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C.A.S.H.
Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region

Analysing Risks in the Transport Sector

This note gives an overview about Work Package 5 – Equipment, Safety and Risk – of the C.A.S.H. project with a brief presentation of recently achieved results. Additionally, it introduces the Institute of Business Logistics and General Management (LogU) as Work Package 5 leader and Hamburg University of Technology (TUHH). In the box below, it describes the relevance of the project for Hamburg and TUHH.

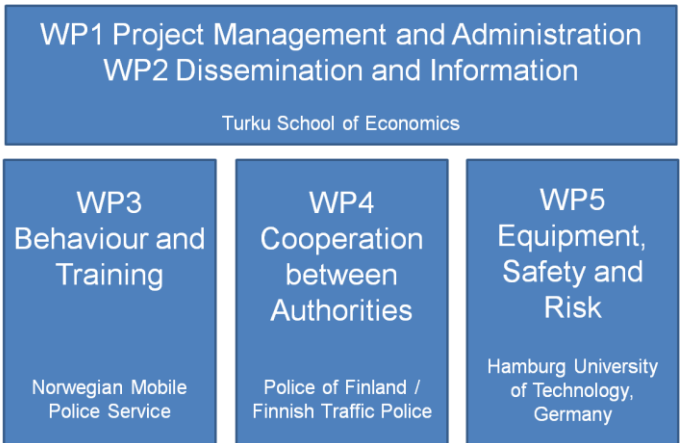

Fig. 1: C.A.S.H. project is divided into five work packages

Work Package 5 – Equipment, Safety and Risk

The aim of Work Package 5 – Equipment, Safety and Risk – is to support related equipment and risk analysis investments through equipment testing in practical use and through analytic work. This work package is not meant for the investments themselves, but to provide useful information for equipment and IT investments outside the project.

The work package is divided into three activities: (1) Equipment testing, (2) security issues, and (3) risk analysis methods.

These activities are led by the following coordinating partners and comprise the following sub-activities:

(1) Equipment Testing (Coordinated by the Finnish Police Technical Centre)

- Recommendations for the Baltic Sea Region (BSR) roadside checks
- Recommendations for the BSR road police corps when investing in up-to-date digital tachograph analysis
- Creation of a traffic police equipment database and a network of equipment experts in the BSR

(2) Security Issues (Coordinated by LogU in Close Cooperation with the Police Organisations)

- Plan for improved cross-border cooperation in procurement of Heavy Goods Vehicle (HGV) control equipment
- Plan for improved cross-border research and development (R&D) cooperation with HGV control equipment users, manufacturers and technology agencies

Hamburg – Hub of Logistics

Hamburg has traditionally been seen as a gateway to the world. With over four million inhabitants, Hamburg metropolitan region is one of the principal beneficiaries of globalisation and the opening of Eastern Europe. It is the North Sea's easternmost port city and at the same time the ideal seaport for Eastern Europe. As a global hub between places overseas, Central and Eastern Europe and the entire Baltic Sea Region, Hamburg benefits from being at the metropolitan heart of logistics goods flows in Europe. The campus of TUHH is located South of Hamburg's seaport, which is the largest in Germany and the second-largest in Europe.

Work Package 5 – Approach and First Results

(3) Risk Analysis Methods (Coordinated by LogU)

- Risk analysis methods and frameworks applied in HGV traffic control
- Recommendations for the BSR road police corps when investing in risk analysis IT solutions and related tools

In this note, activities 2 and 3 will be described in more detail. Figure 2 illustrates LogU's approach on how to compose an overall report to combine the results from both activities.

The report is the basis for recommendations for the Baltic Sea Region road police corps when investing in risk analysis IT solutions and related tools and enable them to cooperate in procurement of HGV control equipment.

Surveys about risk management and used equipment will be the basis for interviews with experts from police organisations, authorities, but also with logistics service providers, associations and manufacturing companies.

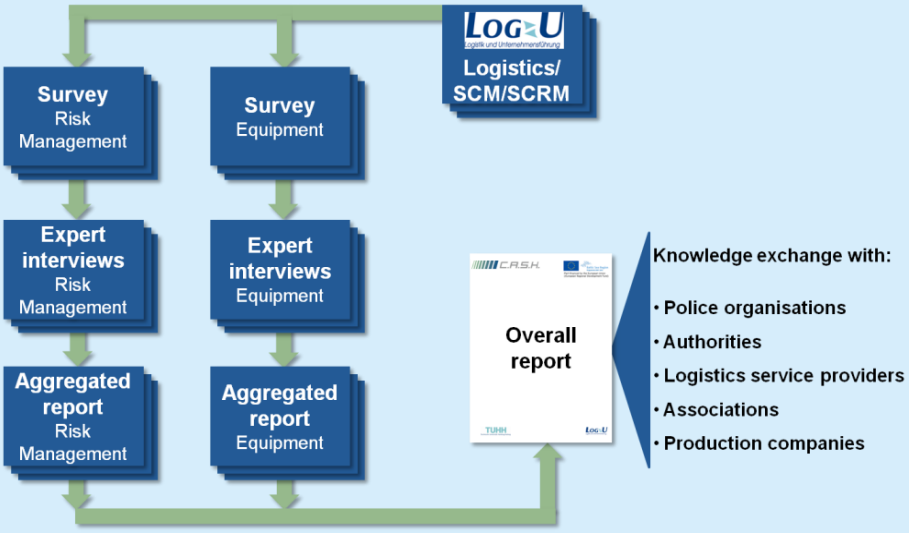

Fig. 2: Approach of Work Package 5

The main work package 5 activities in milestone 1 (September 2009 till March 2010) were to conduct surveys about risk management and used HGV control equipment. These activities were supported by literature research about supply and transport chains, risk analysis methods and strategies for risk mitigation. The activities in milestone 1 are the basis for all three categories of work package 5 (equipment testing, security issues, and risk analysis methods).

Survey about Used HGV Control Equipment

The survey about used HGV control equipment was conducted by the Finnish Police Technical Centre together with LogU in March and April 2010. Police organisations from Denmark, Germany, Finland, Estonia, Norway and Lithuania involved in C.A.S.H. replied to the questionnaire and gave very useful insights for the project.

The next step within work package 5 will be to interview experts on the field of risk management as well as on the field of HGV control equipment and IT systems. The results will be aggregated in reports about risk management and control equipment and later summarised in the overall report.

Survey on Risk Management and Preliminary Results

The survey on risk management was conducted as a web-based questionnaire in the period of February till April 2010. Up to now, LogU has been analysing 55 responses from producing, trading and logistics service providing companies. More answers are expected in the coming weeks. Figure 3 shows that the respondents rate risk management as an increasingly important topic.

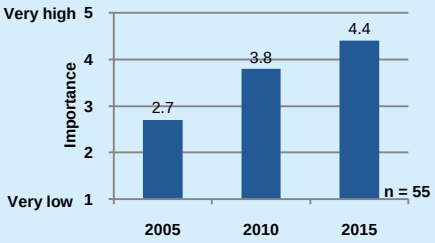

Fig. 3: Importance of Risk Management for the Supply Chain in the year 2005, 2010 and 2015

On a scale from one to five (one means very low and five very high importance) they rated risk management at present as 3.8 in comparison to 2.7 back in 2005 and 4.4 in 2015. This highlights that companies are interested in managing risks and that they believe that managing risks will become more important in the future. Furthermore, LogU analysed the relevance of certain transport risks for the logistics sector. Figure 4 shows that time is the most critical factor in the logistics sector followed by costs and quality. Quantity and Loss have been rated as least relevant regarding the five given risks.

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Baltic Sea Region Programme 2007-2013

Institute of Business Logistics and General Management

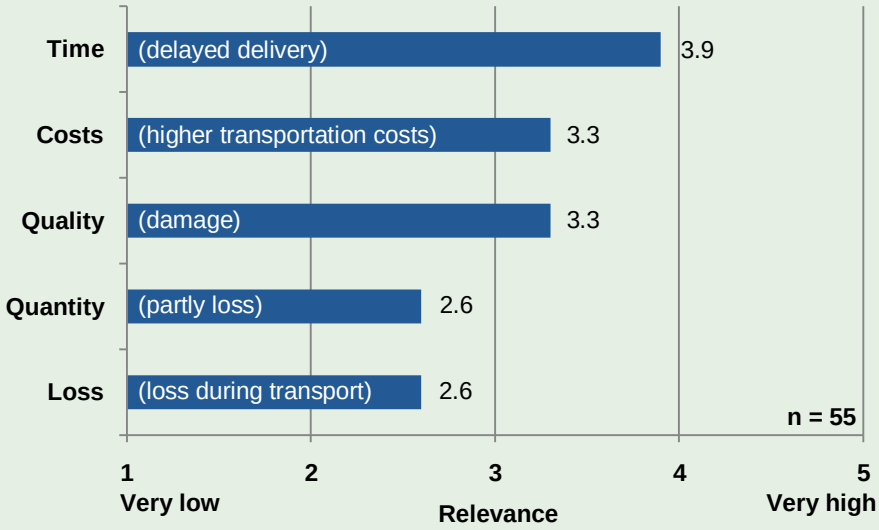

Fig. 4: Relevance of Transport Risks for the Logistics Sector

Time is a crucial factor in the international road transport and depends on effective and efficient traffic controls among other things.

Institute of Business Logistics and General Management (LogU)

At the interface of engineering and economics, LogU carries on application-oriented research and teaching in the areas of logistics, supply chain management and business management.

Professor Dr. Wolfgang Kersten is director of LogU at the TUHH. The institute has the responsibility to coordinate and manage Work Package 5 – Equipment, Safety and Risk within the C.A.S.H. project. The goal of the institute is to develop scientifically founded and practically realisable concepts through interdisciplinary research co-operations, as well as through intense collaboration and networking with manufacturing enterprises and service providers. LogU is part of the Production Management Section of the German Academic Association for Business Research (VHB).

The institute is also a member of the cross university research group for labour and management organisation (HAB). Furthermore, LogU actively contributes to the German Federation of Industrial Research Associations (AIF) to the German Association for Materials Management, Purchasing and Logistics (BME) as well as participates in the Logistics Initiative Hamburg (LIHH) and the German Logistics Association (BVL).

In the field of expertise in business logistics and general management, LogU focuses on the following research areas:

- **Logistics and Supply Chain Management (SCM)**
  Strategies, concepts and methods for SCM, sustainability concepts and initiatives in SCM
- **Supply Chain Risk Management (SCRM)**
  Risk management in (international) logistics, design configurations and strategies for introducing SCRM

Hamburg University of Technology (TUHH)

TUHH is one of Germany's leading universities of technology. The campus' internationality and interdisciplinary are appreciated by 100 professors and nearly 5,000 students. The university fosters collaborations with companies in the region. TUHH is a competitive entrepreneurial university focusing on high-level performance and high quality standards. The university is known for its innovation, has many years of expertise, especially in logistics, transportation systems and information technologies, and guarantees scientific excellence in research and academic excellence in teaching. The university offers 16 Master of Science programs in German and 11 in English. The management research is promoted by 12 institutes, the Institute of Business Logistics and General Management (LogU) being one of them.

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About the Authors

The research of the Institute of Business Logistics and General Management is focused on the current challenges of business practice. LogU cooperates with leading international institutions in the USA, Australia, Asia, Central and Eastern Europe in order to keep up with state-of-the-art research in its findings.

Since 2006, LogU has been annually organising the Hamburg International Conference of Logistics (HICL). The international conference offers researchers and practitioners a platform for actively exchanging ideas and discussing current issues in logistics and SCM areas. In addition, LogU has been organising the technical discussion panel at the NORTEC (Hamburg's Trade Fair for Manufacturing Technology) since 2000, in order to close the research gap between theory and practice.

Within the framework of the C.A.S.H. project, LogU cooperates with the Turku School of Economics as part of the University of Turku (Finland) and the Vilnius Gedimino Technical University (Lithuania) to enhance the knowledge transfer.

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