Promoting Sustainable Mobility in Home to School Journeys in Small and Medium Sized Cities. Case Study of Castelo Branco.

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Rui Manuel Amaro Alves
Polytechnique Institute of Castelo Branco

OUTLINE

1. Framework
2. Case Study of Castelo Branco
3. Project
   - Aims
   - Methodology
   - Results
4. How to promote sustainable home to school journeys?
5. Typology of Developed Activities at international scope
6. Typology of Developed Activities in Castelo Branco Project

Rui Manuel Amaro Alves
Polytechnique Institute of Castelo Branco

Framework

Importance of the home to school journeys

Home to school journey represent a problem for the cities

High importance in urban commuting

High number of citizens involved such as students, parents, relatives, friends, …

Relevant impact in urban environment (GEE Emissions, particle pollution, noise emissions, traffic jam, etc.)

They are a permanent challenge to promote sustainable mobility

It's an opportunity to change the actual urban mobility patterns

It's an opportunity to instill sustainable and healthier mobility patterns into young generations

Public Intervention

In several countries this issue is integrated in political Agenda in which were made specific interventations in this thematic

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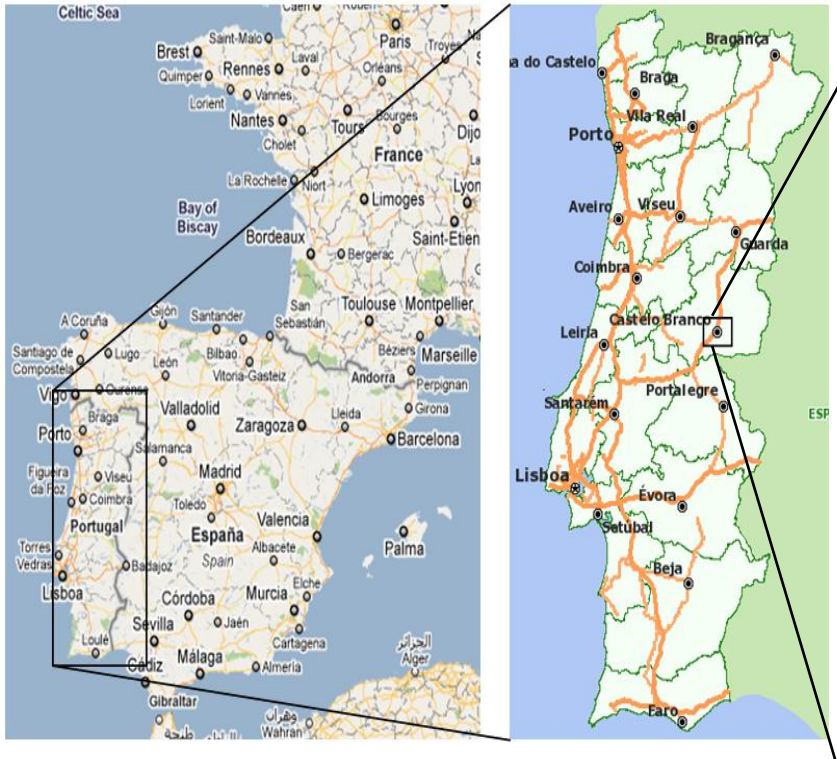
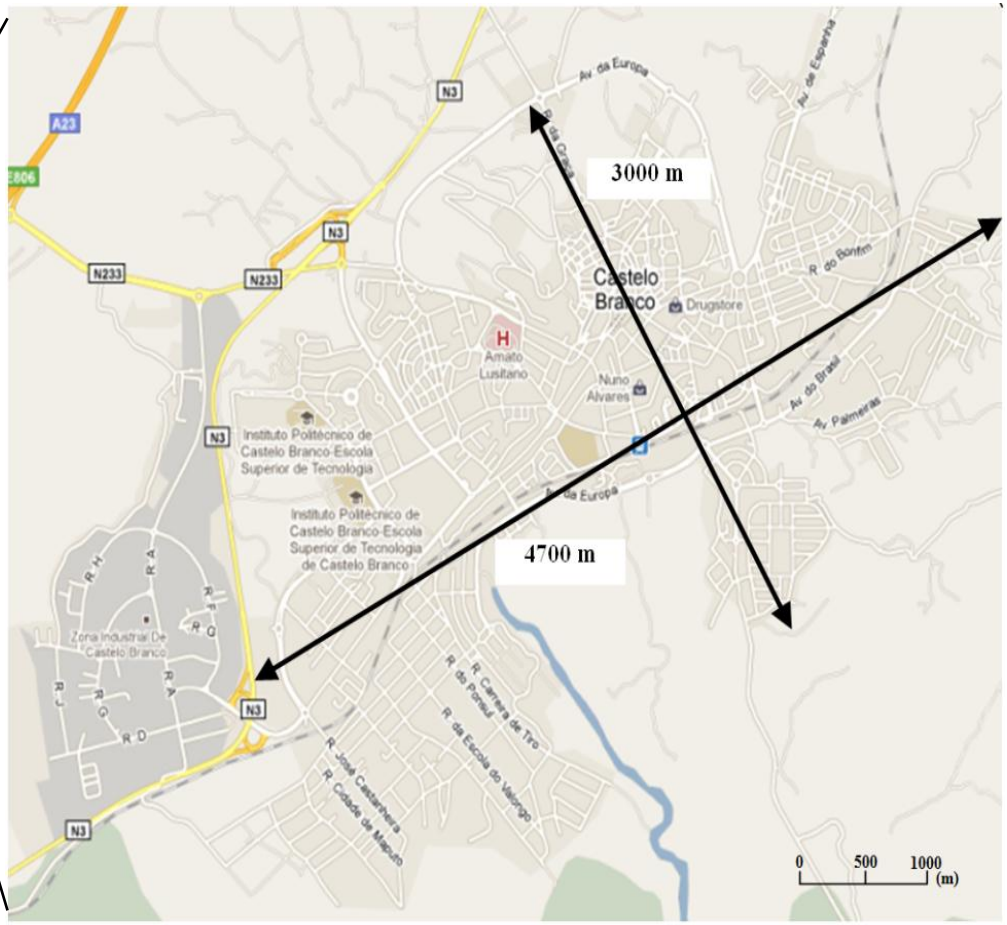
Case Study: City of Castelo Branco - Portugal





- ✓ Urban Area – 12,8 km2
- ✓ Population – 30 000 inhabitants
- ✓ Young Population – 30,2% of the resident population was under 25 years old (2001)
- ✓ Population density – 26 inhabit. /ha
- ✓ Residential density – 12,4 dwellings/ha
- ✓ 45 schools of all grades ; 12 000 students
- ✓ 16 000 persons are daily involved in to/from school journeys

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Culture of mobility - Castelo Branco (Sustainable Mobility Plan, 2008)

- ✓ More than 56% of the families had, at least, two cars
- ✓ Motorization rate (2008) +/- 700 veh./1000 inhabit (estimated)
- ✓ Between 1994 and 2004 the number of motorized vehicles has increased 44%
- ✓ 53% of the families had, at least, 1 bycicle at home
- ✓ 7 daily bus lines (Demand: 2000 passengers/day)
- ✓ Some of the private schools, especially in kindergarten, have their own private student's buses of small dimensions
- ✓ Doesn't exist a transport service to schools of public education
- ✓ Bus lines are not articulated with schools location and timetables
- ✓ Global Shift Modal (% of trips): Private Car - 52% ; Walking - 42%; Bus - 5,5%
- ✓ Journeys to/from work and school (% of trips): Private Car -73,4%; Walking -18,9%; Bus - 4,7%

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Project

Home to school journeys in the city of Castelo Branco.Towards Sustainable Mobility.

www.est.ipcb.pt/mobilidadeescolar/

- ✓ **Ongoing Project:** From April 2010 until November 2011
- ✓ **Schools:** 18 different schools
- ✓ **Age group:** 6 to 14 years old
- ✓ **Scholar population:** 3554 students from the 1st grade until the 9th grade

Grade and age	Number	Percentage
1st - 4th grade (6-9 years old)	1513	42,5
5th - 6th grade (10-11 years old)	838	23,6
7th- 9th grade (12-14 years old)	1277	36,9

- ✓ **Partners:** Municipality of the city ; Local Transport Operator (TRANSDEV); Fundação Calouste Gulbenkian

Aims

Promote sustainable mobility in home to school journeys within Castelo Branco

Study the solutions that may contribute to promote sustainable mobility in home to school journeys

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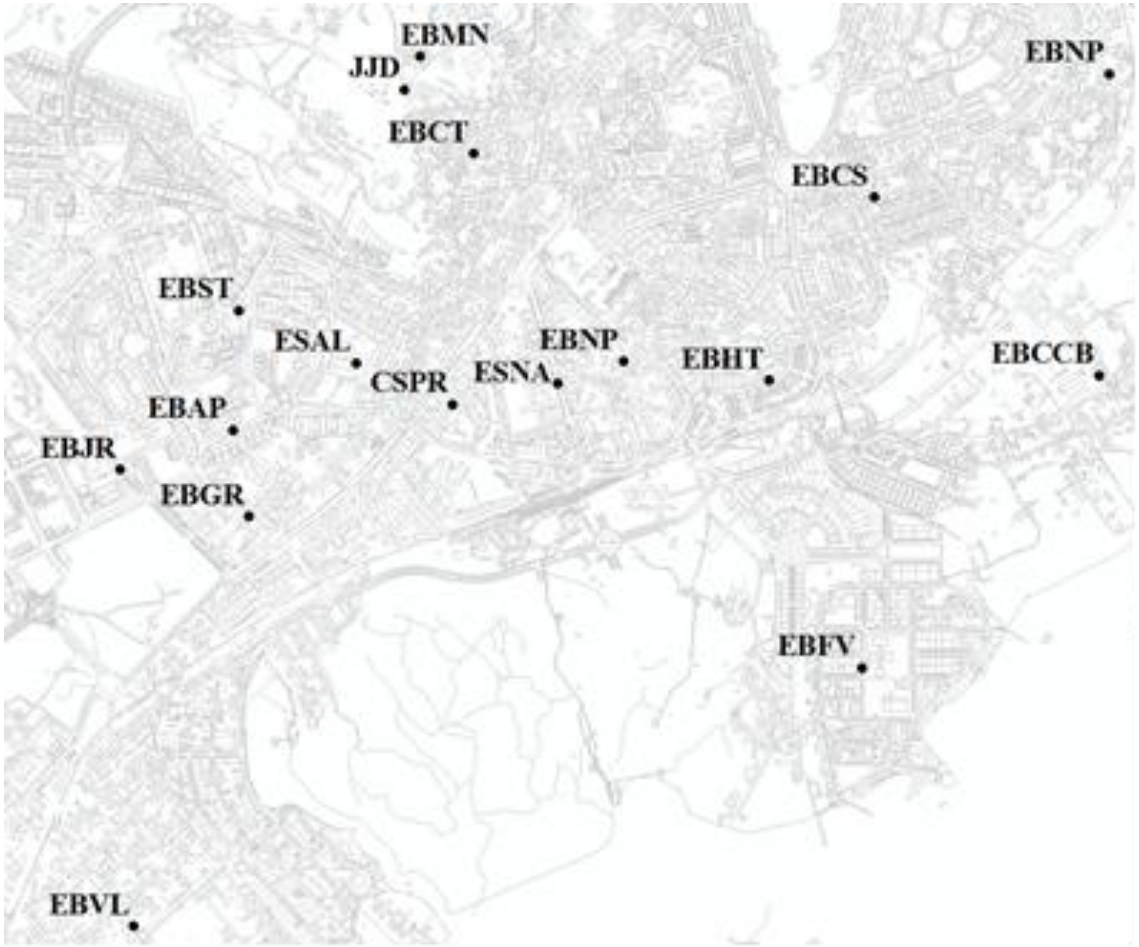
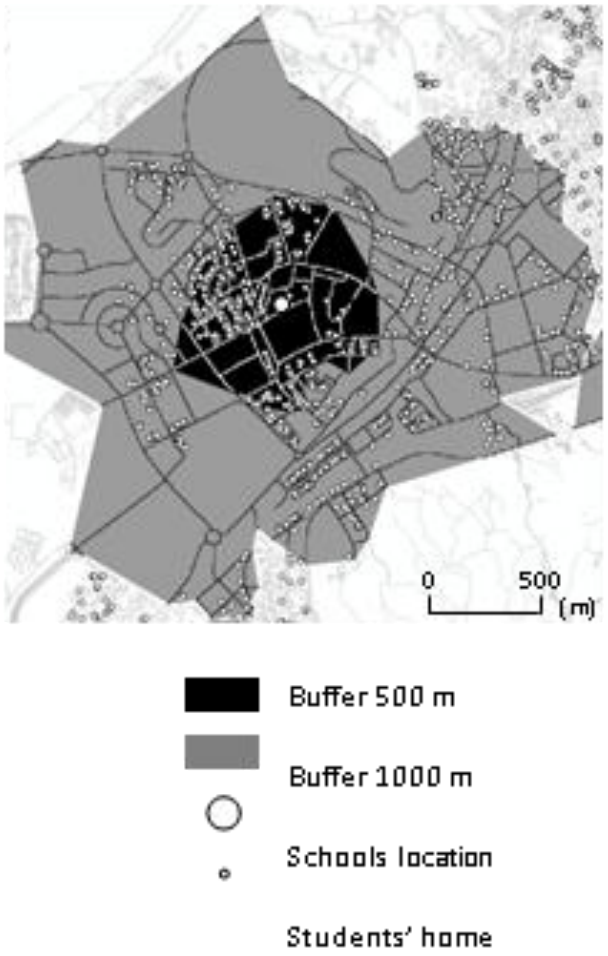
Methodology





3320 students geocoded - 93,4% of the total

27% of the students – buffer of 500 m

52% of the students – buffer of 1000 m

The average distance per student between their home and the school is 588 to 2709 meters

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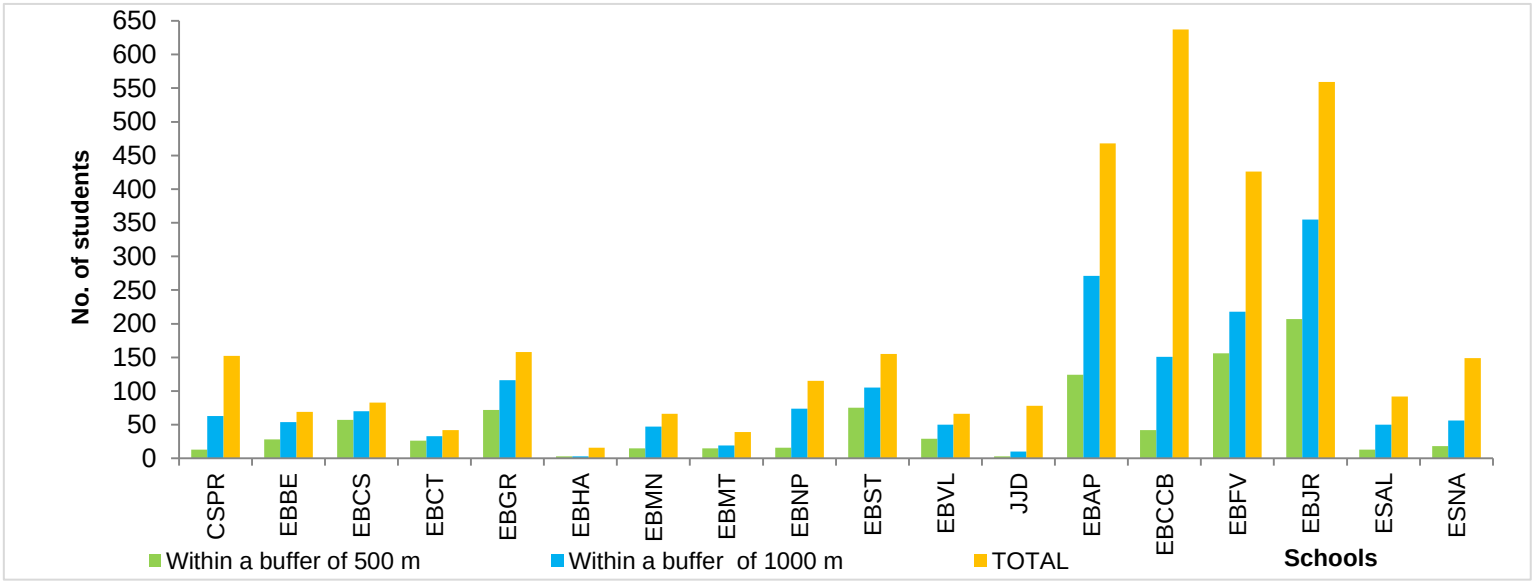
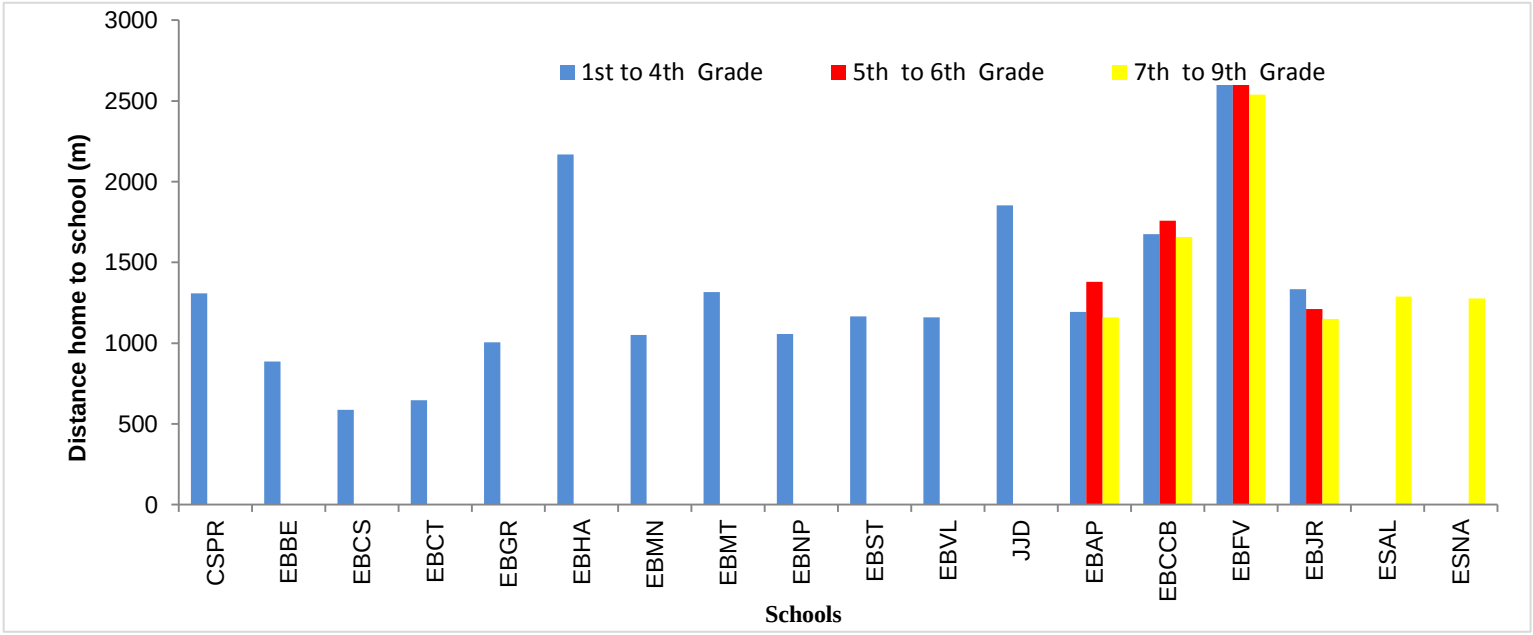
Results

Number of students within the buffer of 500 and 1000 meters and the total by school



Average distance of home to school by school and school grade



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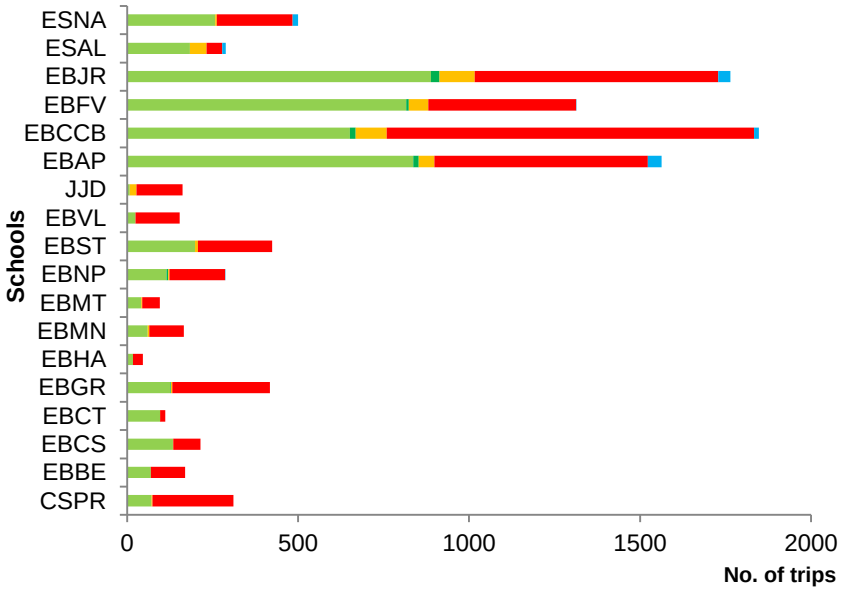
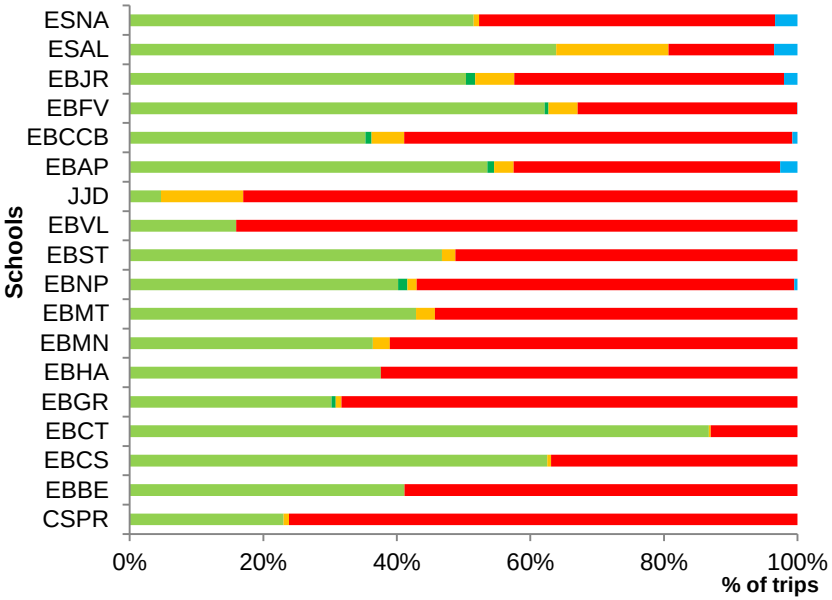
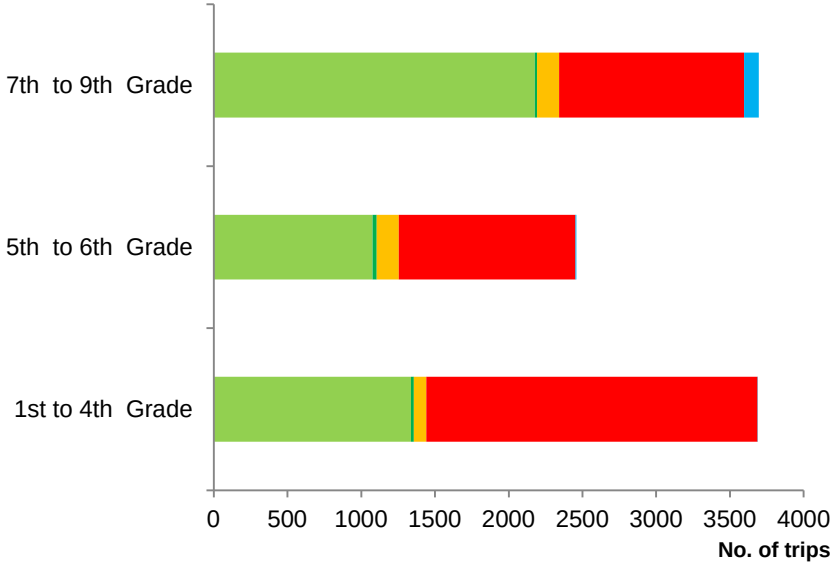
Number of trips by school

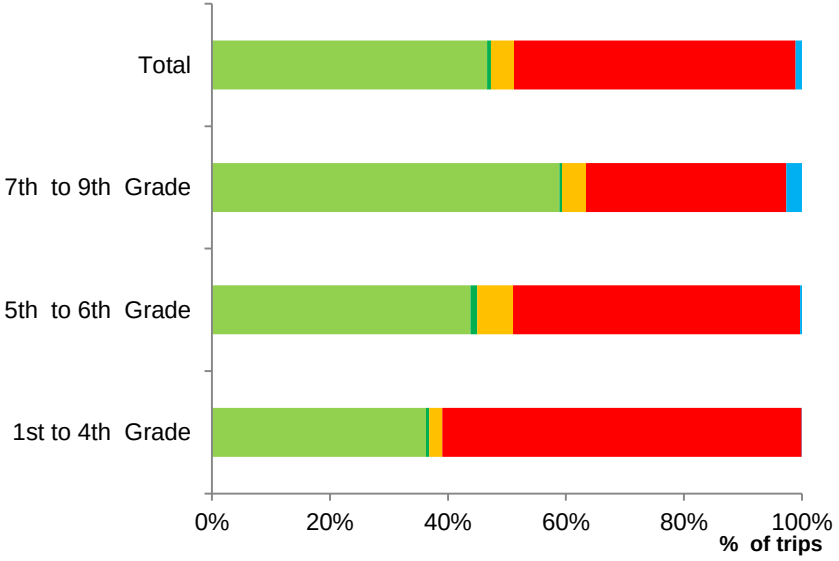


Percentage of trips by school



Home to school journeys by school grade





Bike walking Private car Bus Other

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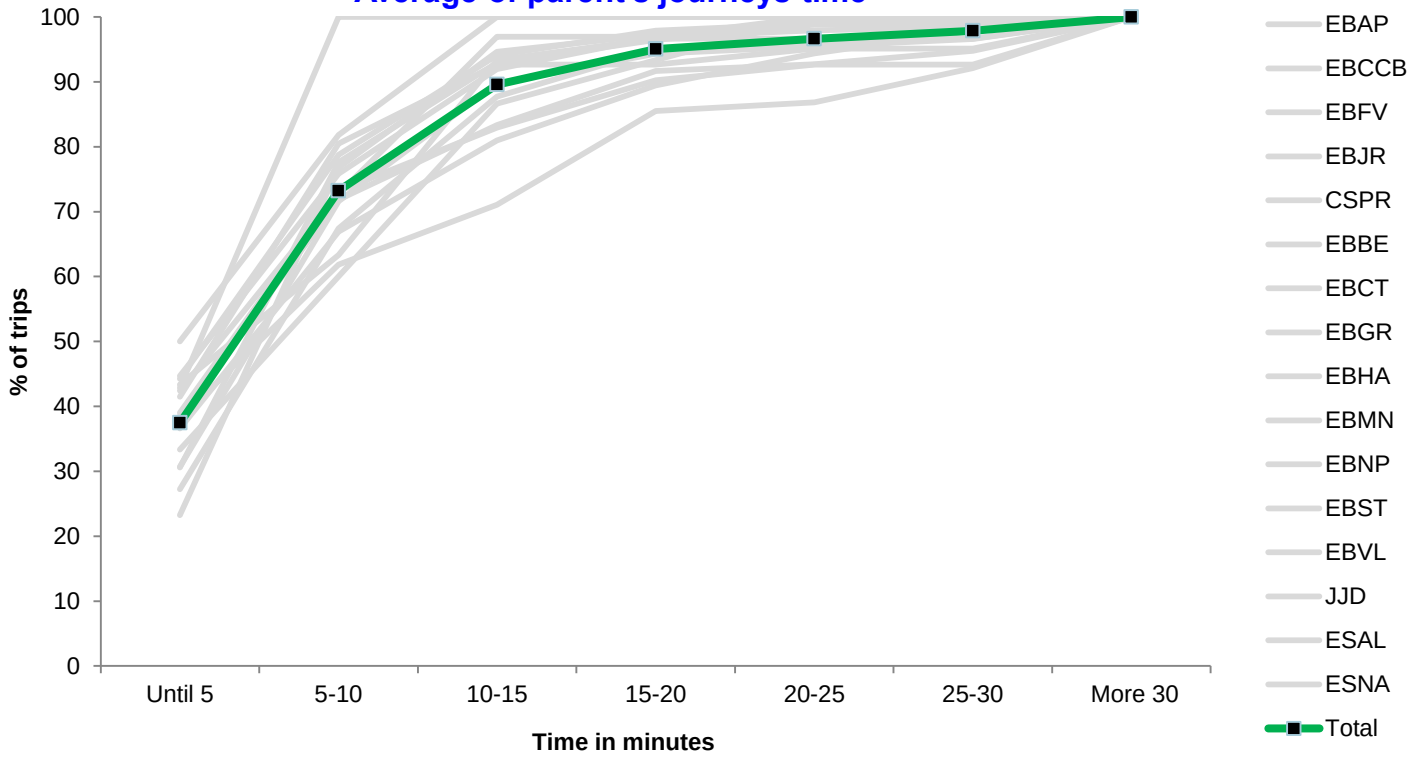
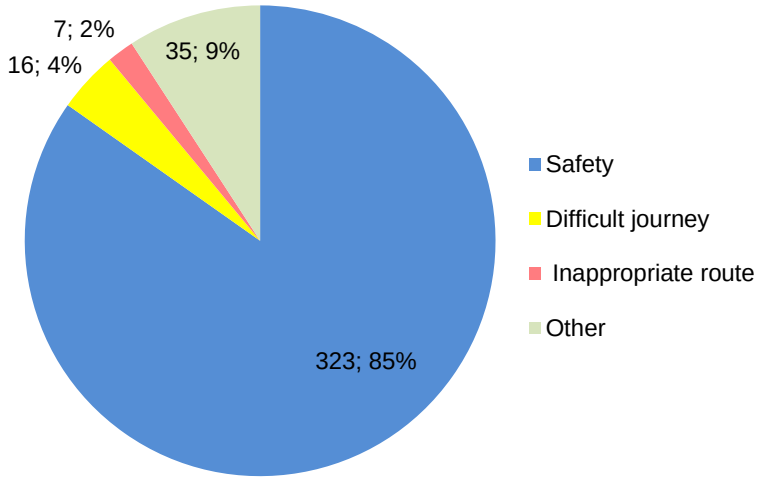
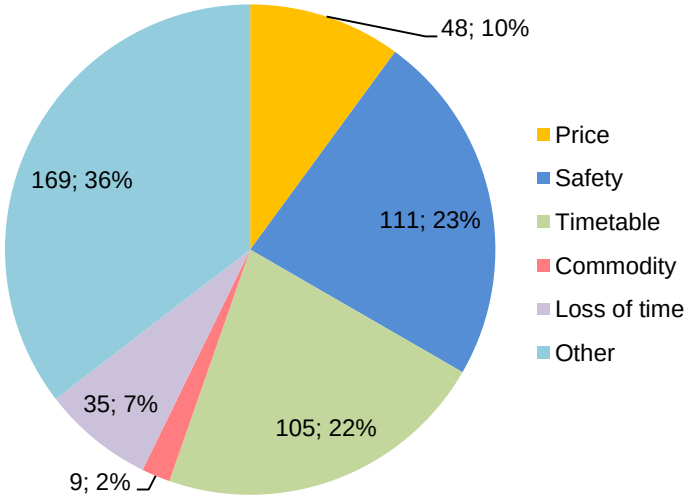
Average of parent's journeys time



Reasons of the parents to prevent that their children walk to school



Reasons of the parents to prevent that their children use the bus



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How to promote sustainable home to school journeys?

The actions that were or are being developed in different countries may be distinguished in two types.

Material and sectorial interventions:

Streets geometry
Road signs
Transportation system

Immaterial actions:

Learning
Awareness
Information

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Polytechnique Institute of Castelo Branco

Typology of Developed Activities at international scope

a) Methodological guidelines for the elaboration of scholar mobility plans;

b) Scholar mobility plans;

c) Guidelines to implement Pedibus and Ciclobus;

d) Good practice guidelines for home to/from school journeys;

e) Institutional and social networks in this thematic (blogs);

f) Permanent Forums;

g) Awareness and learning actions of road safety, walk and bicycle in urban environment;

h) Promotion of regular events about scholar mobility;

i) Regular awareness campaigns;

j) Methodological guidelines about the design of urban streets and road safety solutions;

k) Introduction of road safety and sustainable mobility in scholar programs for different education levels;

l) Legislatives and regulations changes connected to the thematic;

m) Development of bikesharing and carpooling systems.

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Typology of Developed Activities in Castelo Branco Project

Awareness material and events	Media – Articles Radio Programs Website and Blog Website and schools involved Awareness material (Flyers) Participation in events, workshops and local and national conferences Walk to school soundtrack and video
Events	Mobility Contest (Mental Map to school, cartoons and flyers drawings) Mobility Games Mobility Day for school (Walk to school / Car Free Day) Mobility Week of scholar community (Walk to school/ Car Free Day in the same day)
Learning	Workshops and Conferences with scholar community (parents, students and teachers) about sustainable mobility Develop projects with students about sustainable mobility in urban environment (noise, air pollution and road safety)
Scientifical and technical	Diagnostic Study of mobility alternatives (Conception, test and evaluation) Study of the solutions that improve the conditions of utilization and function of sustainable travel mode choices and public transportation penalizing travel individual mode choice (geometry, pavements, traffic control and traffic devices, road safety, etc.) National Seminar about the project National and international technical scientific events (congress, seminars and workshops) Papers submissions to tecnical and scientific national and international Reviews Guidelines and technical recommendations Project Reports

Rui Manuel Amaro Alves
Polytechnique Institute of Castelo Branco

Thank you for your Attention!

Rui Manuel Amaro Alves
Polytechnique Institute of Castelo Branco