



Eva Dijkema

Technical trainee

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Biography:

With a background in Industrial Design I like to creatively solve diverse en complex challenges. I have a big interest in innovation trajectories and I like to work on the development of new concepts and future visions, bringing those to reality by prototyping and testing. As a designer I always try to be ahead of innovation, looking for emerging technologies, materials and creative solutions for user needs and problems. As a technical trainee at ProRail I worked on serval innovation projects of which one is about “smart railway crossings”.

Title of presentation:

Using data to optimise safety and traffic-flow around railwaycrossings

Summary:

ProRail started the “smart crossing” project to research how we can use data to improve the flow of road-traffic around railway crossings and thereby make them safer. The project is divided into several subtopics.

1) ProRail partnered up with the in-car information application Flitsmeister to develop an in-car warning signal for approaching a railway crossing. The alert was implemented with all users of the Flitsmeister application (1,3 million) and resulted in some very positive findings. For example: People lower their speed when passing a railway crossing (in some cases up to 4-5 km/hr) and at unprotected level crossings people brake much earlier (25 meters).

2) ProRail started to develop an algorithm to predict when a level crossing will close and open. Having this information can lead to a better traffic flow when implemented in intelligent traffic lights or navigation applications like TomTom/Google maps/Waze etc. ProRail is also researching on how to communicate a level crossing failure externally. When a level crossing fails this means it is actually a road blockade for road-traffic. When cars somehow get this information during their ride they can decide to take another route or their navigation can lead them to another route. This leads to less dangerous situations around obstructed railway crossings.



3) One of the use-cases of using data to improve safety on railway crossings is to inform heavy goods vehicles better about the characteristics of a railway crossing. I will tell something about the use-case and what the opportunities are in this field.