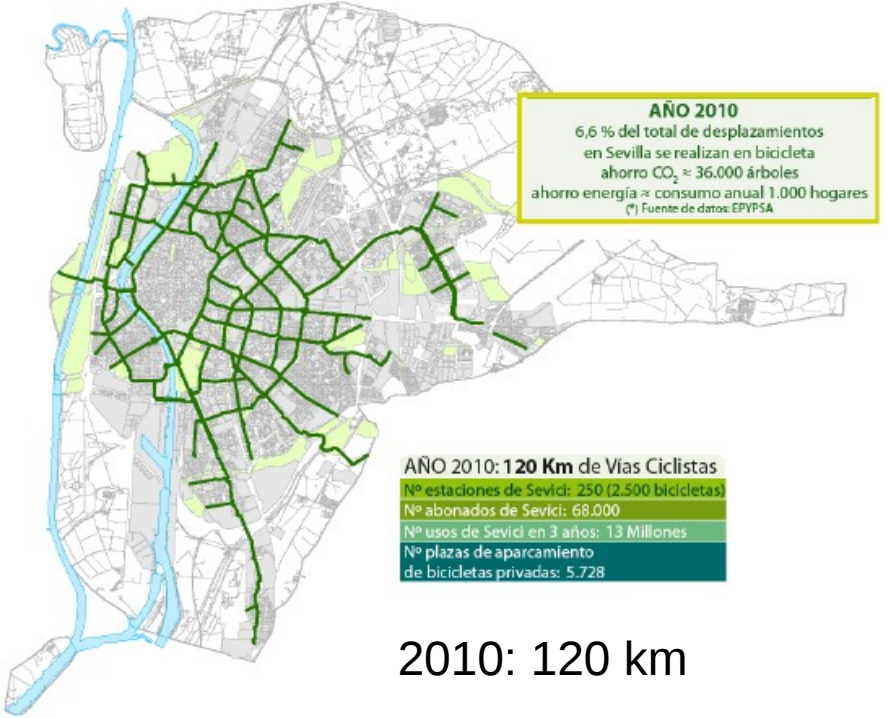
2006: 12 km



2007: 77 km



2008: 92 km



2010: 120 km

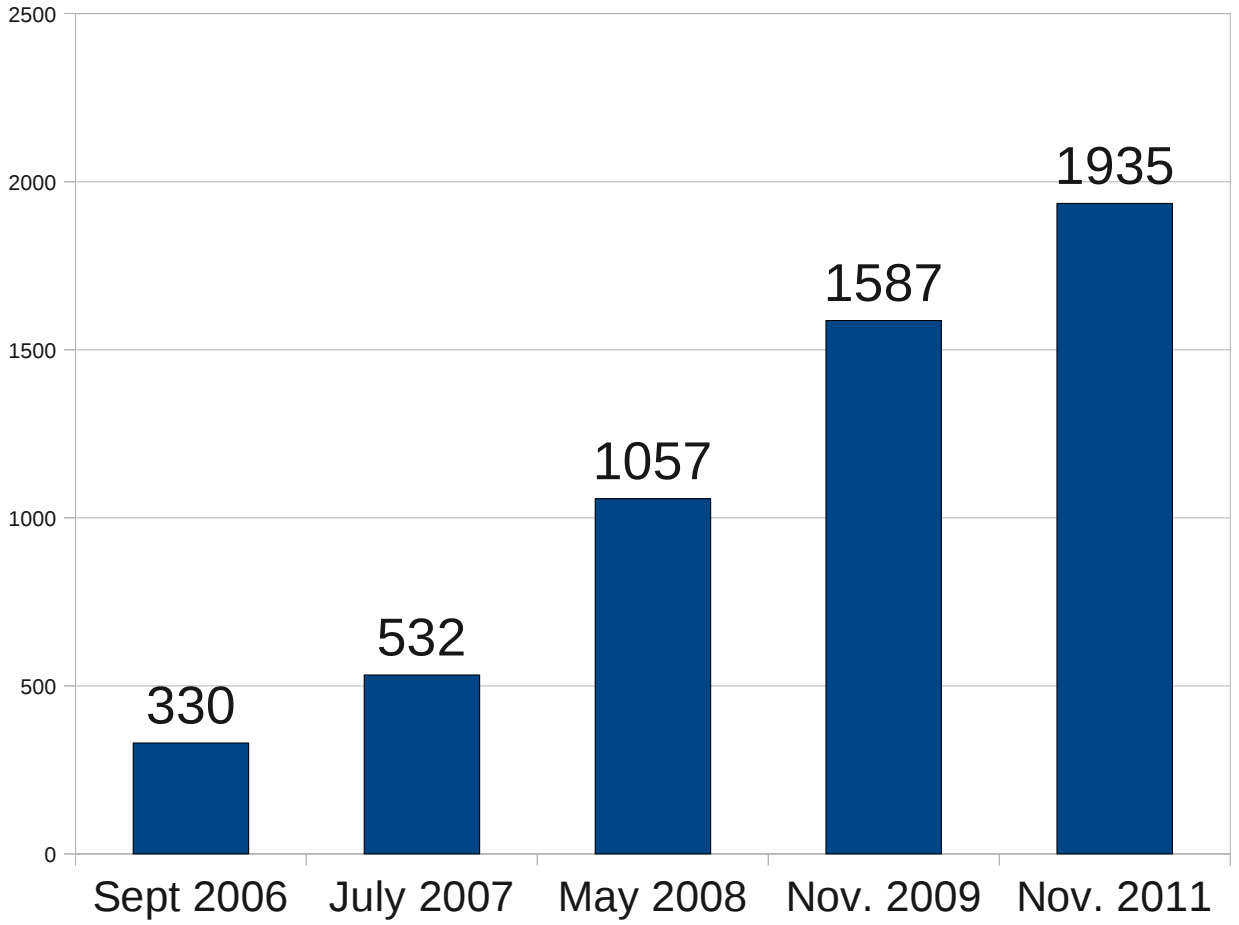
Typologies


ESPECIALISTAS
EN
INYECCION
ELECTRONICA
GASOLINA Y DIESEL
441 96 10
A 10 METROS

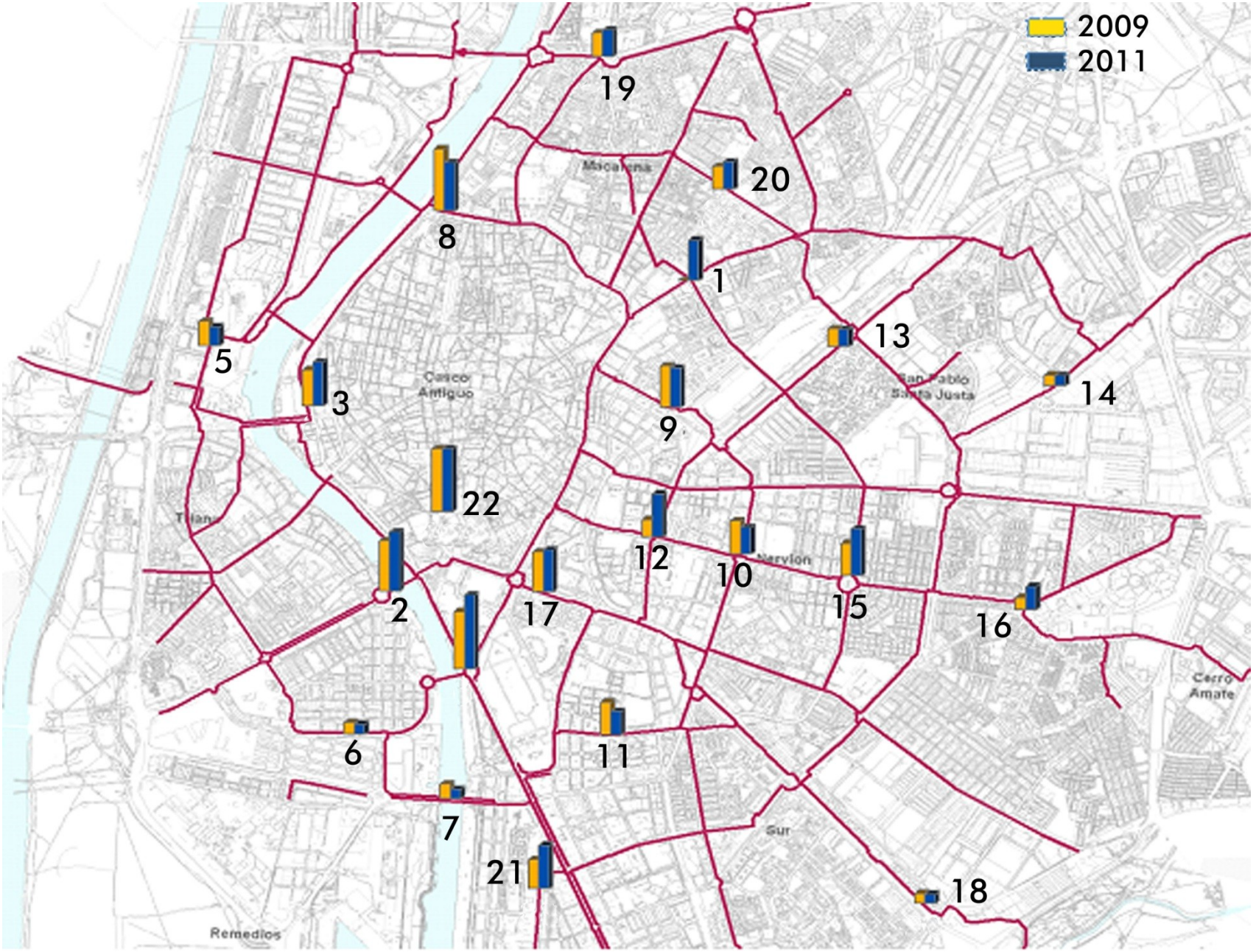
Public bike-sharing system

- 260 stations
- 2600 bikes
- 51397 associates
- 20.000 trips per day approx.
- > 7 uses per day per bike (labour day).

Evolution of traffic intensity

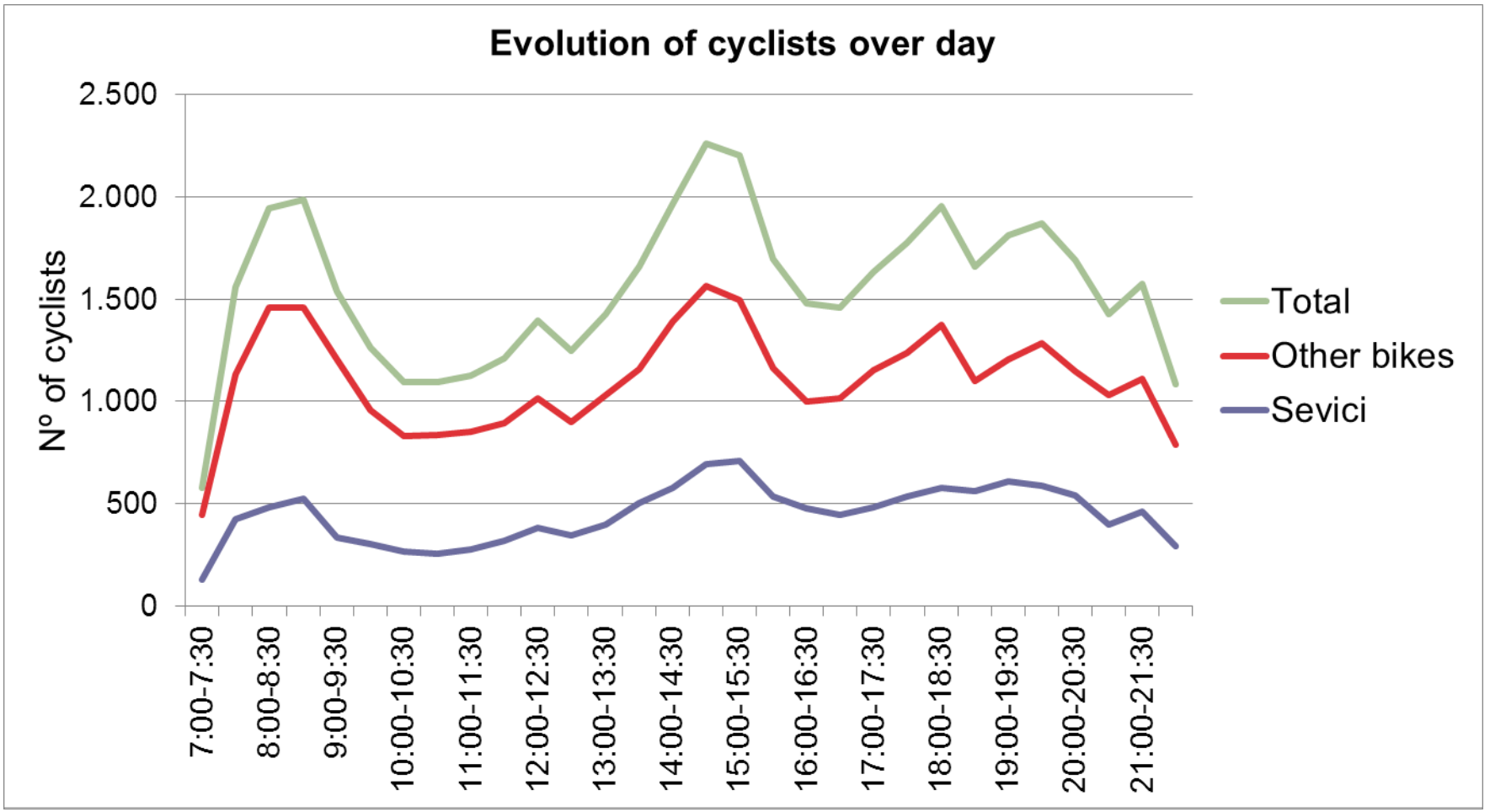


Evolution 2009 – 2011 (+20-10%)



Other details

- Public bikes / Private bikes: 28,77% / 71,23%
- Gender: male 67,92% / female 32,08%



Modal share Nov. 2007

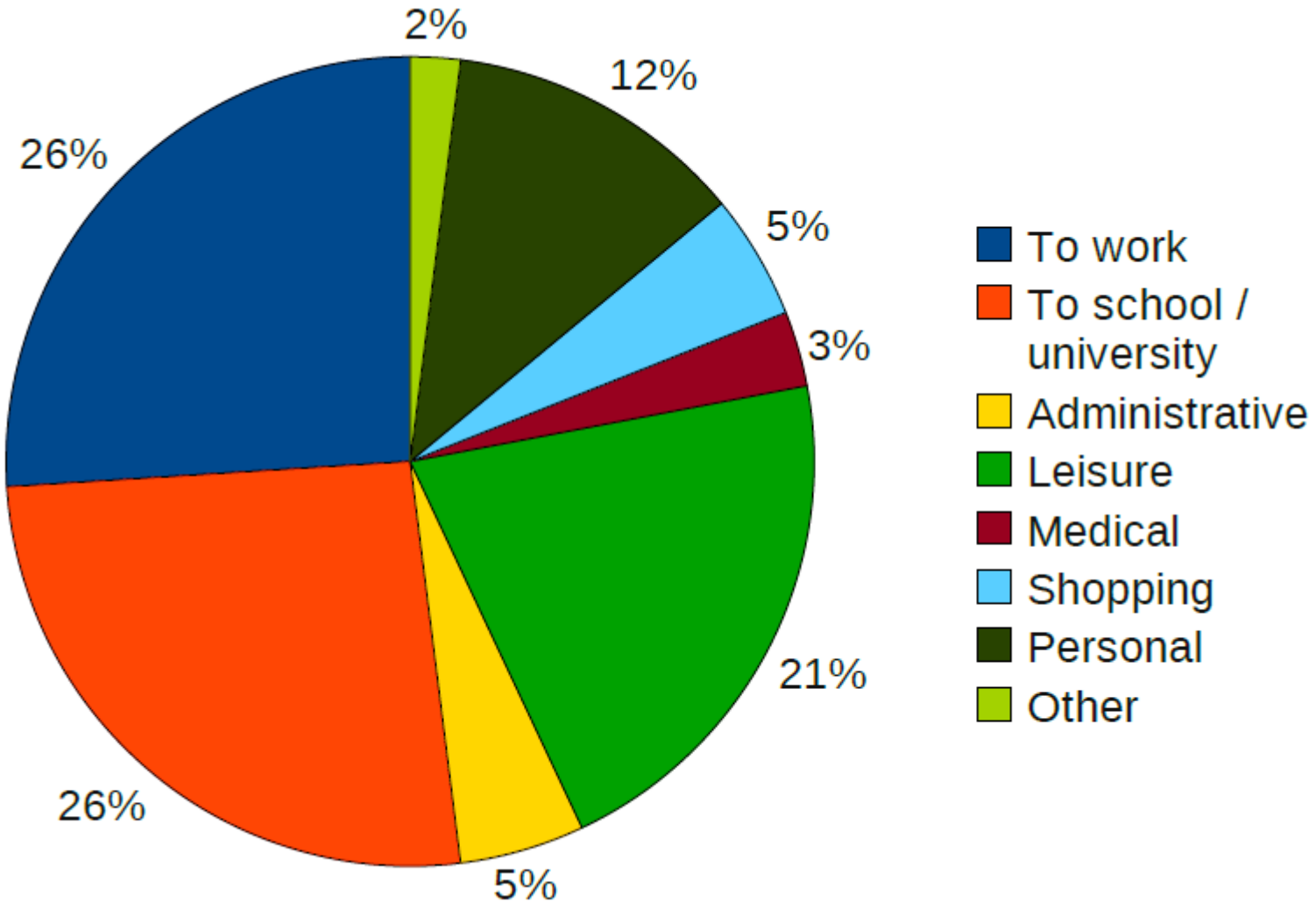
Pedestrians	**475.120**	**36,5%**	
Bikes	**41,744**	**3,2%**	**5,0%**
Public Transp.	**254,463**	**19,5%**	**30,7%**
Motorbike	**59,033**	**4,5%**	**7,1%**
Car	**473,021**	**36,3%**	**57,1%**
TOTAL	**1,303,381 (828.261)**	**100%**	**100%**

Modal share Nov. 2011 (estimated)

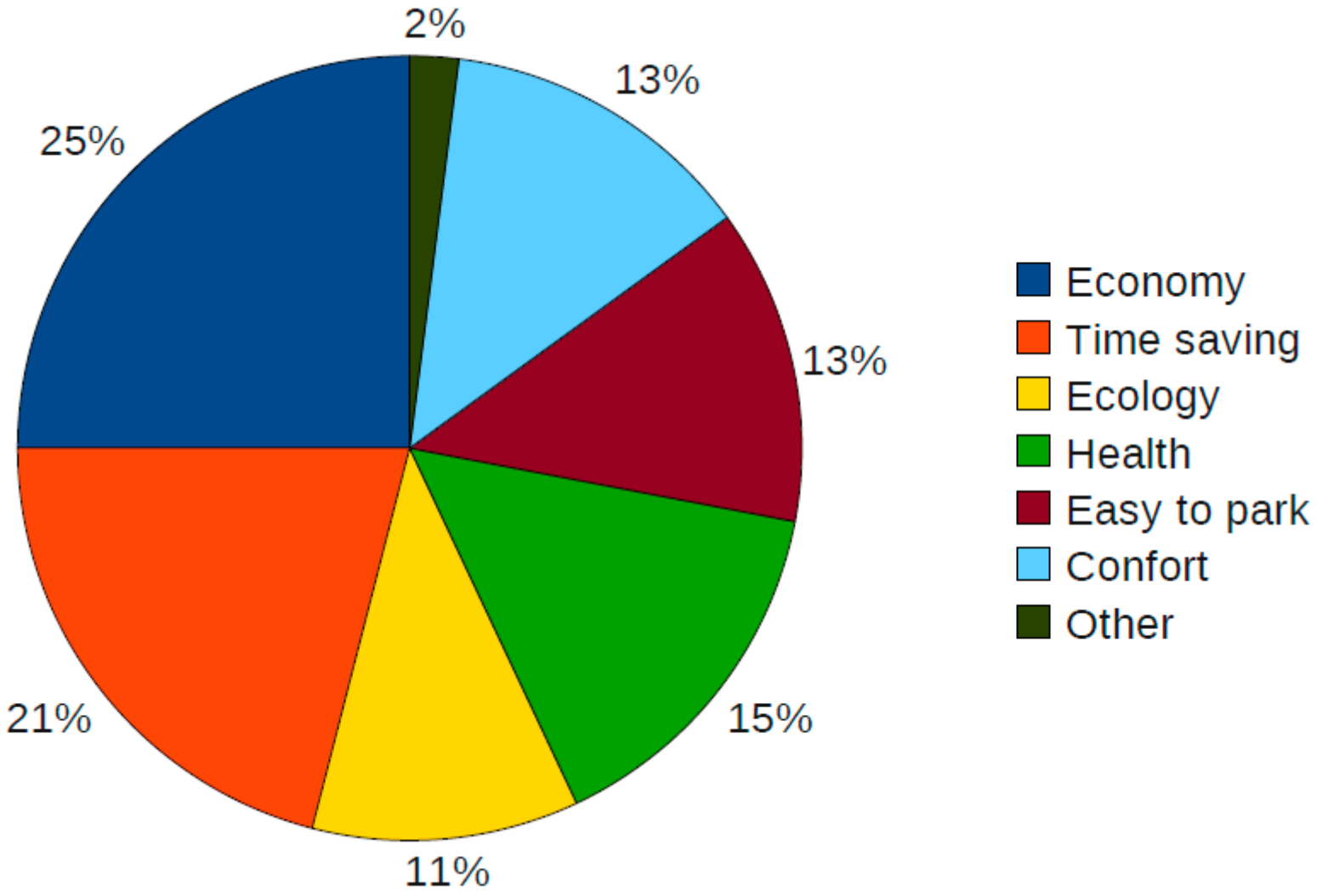
- Bike trips estimated from percent of public bike trips (27.77%), and total public bike trips: 20,877.

Pedestrians	**475.120 (?)**	**36,8%**	
Bikes	**72.570**	**5,6%**	**8,9%**
Public Transp.	**283.489**	**22,0%**	**34,8%**
Motorbike	**65.000**	**5,0%**	**8,0%**
Car	**393.553**	**30,5%**	**48,3%**
TOTAL	**1.289.732 (814.612)**	**100%**	**100%**

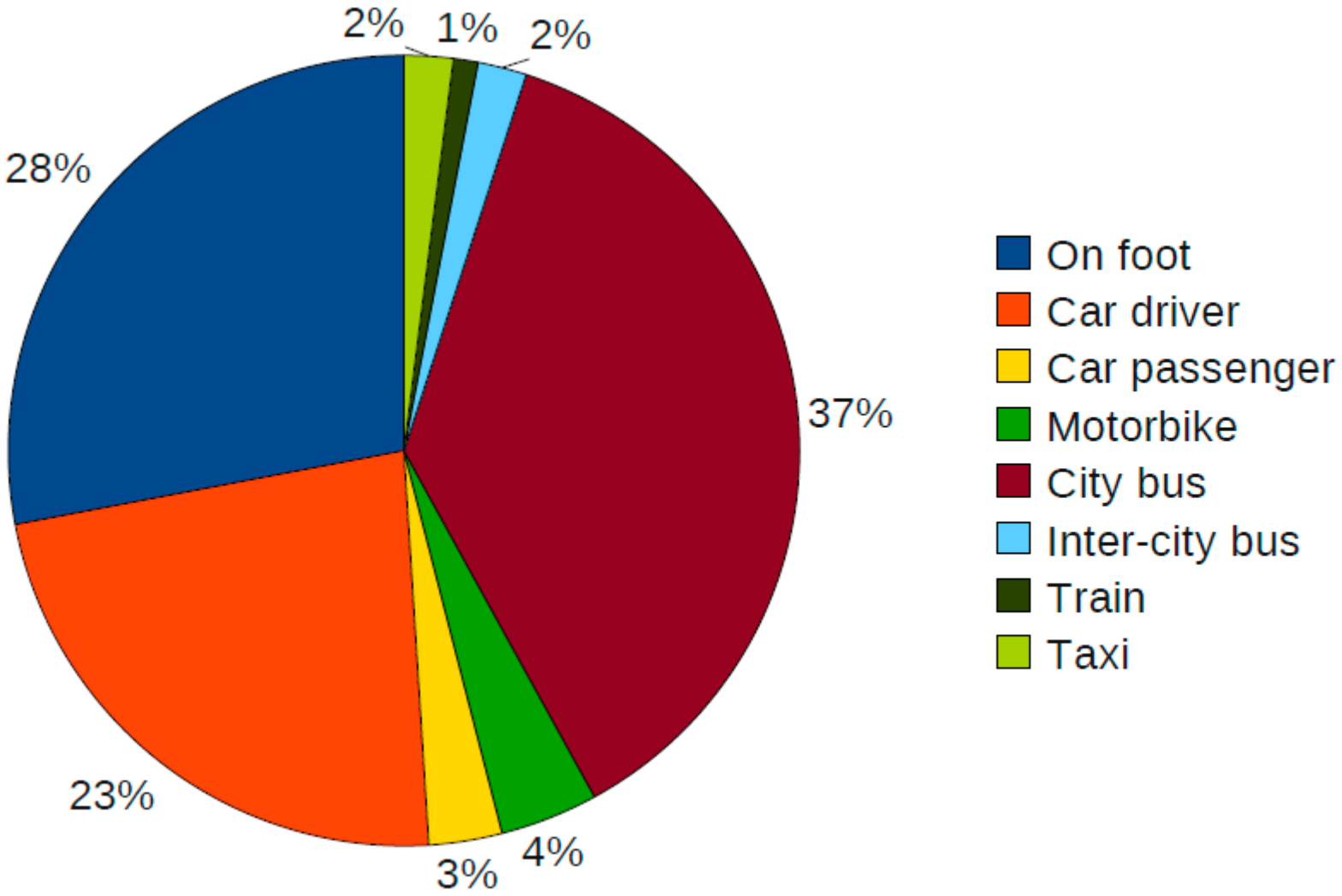
Trip motivations



Reasons for choosing bike

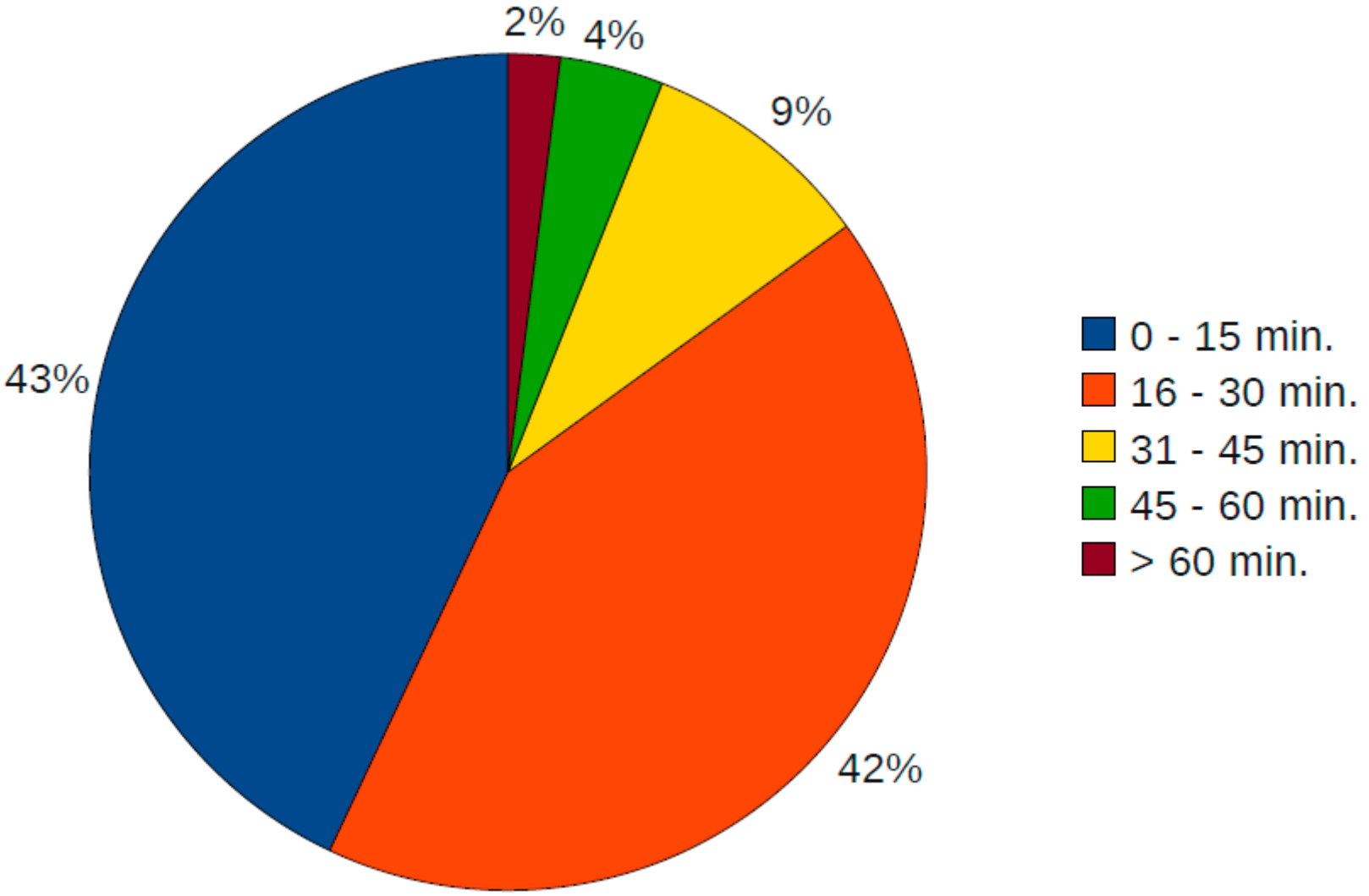


Previous mode



Travel time

(estimated average distance 5,1 km)



CO_2-eq. Savings

http://www.ecf.com/wp-content/uploads/ECF_CO2_WEB.pdf

- Trips: 72.570 trips per labour day without rain
- Average distance: 5.1 km
- Effective days per year: 235
- Substitution:
  - Car 28%
  - Public transport 40%
  - Motorbike 4%
- Total CO_2-eq. Savings: **8.633,9 Tm·CO2eq / year**
- Total fuel savings: **27.151 barrels of crude oil / year**

Health benefits

http://www.heatwalkingcycling.org/

- Population that stands to benefit (daily users) 50.799
- Protective benefit (relative risk of death among cyclists): 22%
- Lives saved (per year): 24,17
- Standard value of a statistical life in Europe (program value): 1.574.000 euros
- Present value of mean annual benefit (discount rate of 5% for future benefits, taking inflation into account): 20.638.000 euros (cost of bikeways network: 35.000.000 euros)

What we have “learned”?

- Make a network, not isolated cycleways (Of course!).
- Make your network fast: people will feel it is useful
- Make your cycleways visible and easy to recognize
- Make your cycleways safe: protect the cycleways against traffic.
- Two-ways better than one one-way (at he beginning)
- If there are parking lanes, put your cycleways between parked cars and pedestrians. Make easy the access to cars.
- Bike-sharing systems are a complement of the cycling network. But not conversely.
- It helps to have a unified management of the bike program.
- Consensus with urban cycling associations is very important!!

Strengths and weakness

- Strengths:
  - Amazing increase of urban cycling (~ x 6).
  - Bike became very popular (30% of people uses it).
  - Infrastructure very difficult to remove (physically and politically).
- Weakness:
  - We are an exception surrounded by nothing.
  - There is not yet a clear political consensus.
  - Conflicts with pedestrians.