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## **Safe cycling for everybody**

## **Abstract**

Cyclists represent 49% of all injured in traffic accidents in Odense. This is due to a very high share of bicycle trips, rating from 15 to 50% in various districts. Cyclist safety has the highest priority both to protect cyclists, but also to motivate more people to cycle. 80% of the school children walk or cycle to school and the ambitions are to keep this high share.

Most cyclists in Odense don't use bicycle helmets, but recently this has started to change. Through the last decade cyclists from the age of 14+ have 10-doubled their use of helmets, which now has reached a level of 10%. Also children have doubled their use in the same period and today 90% use helmet. In 2004 the bicycle helmet campaign was developed. The strategy was not to tell people that the helmets were smart, but rather to give cyclists a good offer just when they needed it most – at the hospital. All wounded cyclists are offered a 50% discount on a helmet for personal use. They can choose between 20 models in different sizes and colours. 1800 cyclists get this offer each year.

The development of an interactive cycle simulator for children was started to supplement other training activities. The simulator is based on short video sequences on a web site, which allows children to train difficult situations in the traffic without getting hurt. The system doesn't focus on traffic rules, but on the unpredictable and dangerous traffic situations that cyclists get into. Statistics from the system give clear feedbacks on their abilities and give important information to the teachers and the parents. The system is going to be transferred into other national versions in Italian, Swedish and Flemish.

# Paper

Odense is appointed as the national cycle city in Denmark and many cycle initiatives have been established during the last 10 years.

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## Cycle helmets

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**Figure 1: Icon from the cycle helmet campaign.**

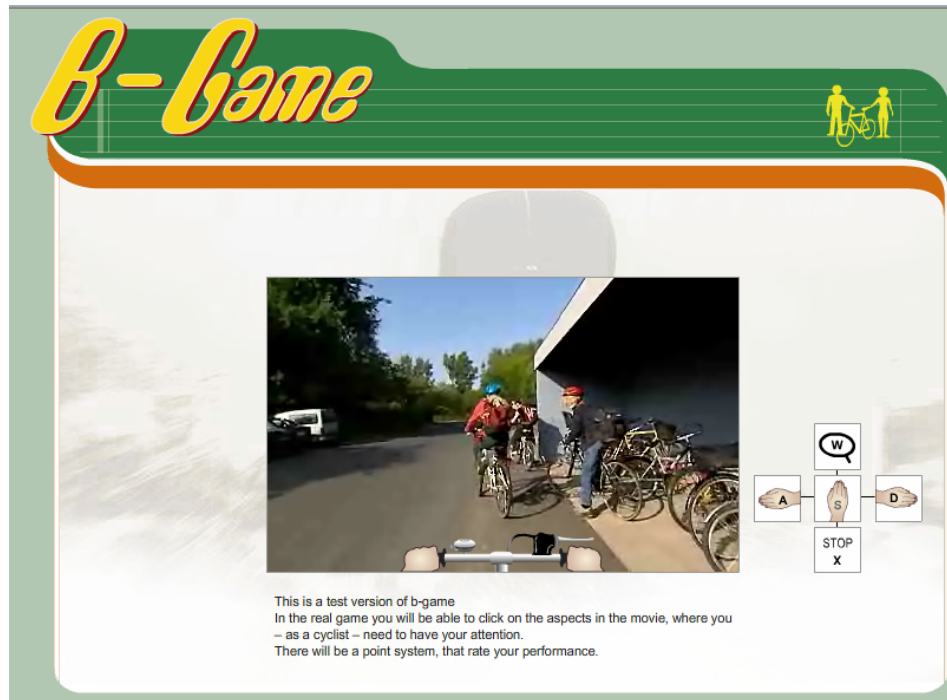
The cyclists can choose between 20 models in different sizes and colours. 1800 cyclists get this offer each year.

## Interactive cycle simulator

The development of an interactive cycle simulator for children was started to supplement other training activities.

The simulator is based on short video sequences on a web site, which allows children to train difficult situations in the traffic without getting hurt. The system doesn't focus on traffic rules, but on the unpredictable and dangerous traffic situations that cyclists get into. The child would need:

- Attention
- Concentration
- Foresight



**Figure 2: Test version of the cycle simulator.**

B-Game is an edutainment game, where the child is cycling through 11 different fields with an increasing level of difficulty. The game is designed with plateaus and the child gets points in reward. The film sequences are made from a cyclist's placement with a handlebar in front.

On his way through the city the cyclist is supposed to click with the mouse to identify potential risks in the traffic. He can also choose to give signals for turning and stopping or to turn his head.

While cycling the pictures are accompanied by realistic sounds.

The target group is chosen to be 12 year old children because:

- They've got a bicycle.
- They can cycle well.
- They have knowledge of rules for cyclists.
- Sometimes they would like to cycle on their own.
- They're taking the national cycle test.
- They are able to learn through computer games.

The game has been set up according to certain demands:

- The child needs to identify himself with the role
- The child must feel well-informed on traffic safety and advantages of cycling
- The child needs to feel fascinated by the interaction between his attitudes and the reactions in the play.

The game runs without stops until the child would choose to change attitude. This gives a more realistic simulation of the real life situations.

The game will be provided for all 50 schools in Odense and the target is to reach at least 90% of children by the age of 12 years.

The story line in the game is that the child should meet someone downtown at the cinema and takes his bicycle to go there. Inbetween every section of the game the child would receive a SMS with information about where he should go. At the start he can choose his bicycle, a helmet and a mobile phone.

The game takes the child through a number of different situations:

- To pass a number of parked cars
- To turn left at a traffic light
- To pass a roundabout
- To watch right turning trucks
- Etcetera

Statistics from the system give clear feedbacks on their abilities and give important information to the teachers and the parents.

The system is going to be transferred into other national versions in Swedish and Flemish.

The project is co-funded by the European Commission in the frame of Civitas projects.

## Referencing

### Website

[www.cyclecity.dk](http://www.cyclecity.dk)

### Website

[www.civitas-initiative.org](http://www.civitas-initiative.org)