**European Transport Safety Council** 





# **STARS Project**

Final Report - Latvia

Marta Umule

Mikus Vareika

Riga, February 2013

## **Table of Contents**

INTRODUCTION	3
FAILED IDEA	4
THE ORIGINAL IDEA	9
CONCLUSION	11

#### **INTRODUCTION**

Unfortunately, we have to start with bad news – our project is not implemented yet. Idea that we had after the original one was denied by Riga City Council Traffic Department. Details are given later in the report.

Last February we were in Brussels along with other 10 groups of two people. Within the STARS project we had five quite intensive days of learning process. Everything was very well organized; our task was just to be on time. European Transport Safety Council (ETSC) members had their own made presentations, mostly about global situation in road safety, biggest problems in different European Union (EU) countries and main goals to reach. Also each day some experts visited us and shared their specialty with us. We had lectures, practical group works and discussions about topics that influence road safety. We talked about both – technical aspects like speed and road construction, also physical importance in road safety.

All the time Ilyas Daoud (STARS project coordinator) guided us through the learning process, reminding us the things we should concentrate on and helped with our project development. We are really thankful to him and other ETSC stuff members who put in their work in us.

#### **FAILED IDEA**



This is where our chosen site starts. It is a one way urban road that here separates from other one way road with two driving lanes. Speed limit in this moment changes from 70 to 50 km/h giving drivers the first reason to exceed the speed limit while they are adjusting. But as it is seen the road is wide, also going downhill and confusing combination of signs are not slowing drivers down. Later comes junction with another one way road from the right side and because of a narrow angle their visibility is very limited. That is why vehicles going downhill should successfully adjust to the new speed limit about in a half of the stretch between these two junctions.

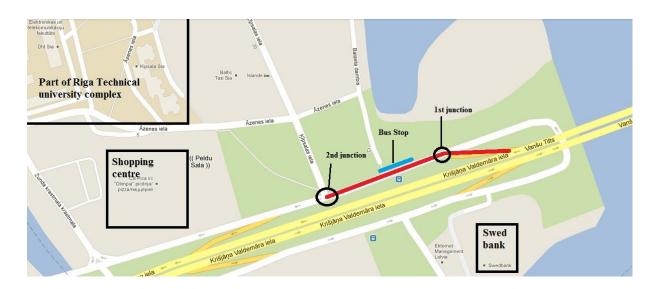
As for that we wanted to implement two things. One is to make driving lane narrower by painting horizontal road markings. It would feel drivers somewhat more tightly and as it is proven they would slow down. Another method would be perpendicular road markings (yellow in picture) as a reminder of speed limit change and a warning to turn attention on what is ahead.



The next steps would be to make traffic more organized after the junction by clearly dividing the road in two lanes and keeping them quite narrow. Also we wanted to separate the bus stop (first lane from left). We think that even these simple solutions would have obvious impact on speed and we could prove that with exact measurements before implementing next part of project (setting up traffic lights in the following intersection).

Unfortunately this was a part that couldn't be done because road construction legislation says that each driving lane where public transport goes must be at least 3.5 m wide. However in this stage road is just about 6 m wide (without the bus stop). The site has the space to make road wider but that would dramatically increase the costs.

Despite in real life vehicles here drive in two lanes, technically it is still one way road. Also this was the biggest obstacle for our project because it was very important thing to do especially next steps to be possible.





View in the opposite direction. Arrows show in which direction each lane would go. When heavy traffic about 900-1200 vehicles per hour would go straight and 300-400 later turn right.



In second junction of our site we wanted to set up traffic lights. It would momently have a huge impact on safety and practically eliminate possible vehicle collisions. Also pedestrians and cyclists would have their own "green" on crosswalk.

Signal in 1 <sup>st</sup> light	Period (s)	Signal in 2 <sup>nd</sup> light	Crosswalk
Green straight	0-87	Red	Green
Green straight + Green to right	87-111	Red	Red
Yellow + Green to right	111-114	Red	Red
Red + Green to right	114-116	Red	Red
Red + Green to right	116-117	Red and Yellow	Red
Red + Green to right	117-144	Green	Red
Red + Green to right (flashes)	144-147	<b>Yellow</b>	Red
Red	147-149	Red	Red
Red and Yellow	149-150	Red	Red

Green Totals: Straight 1min 51s; to the right 57s; 2<sup>nd</sup> light 27s; crosswalk 87s



Equipping this junction with traffic lights would really make it a lot safer for drivers coming from this side (600 per hour at peak) and making the right turn because then they would not have to give a preference to vehicles coming from left (often with speed 50 km/h or more and at times driving very chaotic).

Must mention that about 2000 students use this crosswalk each working day, going from bus stop (to the left) to many faculties` of Riga Technical University (to the right).

## THE ORIGINAL IDEA



The idea was to make this crosswalk more visible, so that drivers would pay more attention and it would be easier for them to react. Better visibility would let drivers slow down earlier if they see someone on the crosswalk or near.

The problem was that it would be more like a construction project not the one really concentrated on speed reduction. Reached speed reduction would minimal and very hard to measure, but surely it could have helped to avoid possible collision.





These were possible solutions for better visibility on crosswalk we wanted to implement in our site.

### CONCLUSION

- First of all we must admit that it was not the right time for us to participate in STARS project because we did not have the necessary time to put in project's implementation.
- ETSC and especially Ilyas Daoud did their best to help us but it was our lack of action as the main reason why our project still is not implemented.
- After canceling these two previously described ideas and having about 5 other options, we concluded that it is difficult to find a suitable site where speeding is obviously a problem.
- According to latest data by Riga City Council Traffic Department data there are 8 "black spots" in city. Five of them are junctions with left turn allowed and 3 crosswalks. Projects in these sites would be more like our original idea.
- Accidents with speeding and victims are more happening randomly on intercity roads usually when trying to overtake someone in wrong time and place. Exploring such places we concluded that usually there is no need to reduce the speed limit.
- In any case, we will continue to work on our project and inform Ilyas Daoud about how we do.
- We have contacted Mr. Aldis Lama (Road Traffic and Safety Department) who helped us with statistical data and Mr. Talivaldis Vectirans (Traffic Organization and Safety Division manager) about project implementation possibilities. He also said that if our project will be accepted they will implement it by themselves, however if it will be more expensive we will try to find and convince sponsors to help us.