



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

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OUTLINE

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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

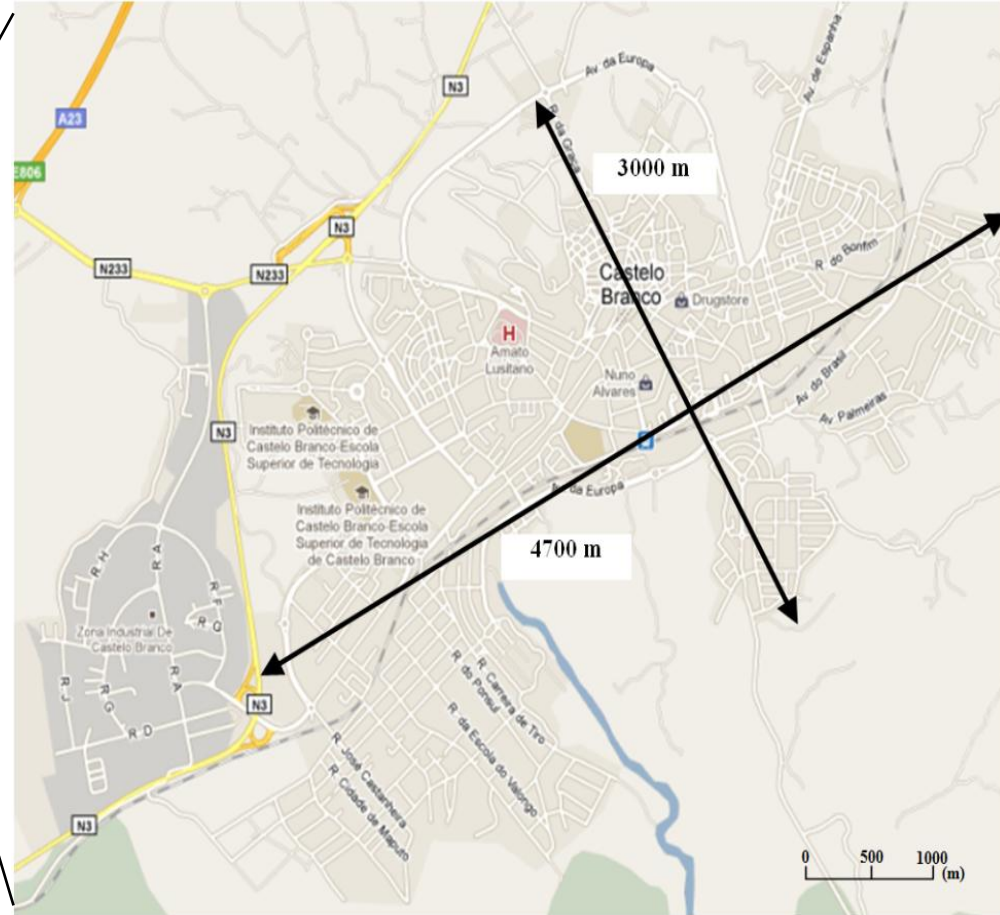
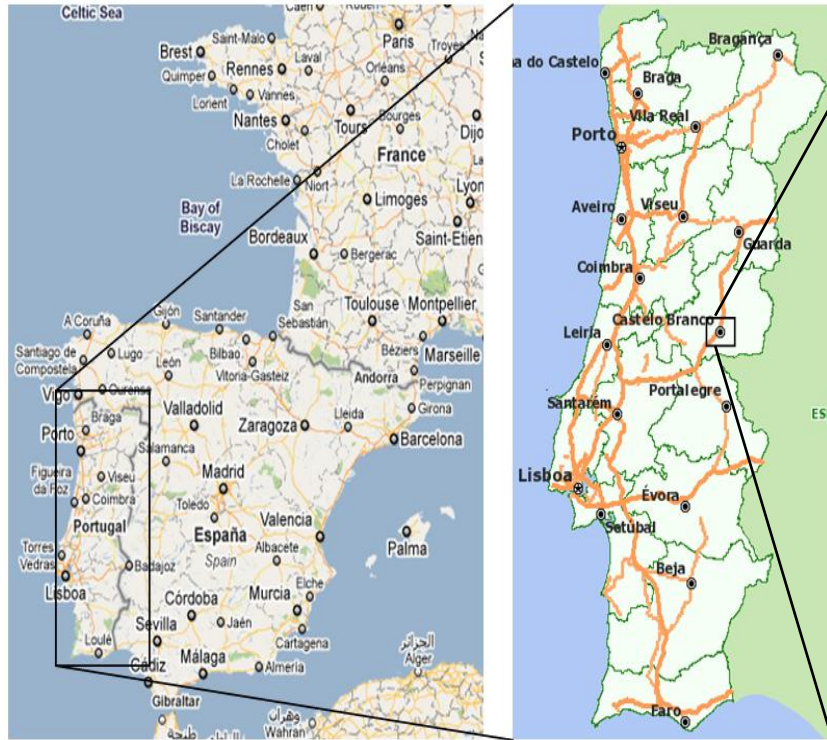
It's an opportunity to change the actual urban mobility patterns

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 interventions in this thematic

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

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 bicycle 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%

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

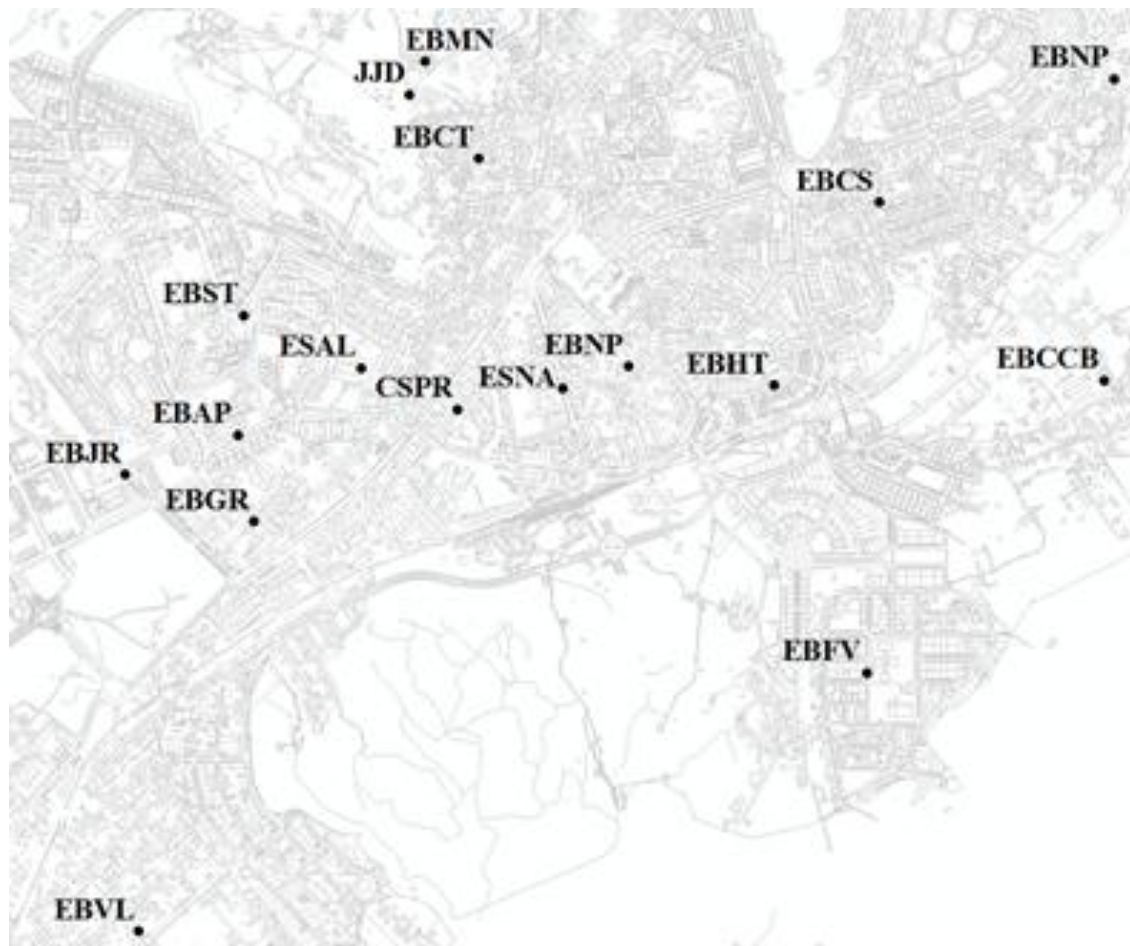
- ✓ **Partners:** Municipality of the city ; Local Transport Operator (TRANSDEV); Fundação Calouste Gulbenkian

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

Methodology



- Buffer 500 m
- Buffer 1000 m
- Schools location
- Students' home

3320 students geocoded - 93,4% of the total

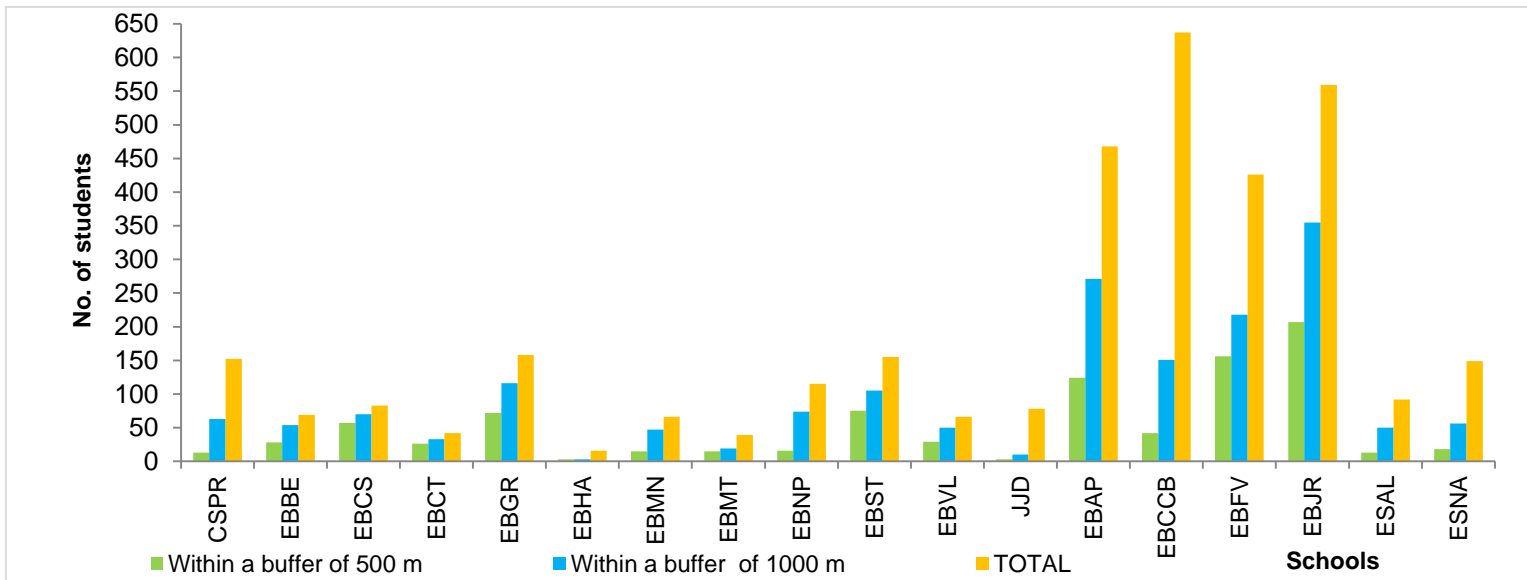
27% of the students – buffer of 500 m

52% of the students – buffer of 1000 m

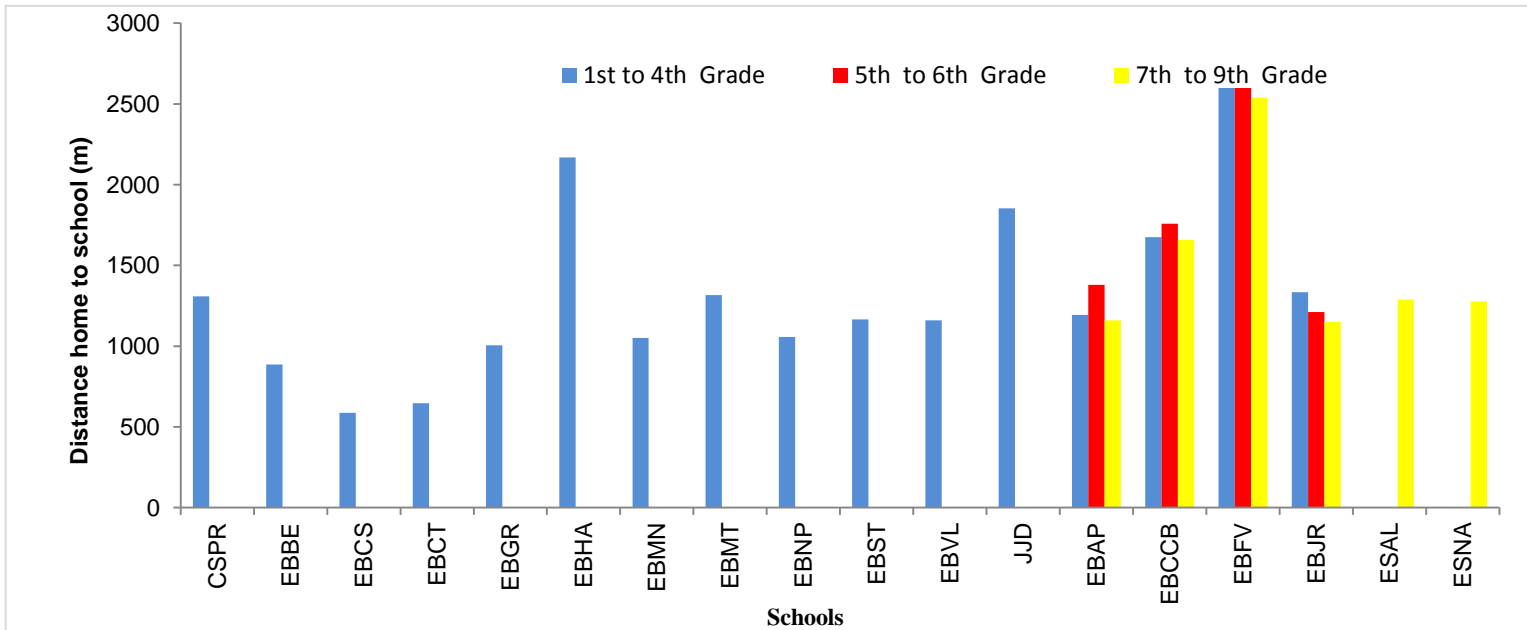
The average distance per student between their home and the school is 588 to 2709 meters

Results

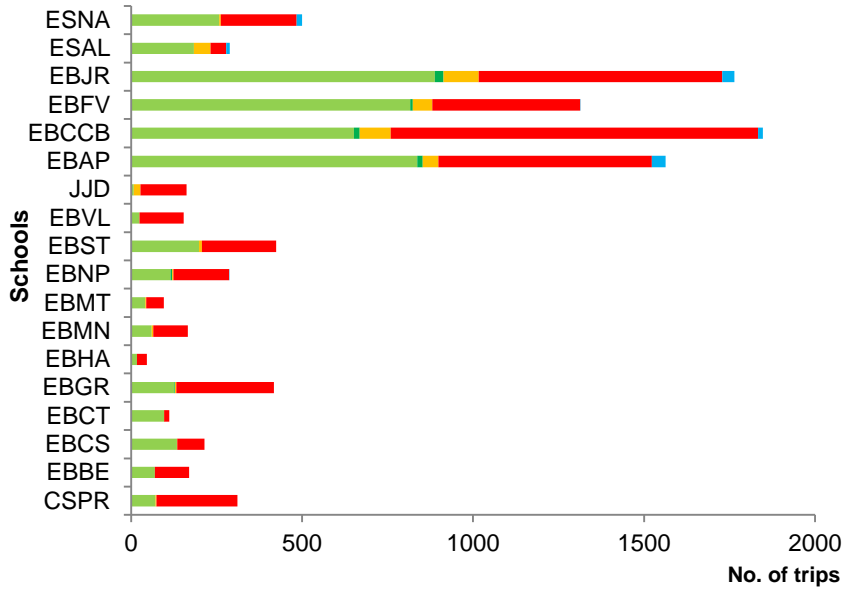
Number of students within the buffer of 500 and 1000 meters and the total by school



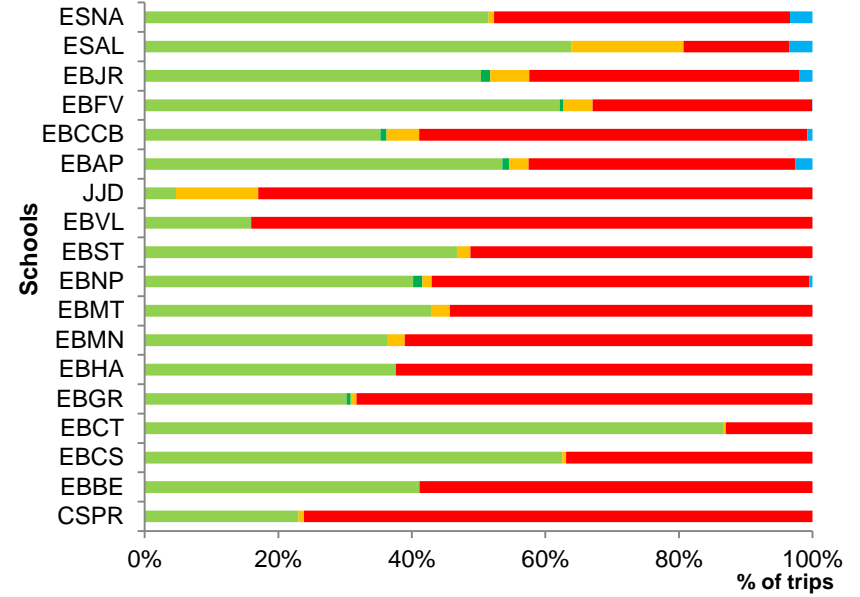
Average distance of home to school by school and school grade



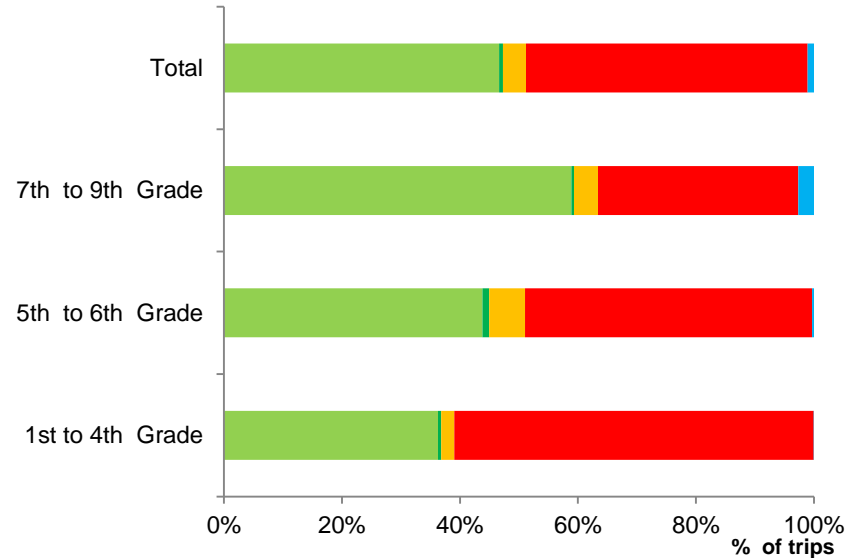
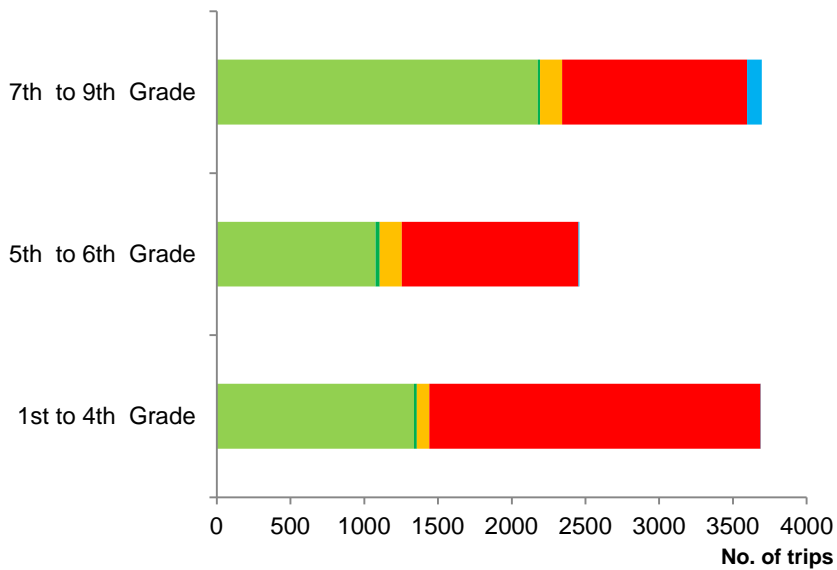
Number of trips by school



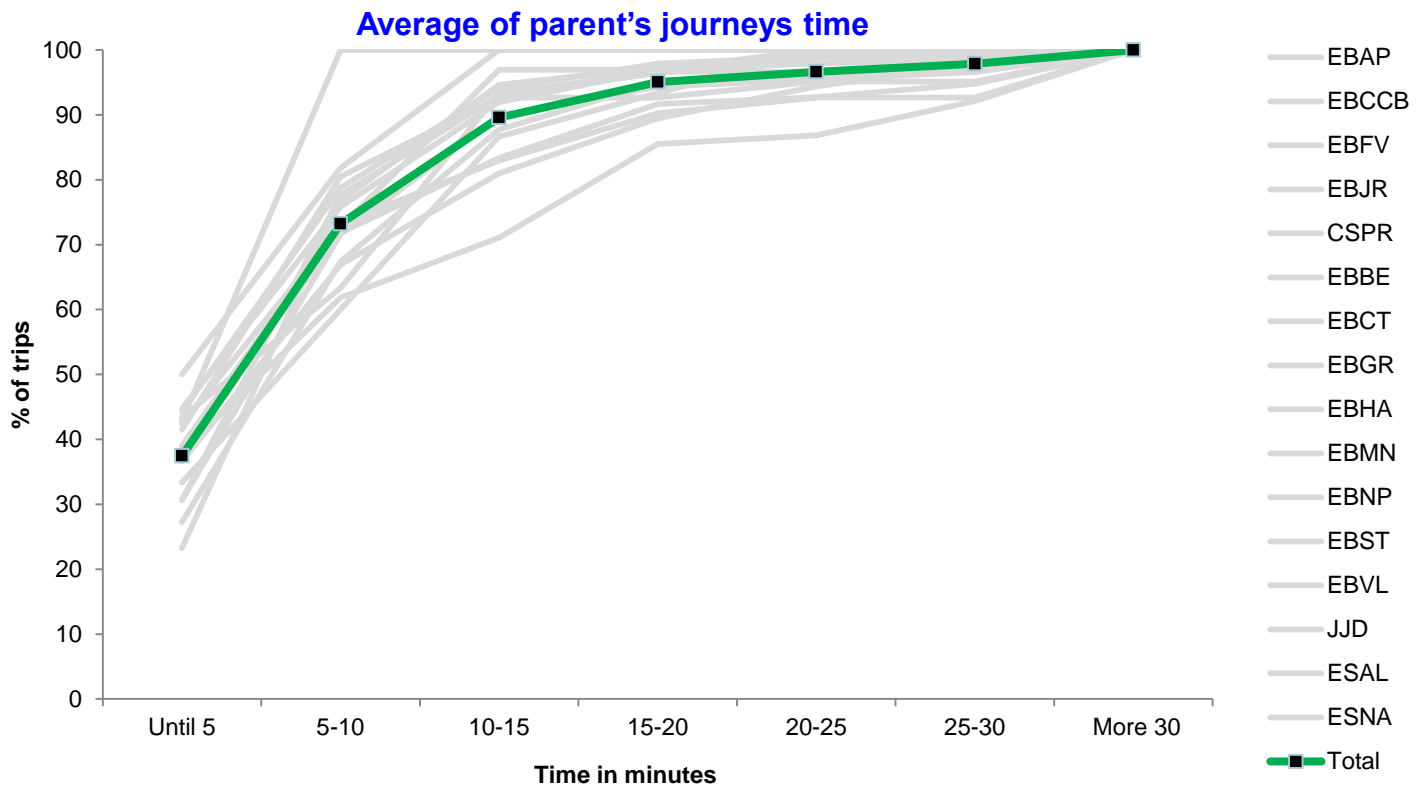
Percentage of trips by school



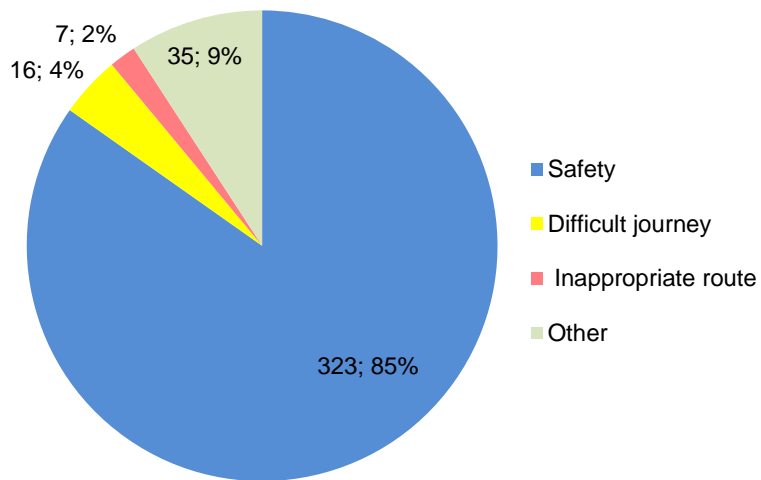
Home to school journeys by school grade



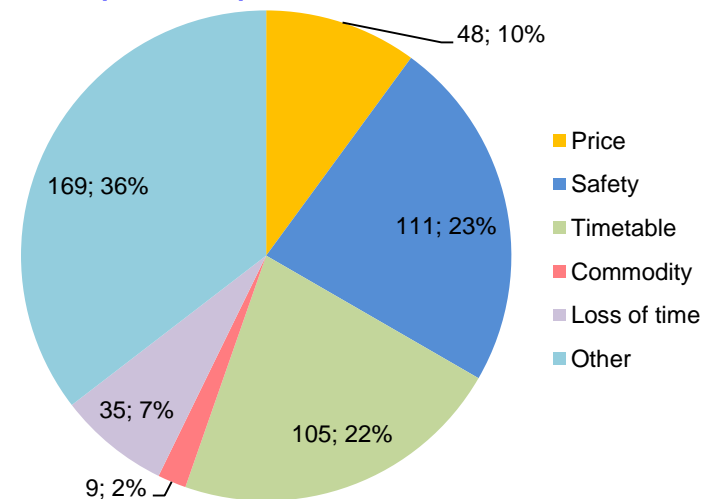
■ Bike
 ■ walking
 ■ Private car
 ■ Bus
 ■ Other



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



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



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



AL CUMPRER FACTOS QUE TALVEZ NÃO CONHEÇAS...

O sustentabil que contribui para a saúde e o bem-estar não se trata de evitar a carne, mas sim de evitar a carne vermelha e a carne de porco. A carne vermelha e a carne de porco são as principais fontes de gordura saturada e colesterol, que aumentam o risco de doenças cardíacas e diabetes.

De acordo com a Organização Mundial da Saúde (OMS), a ingestão de carne vermelha e de porco deve ser limitada a 500g por semana. Isso significa que você pode comer até 100g de carne vermelha e de porco por dia.

Além disso, a ingestão de carne vermelha e de porco está associada a um maior risco de câncer de cólon e de próstata.

Portanto, para manter a saúde e o bem-estar, é importante limitar a ingestão de carne vermelha e de porco e optar por fontes de proteína mais saudáveis, como peixe, aves e legumes.

CONVERSAS PARA O JANTAR COM OS FILHOS E SOBRINHOS...

Como explicar as alterações climáticas?

As alterações climáticas são causadas pelo aquecimento global, que é causado pela liberação de gases de efeito estufa na atmosfera. Esses gases retêm o calor na Terra, tornando-a mais quente.

Podemos evitar as alterações climáticas? Sim, podemos! Existem muitas coisas que podemos fazer para reduzir a liberação de gases de efeito estufa e combater as alterações climáticas.

Algumas das coisas que podemos fazer são:

- Reduzir o uso de carros e optar por transporte público, bicicleta ou caminhada.
- Consertar lâmpadas e eletrodomésticos para economizar energia.
- Reciclar papel, plástico e vidro.
- Plantar árvores e cuidar das plantas.

Como explicar a importância de reciclar?

Reciclar é importante porque ajuda a reduzir a quantidade de lixo que vai para os aterros sanitários. Isso ajuda a reduzir a poluição e a economizar recursos naturais.

Além disso, reciclar também ajuda a reduzir a quantidade de energia necessária para produzir novos produtos. Isso ajuda a reduzir as emissões de gases de efeito estufa e a combater as alterações climáticas.

SITES COOL QUE PODES VISITAR

- www.partner.pt
- www.bikefriendly.org.uk
- www.gobike.org.uk
- www.parkeurope.org
- www.mountainbike.net
- www.bikefriendly.org.uk
- www.bikefriendly.org.uk
- www.bikefriendly.org.uk
- www.bikefriendly.org.uk
- www.bikefriendly.org.uk

UM CARRO A MENOS

BE COOL!

Conhece para a sustentabilidade? Mostra-te no trabalho de um futuro mais sustentável! Dá-nos a tua pegada ecológica!

Programa Qualidade Ambiente

"A vida é como andar de bicicleta, é preciso estar em constante movimento para manter o equilíbrio."

Albert Einstein

Se Einstein hoje fosse vivo diria também... Andar de bicicleta é essencial a uma vida saudável e a um ambiente equilibrado.

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.

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)

Scientific 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 technical and scientific national and international Reviews
Guidelines and technical recommendations
Project Reports

Thank you for your Attention!