

Transport Security Year 1

The project Transport security Year 1 has dealt with threats towards the transport industry. Dealing with anti-theft security, port security, dangerous goods, smuggling and terrorism the project aimed at the complete supply chain as the solutions for preventing threats to one link in the supply chain usually improves the situation for other links as well. The overall focus was anti-theft security and its effects on the different links of the supply chain.

The project has reviewed selected research projects related to transport security and did a situational analysis of the transport security situation in Sweden, Europe and Brazil. The situation analysis concluded that security does not sell very well. The incentives for haulers or forwarders in most European countries and in most transport segments are rather weak. The financial threats that could motivate investments in security are not enough for investments to take place. The haulers liability and financial risk is limited, often by the terms of delivery. Also, the potential financial risks are usually handled by insurance companies. Unless the transport buyers or governments demand higher security or the haulers' financial risk will rise, most security solutions will have to be sold offering added value in other terms than security. Added value could be higher efficiency.

The situation analysis also concluded that security training could be effective and by knowing how to avoid critical situations many incidents would likely not occur and by knowing how to behave if attacked, drivers could avoid injuries and suffering. Knowledge about how to behave in threatening situations would probably make the driver feel more secure and increase the chance of rational behaviour. Further concluded was that secure parking areas for trucks are not and will not be sufficient, probably for many years, if ever. Support of on board security systems could probably make insecure parking areas usable in a secure way.

The project further explored a theoretic transport scenario which covers a multimodal transport including ports, terminals resting areas etc. The scenario was designed to uncover the most common critical situations for road transports and was analyzed from attractive and dangerous goods transport security perspective. The analysis of the scenario, security risks and solution proposals was carried out during workshops. The workshop participants represented different parts of the transport chain and they gave their expert opinions and helped refining the scenario, ranked the security risks and proposed new security solutions and concepts.

According to the workshop results, the highest risks in the transport chain are the road transport, train transport and insecure overnight stops. The proposed security solutions list was topped by security training, geo locked trailer doors and remote immobilizer.

Commercialization and business aspects of security solutions were also in focus for the project. Conclusions related to the business aspects included that coordination problems exist in the Swedish market of transportation security. However the problems are thought to be solved by collaboration among industry actors. It was also noticed that haulers are more prone to invest in efficiency solutions rather than security and to make security investments interesting, it is vital to highlight the benefits of efficiency. It was also concluded that there could be an opportunity to initiate collaboration with insurance companies in order to negotiate premiums to improve the customer offer when selling trucks.

Objective

The project which could be described as a preliminary study had a main objective that was defined as “taking the first but important steps to create future solutions in order to reduce violence against drivers, reduce the threats against the cargo and reduce the effect on society caused by organized crime.”

It was decided that the projects main deliverable should be a report and the main objective was broken down to the following objectives:

- Provide short summaries of selected previous research projects carried out at Volvo Technology.
- Provide a description and an analysis of the current transportation security situation in Sweden and Europe with a complement from Brazil.
- Collect information in order to find the most critical parts of the supply chain.
- Collect information in order to find solutions that provide the most impact available, preventing transport related crime such as smuggling, terrorism and theft.
- Provide a business perspective for transportation security solutions.
- Provide input to coming research by supporting and pointing out critical areas where to focus future transportation security research.

Results and deliverables

The result and deliverable of the project is the report “Transport Security - Year 1”.

Project realization

The theoretic base was built by reviewing earlier studies and research projects performed at Volvo Technology. Further information was retrieved from other literature, academic - and statistic reports.

Also, a number of workshops with participants from diverse parts of the transportation and security industry were carried out. The objectives of the workshops were to:

- Assess the feasibility of a theoretical transportation flow that provides the model of which different kinds of criminal modus have been questioned.
- Estimate the risks of different types of attacks against transports of attractive and dangerous goods
- Propose solutions for how to avoid and what measures to take in order to prevent the transports from being attacked.

To collect individual thoughts and experiences not captured through the workshops some of the participants were interviewed shortly after the workshop.

The business aspects were investigated by supervising a bachelor thesis at the Department of Industrial Engineering and Management, Chalmers University of Technology.

Project outcomes

The report and conclusions made, compose the foundation for further research in the area of transportation security. Volvo and strategic partners have the intention to apply to the FFI programme for a sequel of the project.

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The Volvo logo is displayed in a bold, blue, sans-serif font.

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Publications and dissemination of results

- Workshop: Internal Volvo Technology, 2010-04-12.
- Presentation: ”Säkerhet kring transporter på väg - Idag och imorgon” given at Transport & Logistikkonferensen, 2010-05-06.
- Workshop: External participants, 2010-05-17.
- Workshop: External participants, 2010-05-24.
- Project Report: “Transport Security Year 1”, Authored by Volvo Technology, 2010.