Ladies and Gentlemen,

Logistics is enjoying further development. To be able to satisfy the current and future challenges in the competitive world of productive industry, it is necessary to develop innovative solutions and to transfer research findings into practical applications. ISL has been involved in this task for six decades now and has earned recognition and success at a national and international level for its activities in this regard. Our project partners are well aware of the strategically important advantages they gain from the successful cooperation between industry and science.

Sixty years ago, logistics was primarily a function-oriented sector. The interest then was in optimizing inventories, the technical realization of isolated conveying systems, or the size of a company's own fleet of vehicles. Containerization was not in sight at the time. And information and communications technologies were limited to stationary telephones and telegrams. The situation since then has changed beyond all recognition thanks to technical and organizational innovations. So which developments will affect the logistics and the transport industry in the coming decades?

Today, the buzz words are self-controlled transport and logistics systems, cloud logistics and logistics clusters, cyber physical systems and smart grids, emulators and artificially intelligent agents, the dematerialization of the supply chain, and additive manufacturing. These topics also have an important influence on the current work being undertaken by ISL.

Today, it is more important than ever when undertaking these research and transfer tasks to marry a high level of scientific input to a strong degree of practical relevance. This approach is part of the founding objectives of ISL, and is something we bring alive in our day-to-day activities. The results of the projects achieved in 2013 confirmed our success in integrating this approach in our work.

As in the past, ISL has not only been active regionally and nationally in 2013, but has also enjoyed involvement in an increasing number of international projects. ISL is and remains a major source of innovation for maritime logistics in Germany and Europe. The Board of Directors would like to thank our project partners in this regard for the trust they place in us when we work on their behalf, and we would particularly like to thank our employees because the successful implementation of numerous research and consulting projects, and the transfer of the results into practical applications would not have been possible without their outstanding work.

In this research report, you will find a summary of our activities and projects, which are certain to awaken your interest. Please feel free to visit us at any time and to discuss the results of these projects at ISL, and to think about new ideas and concepts. I would like to use this opportunity to highlight some projects in particular.

At the end of the project time of three years, the consortium of the PreparedNET research project coordinated by ISL was able to successfully close the project in September 2013. The work concentrated on providing a software-based emergency concept to safeguard the flows of goods in freight villages and logistics hubs affected by unforeseen problems. The new PreparedNET Management Portal, which functions on the basis of a multi-agent system, now enables companies to dynamically control their remaining capacities and thus to safeguard the deliveries to their clients despite ongoing problems.

The SMITH research project which focused on improving the energy efficiency of passive temperature-controlled transport operations (such as liquid aluminium) was also successfully concluded in 2013. With the help of the developed hardware and software components, transport service providers in the low and high temperature segment are now able to monitor their goods continuously, at the same time as achieving savings for the necessary heating up or cooling down.

Against the background of the national competitiveness in the global freight markets, and the growing volumes of
transport involved, the consortium of the SMART SC project has been working since 2012 on making sustainable improvements in the communications structures of port-centric transport chains with the help of eBusiness standards. This includes considerations being made to take the first steps in the direction of a maritime-oriented cloud logistics system.

The Asian-German Knowledge Network for Transport and Logistics (AGKN) is currently being set up by us with the support of the international office of the BMBF. The topics looked at by this network involved innovative and sustainable solutions for the exchange of expertise and the planning of cooperative approaches for maritime logistics and hinterland transport.

On the basis of a range of studies, ISL continues to monitor market developments in the North Range ports and their hinterlands, so that we can inform our customers about all of the latest trends and any deviations from the forecast developments. The basis of this information includes the North European Container Traffic Model which has been in use for many years to analyse the container flows from and to the most important North Range ports, and another tool is the Global Port Tracker - North Europe Edition, which is regularly published jointly with Hackett Associates.

Another instrument in this context is the RWI/ISL Container Throughput Index which has been published monthly for over two years together with the Rheinisch-Westfälisches Institut für Wirtschaftsforschung. This index analyses global container traffic and provides reliable assessments on the development of global economic activity.

After a project period of three years, the ECSIT project was successfully completed in October 2013. This project was coordinated by ISL and initiated by the Senator for Economics, Labour and Ports in Bremen. New processes and technologies for scanning containers, which were developed with the aim of increasing security within sea port terminals, were presented at the Container Terminal Bremerhaven.

The EU project CASSANDRA which was continued in 2013, is another project involving security research. The objective here is to enhance security by optimizing the transparency of the already existing information. The 26 partners from 10 different European countries are jointly concentrating here on electronic data traffic with the aim of developing a new data sharing concept for companies and authorities on the basis of a risk-based approach.

Building on our successes in 2013, we will continue to rigorously pursue our research and transfer strategy for innovative maritime logistics. This strategy is largely responsible for maintaining ISL’s visibility, acceptance and reputation in its fields of research and consulting. Customer satisfaction, as well as the high quality and attractiveness of the research and science-based consulting services which ISL provides, are our highest priority.

H.D. Haasis
Univ.-Prof. Dr. Hans-Dietrich Haasis
Chairman of the Board of Directors
The Logistics Systems Department deals primarily with business and regional economic issues relating to the future of logistics. The core competencies of the department in this regard are the corporate system integration of intermodal transports as well as the analysis, configuration and evaluation of synergetic regional networks, such as freight villages and logistics centres. Other focuses lie on knowledge management and cooperation controlling, such as for logistics networks and supply chains, as well as on the process-oriented configuration of resource-efficient business models. Cooperative and competitive logistics solutions within companies, the supply chain, at specific locations, and in distributed production systems gain significantly in importance in this context. Innovative scientific approaches are analysed and further developed involving topics such as transport system integration, mobility, meso-logistics, competition, supply chain controlling, multi-agent systems or resource efficiency and green logistics.

Project partners include businesses involved in the maritime industry, trading, production, and logistics companies, as well as the EU, the Federal government, the Federal states and municipalities. Via this department, ISL is also involved in the Via Bremen Logistics Network, as well as in the Bremen Research Cluster for Dynamics in Logistics (LogDynamics) at the University of Bremen. Professor Haasis here is the Chairman of the International Graduate School. A cooperative young scientists group was also established in 2013 between the University of Bremen and ISL as part of the Excellence Initiative. This young scientists focuses on “Computational Logistics” within the maritime logistics sectors. Furthermore, this department has involved ISL for several years as a research unit working on behalf of the Federal Logistics Association (Bundesvereinigung Logistik, BVL) and the Organization of Transport Business Economics and Logistics (Gesellschaft für Verkehrsbetriebswirtschaft und Logistik, GVB).

Selected projects and activities in the main research areas pursued by the department in 2013:

MULTIMODAL LOGISTICS SOLUTIONS AND MARKETS
The work undertaken looking at this aspect involves the development, analysis and evaluation of multimodal-centric procurement and distribution logistics solutions. Simulations are also carried out in cooperation with the Optimization and Simulation Unit of the Information Logistics Department. Multimodal logistics products are investigated with respect to their design, calculation, cost sharing approaches and system integration. The results are communicated internationally via cooperation with the European Intermodal Association (EIA).

At the end of the three-year duration, the consortium of the research project PREPAREDNET - Agent-based Simulation and Research of an Emergency Concept for the Protection of Sensitive Logistics Hubs can look back on a successful conclusion. This project was funded by the Federal Ministry for Education and Research as part of its national security research programme, and coordinated by ISL. The results were presented to around thirty participants in the Situation and Command Centre of the University of Applied Sciences in Bremerhaven in September 2013. The main focus of this presentation was a live demonstration of a management portal developed for companies involved in freight villages and logistics hubs and using a multi-agent system.

The core of this system is preparing a software-based emergency concept to maintain goods flows after unforeseen problems within logistics hubs. Problems of this kind can arise for instance from damage to tracks and points, shutdowns of vehicle facilities, or traffic accidents on important feeder roads. The PreparedNET Management Portal now helps companies to dynamically plan and control the remaining transport, transshipment and handling capacities within the logistics agglomeration, and thus ensure that deliveries are still made to their customers despite ongoing problems. The emergency concept enables emergency operations to be
initiated immediately an incident causes problems, and also in the event of a significant shut down in operations.

Freight villages and logistics hubs play an important part in supplying goods within Germany’s infrastructure. A freight village brings together and networks different modes of transport (e.g. road, rail, waterways) and different players. The players include haulage companies, warehouse operators, service providers, and logistics-centric industry and trading operations. The associated complexity is increased further by the growing volumes of goods being transported and the enormous variety of the freight moving from A to B. A serious incident within a freight village can give rise to regional, national, and even international production shut downs and supply shortages for industry, the trading sector and the inhabitants.

To demonstrate how the developed web-based system functions, a scenario was selected based on an actual situation which occurred in the freight village Bremen in autumn 2011: a problem with the rail links caused by a collision between two freight trains. The new PreparedNET Management Portal actively informs the users about the accident and the associated consequences for their goods flows. The system based on multi-agent technology then assists the users in their efforts to maintain the flow of their goods by implementing the dynamic planning and control of their remaining capacities. Additional companies were integrated within this scenario to realistically simulate the complexity of balancing the demand and supply of the logistics capacities of the individual companies within the freight village. Moreover, additional information on the development of the problem was displayed on the interface of the demonstrator to enable the strength of the system to be demonstrated even when cascading scenarios are involved, for instance, delays in the recovery of a train as a result of unforeseen complications. In the actual incident in 2011, it took several hours for the players to initiate the first emergency operation process. By way of contrast, the new Management Portal takes only seconds to reveal which companies are affected by the actual incident, at the same time as providing specific suggestions for solving the problem. The users can then utilize the recommendations made by the system and the web portal to flexibly communicate and negotiate amongst one another to provide the necessary transport and transhipment capacities - in other words, to take advantage of other players and means of transport to maintain the capacities required depending on the supply and demand, and ultimately to avoid any supply shortages.
The participants at the closing meeting were convinced that the agent-based methodology, combined with the web-based interface, was the right course to take to implement emergency concepts at logistics hubs, and were very positive in their assessment of the development of the portal. Thanks to the structure of the application used and standardized during the course of the project (DIN SPEC 91291), PreparedNET can be integrated without any problem in new logistics agglomerations, and can become a crucial location benefit by boosting the resilience of the logistics chains.

» www.isl.org/research
» www.preparednet.isl.org

New logistics challenges also arise within the context of the logistics for offshore wind farms associated with the specific influencing parameters on the management of supply chains, such as changes in schedules caused by meteorological influences, as well as the restricted availability of resources which are either in short supply or highly expensive. To determine the consequences of various problems affecting supply chains, and to enable the evaluation with respect to achieving logistics objectives and the use of resources, ISL has a simulation tool which visualizes the whole marine and onshore logistics chain.

The economic findings reflect the improvement in planning security, the transparency of the logistics processes involved, and the ability to estimate project risks. The simulation can incorporate the subcontracting companies upstream of the production and transport processes, as well as the incoming, outgoing and transhipment processes taking place in the ports, or taking into consideration cost, time, and problem parameters, as well as shortages. This tool is continuously further developed to handle a wide range of operating and strategic aspects, and has already been used successfully in the cooperation projects with business partners such as EnBW for offshore wind farms in the North Sea and the Baltic Sea. There are also plans to extend its coverage in this field to include security research by investigating possible threats to offshore wind farms and the resulting measures.

» www.isl.org/offshore

The Financing Infrastructure for Transport and Logistics within the Northern Dimension project was successfully concluded in March 2013. This project was managed by the University of Technology in Lappeenranta, and implemented by ISL, the Graduate School of Management in St. Petersburg, and the Higher School of Economics in Moscow. The client was the Northern Dimension Institute and the project was financed by the Foreign Ministry of the Kingdom of Norway. The objective was to capture and present in the form of case studies the types of transport financing infrastructure used by the member countries of the northern dimension, in other words, countries bordering the Baltic Sea, plus Norway and White Russia. A particular focus of this work was cross-border transport infrastructure projects. The results were compiled within a guidebook.

» www.ndinstitute.org

MESO-LOGISTICS AND COOPETITION

In cooperation with Deutsche GVZ-Gesellschaft (DGG), which is also spatially integrated within ISL, this specialist area looks at projects on location logistics, the development of freight villages, and logistics-oriented clusters.

The research project Freight Village Climate Protection Benchmarking funded by the Federal Ministry for the Environment, was one of the priority projects looked at by this area in 2013. The objective is to identify the best solutions with respect to sustainability at German
freight village locations on the basis of a comprehensive survey. This involves establishing a success database containing information on various categories of measures including buildings, resources, vehicles, organization, energy consumption and intermodality. The key findings will then be passed on to the freight village community. Distributing best practice takes place via numerous measures including road shows, workshops, papers at conferences, and the dedicated website in particular.

» www.isl.org/research
» www.gvz-klimaschutzbenchmarking.isl.org

In addition, the research project Security Strategy for Freight Transport undertaken on behalf of the Federal Ministry for Transport, Building, and Urban Development, was successfully concluded at the beginning of last year. This involved elaborating for the first time a pan-modal concept to safeguard the logistics industry in Germany. The project was a direct implementation of measure 1D (Security Strategy for the Freight Transport and Logistics Industry) of the German action plan Freight Transport and Logistics.

ISL opened up the growing Turkish logistics market for the first time at the end of 2013 with a cooperation agreement for the Logistics Centre / Freight Village Trabzon. The consulting services provided for this project include market and location analysis, and particularly, the specific master plan for the freight village.

Furthermore, DGG worked together with ISL on three consulting projects in 2013. These include the Development Concept for Freight Villages in Germany project, the Master Plan Freight Village Kaluga Russia project, as well as the EcoHubs EU project.

» www.gvz-org.de
» www.ecohubs.eu

GOVERNANCE AND LEADERSHIP

Governance and leadership are important configuration elements in modern and innovative corporate governance. In addition to approaches involving knowledge management and corporate governance, this research focus also investigates planning and controlling approaches for companies working cooperatively within network structures.

Against the background of the national competitiveness in global freight transport, and the continuously growing volumes of goods being transported, the joint project SMART SC - eBusiness Standardization in the Maritime Supply Chain, funded by the Federal Ministry for Economics and Technology, has been focused since 2012 on achieving sustainable improvements in communication structures within port-centric transport chains. The aim of the project is to boost the efficiency of the existing logistics processes across the whole container-relat-
ed value chain involved in imports and exports by the pan-company use eBusiness standards.

With the aim of improving the efficiency of physical processes such as transport, transhipment and warehousing, the information, communications and transaction paths, accompanying the flows of goods are to be harmonized. In addition, the exchange of data, information and documents between the companies involved in the supply chain is to be handled more efficiently and with a much smaller error ratio.

The first milestone was reached in April 2013 with the completion of a demand analysis, the evaluation of a company survey, and the specification of the sought-after eBusiness solution. The consortium’s ongoing tasks involve the development and implementation of a data mediator, the implementation of a supply chain event management module, the development of mobile components for trucks, as well as undertaking an economics and sustainability analysis of the solution on the basis of the defined specifications.

A research network of scientists from Germany, Vietnam and China is currently being established with funding from the International Office of the Federal Ministry for Education and Research. This network looks at innovative and sustainable solutions for exchanging know-how, and planning cooperative approaches in maritime logistics and hinterland transport systems. The permanent establishment of the Asian-German Knowledge Network for Transport and Logistics (AGKN) research consortium co-initiated by ISL opens up many opportunities in this context for closer cooperation between scientists and experts from companies. A feasibility study on the theme-related continuation of this research structure is aimed at to provide the players involved in the AGKN network with an overview of the establishment of a permanent and independent association model. The aim in this context is to highlight the already existing forms of institutionalization within the research community, and to develop and implement an “Association of Asian-German Knowledge Network for Transport and Logistics” in dialogue with the partners involved.

For this project, the Chinese-German Centre for the Promotion of Science in Beijing provided ISL with establishment support for the second time in 2013 for the planning and implementation of a scientific conference on green and secured logistics in Nanning.

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SUSTAINABLE PROCESSES AND STRUCTURES

This research area investigates logistics processes and structures involved in the interaction between production, trading, and logistics, from the point of view of sustainability research. The focus here is primarily on green and secure transport planning and control.

The SMITH - Energy Efficient Supply Chain Management using Expert Systems for Passive Temperature-controlled Transport Processes project funded by the German Ministry for Education and Research was successfully completed after running for two and a half years. The project focused as a typical example on Aleris Recycling GmbH and the energy efficiency of the passive temperature control involved in the transport of liquid aluminium by this company. The liquid aluminium and the appropriate transport containers must be heated up in such a way in advance that the product is supplied to the clients at the proper processing temperature. The adjustment of both of these temperatures by the load-
ers is often just based on experience taking into consideration data such as transport duration, the condition of the transport crucible, and the weather conditions.

To ensure that the temperature does not drop below the necessary processing temperature when it is delivered, the molten aluminium, and the transport crucible which keeps the aluminium hot, are frequently heated up to a unnecessarily high temperatures. This results in the negative energy efficiency which is often typical of passive temperature-controlled transport operations.

At Aleris’ production facility in Grevenbroich, the project consortium coordinated by ISL presented the very promising findings in September 2013, and demonstrated the expert system it had developed consisting of hardware and software components. The hardware involves a radio control unit with the appropriate sensors, which measures the temperature of the aluminium during transport as well as the relevant environmental data such as air temperature and air humidity. The radio sensors involved are extremely rugged with a solid cast construction, and therefore protected from all harmful influences. They are therefore particularly suitable for the tough operations involved with all transport and commercial vehicles. The associated software is able to forecast the optimal departure temperature of the liquid aluminium before transport on the basis of the environmental data which has been collected and by taking into consideration the customer’s specifications. Companies and transport service providers in the low and high temperature sectors can use this expert system in future to help them intelligently monitor their goods throughout the whole transport process, as well as achieve savings for the heating up or cooling down of the goods required in advance prior to the passive temperature-controlled transport.

On the basis of around four hundred journeys which have been analysed, the use of the system arising from the SMITH project has led to a reduction in costs and CO₂ emissions of up to 10.9% taking into consideration the assumptions made and the current prices for gas and CO₂ certificates.

» www.isl.org/research
» www.smith.isl.org
The Maritime Economics and Transport Department advises clients from the areas of politics, business and administration on matters relating to shipping, ports including their hinterland and shipbuilding operations. In-depth analyses of influencing factors and interdependencies as well as the development of forecasts for the markets of the maritime economy serve as a basis for the work in this field. The ISL experts also compile concepts for transport policy on a regional, national and international level and develop qualitative and quantitative approaches for infrastructural transport planning and modelling for surface and maritime transport within the framework of projects.

Overall, the department has access to a wide spectrum of databases and information services for the statistic analyses and forecasts as well as the diverse consulting services based on in-depth market information. In addition to economic factors, ISL also deals with issues in the area of shipping and the environment to an increasing degree.

Selected projects and activities involving the department’s main areas of activities in 2013:

**MARKET STUDIES AND MARKET MONITORING**

ISL continuously monitors the market development in the North Range ports and their hinterlands within the framework of various studies, publications and projects. With this background, ISL can quickly inform its clients about the latest trends, and any deviations from previously expected developments. These assessments are based on various analyses including the North European Container Traffic Model, which has looked in detail for many years at the container flows from and to the most important North Range ports, and which is a key data source for hinterland transport. Another report is the Global Port Tracker - North Europe Edition, which is regularly issued together with Hackett Associates.

» www.isl.org/nectm
» https://shop.isl.org

Another instrument is the RWI/ISL Container Throughput Index which is published every month together with the Rheinisch-Westfälisches Institut für Wirtschaftsforschung, and which analyses the development of global container transports. The index can be used to produce reliable assessments of the development of global economic activity because international trade is largely handled by the global ports via marine shipping and container transhipment. ISL incorporates in this report information continuously collected from 72 ports which handle around 60% of global container transhipments.

» www.isl.org/containerindex

In addition, ISL also has a system for the standardized elaboration of customer-specific market reports and concise studies covering different aspects of marine shipping (containers, tankers, bulkers, multi-purpose ships, platform suppliers, cruise liners, car carriers, ferries, etc.). Another key aspect is a Data and Estimation Model for Global Container Transport designed for complex (multi-client) approaches focused on Europe, and which encompasses the following market segments: deep sea and short sea transport services, and hinterland and transhipment regions.

**PORT AND SHIPYARD DEVELOPMENT**

One of the main aspects with which the department concerns itself is acting as a consultant to ports and shipbuilding organizations. Research was started in summer 2013 looking at the feasibility for an additional container terminal in Wilhelmshaven, and thus the potential further expansion of JadeWeserPort. ISL to-
together with ISL Applications GmbH won the tender for analysing the demand, cost-benefits and operational terminal design. The market position of Wilhelmshaven with respect to hinterland and feeder transport was determined on the basis of the North European Container Traffic Model. Together with the latest overall market forecasts, this enables the potential for the development of transhipment in Wilhelmshaven to be estimated. When combined with other information, this provides a plausible point in time for the commissioning of additional capacities as well as their dimensioning.

The Observatoire des Coûts de Passage Portuaire project was acquired jointly with MLTC Maritime Logistics and Trade Consulting (Paris) and SBC Shipping Business Consultants (Madrid) and is concerned with the detailed monitoring and determination of port docking costs in various European ports. This involved ISL investigating ports in northwest Europe as well as the Black Sea region. The aim of this project being undertaken on behalf of the French Ministry for Ecology, Sustainable Development and Energy is to determine the competitiveness of French ports in a range of cost categories as well as to identify best practice.

Two other projects are concerned with shipping company strategies to supply the Baltic Sea region. The traditional structures for supplying the Baltic Sea region have been shaken up by the use of feeder ships with up to 4,000 TEU, as well as direct shipping to Gdansk in Poland by the Maersk Far East Service AE1/AE10. The impacts of these new strategies on the ports in the North Range and the Baltic Sea region are being investigated, and assumptions are being derived on the development of the supply strategies for the Baltic Sea region covering a range of scenarios on the basis of scheduled service calculations.

An analysis of the potential of the North East Passage was undertaken on behalf of a North European port. ISL looked here at various aspects including the economic, technical and legal frameworks for the use of these shipping routes, and derived potential implications for the Northwest European ports on the basis of a range of scenarios, as well as assessing the benefits from the point of view of the shipping companies.

As part of the Macro-economic Development and Multi-modal Cargo Flows of the South-Eastern Baltic Sea Region project of the EU’s INTERREG Baltic Sea Region Programme, use was again made of the Container Traffic Model. Specifically, this concerned compiling the hinterland transport flows to the Baltic ports, and assessing the impact of the existing macro-economic forecasts on this hinterland transport and the modal split in the region. One aspect also focused on White Russia.
An order for the renewed updating of a study was received in early 2013 concerning the expected transport volumes and vehicle movements due to the port operations in Bremerhaven and the resulting impact of the traffic on the Cherbourger Straße. This study incorporated the latest changes in transhipment volumes, existing infrastructure modifications, and the effects of probable capacity restrictions on the various hinterland transport modes. Special attention was given to the probable capacity restriction affecting rail transport and the consequences for this modal split.

SHIPPING AND SHIPPING POLICY

The shipping experts at ISL have regularly undertaken an analysis of the heavy lift and project cargo market for some time now, and prepare a report on the development of the fleet of heavy lift ships and the markets for industrial goods which have a high probability with respect to the shipping of larger cargo units in the sense of project transport. In addition to intense research on the development of the fleet and the order book using information provided by IHS Fairplay and Clarkson Research, with the aim of gaining a true insight into the fleet development and its specifications; work also involved a global investigation of the development of orders in sectors including the offshore industry, power plant construction, the construction of chemical plants, and refineries, pipeline construction, port construction, and a large number of other sectors. This information was then used to assess the development of the demand for project cargo and heavy lift shipping capacities.

Back in 2012, ISL already had overall responsibility for a comprehensive feasibility study for establishing a second ferry line in Timor-Leste, a project which was financially supported by the Federal Republic of Germany. Against the background of improving the infrastructure, integration and social conditions within the country, this feasibility study not only looked at the application possibilities, but also the technical and economic feasibility of the second ferry line, as well as the ship design, port construction and organization. The feasibility study concluded that the country’s development objectives would be better served by constructing a new road.

The BSR InnoShip - Baltic Sea Cooperation for Reducing Ship and Port Emissions through Knowledge and Innovation-based Competitiveness project which was part of the INTERREG Baltic Sea Region Programme of the EU, and which involved 18 partners from research institutes, port cities, and port administrations, was completed at the end of 2013.

EU TRANSPORT POLICY

In addition to some smaller EU projects, the Maritime Economics and Transport department was also involved as a partner in other projects concerning the EU Commission’s 7th Research Framework Programme. These projects usually run between two to three years, and are implemented at a European level with close cooperation between industrial companies and institutes involved in policy making and administration.

ISL is involved in a Multiple-Framework-Contract with the European Parliament together with a Belgian and a French partner. This framework agreement is extended automatically by one year if not terminated by any of the contractual parties. The contract is scheduled to end in summer 2015.
Within this context, ISL also provides assistance for parties making applications for the MARCO POLO II Programme as well as the TEN-T Programme of the EU Commission. For instance, an application was elaborated for MARCO POLO Programme funding for a port hinterland project for companies from the maritime industry, and an application was also formulated for a Northwest European port requesting funding for a feasibility study as part of the TEN-T Programme.

SHIPPING AND THE ENVIRONMENT

The aim of the H2OCEAN - Development of a Wind-Wave Power Open-sea Platform Equipped for Hydrogen Generation with Support for Multiple Users of Energy project which is part of the 7th Research Framework Programme of the EU Commission, is to develop a wind-wave platform to generate energy in the open ocean.

The project runs for three years and involves a total of seventeen partners, of which six are research organizations, ten small to medium sized enterprises, and one major company.

» www.isl.org/research
» www.h2ocean-project.eu

As part of its work to simulate shipping emissions ISL has a model which visualizes shipping movements, which was developed jointly with the Information Logistics department. The simulation focuses estimating the movement of ships in ports, and simulating the time involved in the operational processes. The shipping movements are then integrated with the emissions values calculated in each case. In addition to determining the shipping traffic of even small bunker and authority boats, as well as inland shipping, a database was also prepared incorporating the specifications (capacity, consumption, emissions values, etc.) for every type of engine used by the ships. The input parameters such as ship engines and their emissions, as well as the expected size of the ships, are updated on a regular basis.

The analysis and visualization of shipping emissions was utilized for the first time for an Elbe simulation in the Port of Hamburg undertaken on behalf of the HPA Hamburg Port Authority. During the reporting period, this was expanded by incorporating additional functions, and a maintenance contract was also closed between HPA and ISL.

The EcoPAW project undertaken last year established the platform for the extrapolation and expansion of the shipping emissions simulation model to other overall port systems. As part of the standardization, this means that it will also be able to not only include the ship-related emissions, but also the emissions related to the port, handling and transport chain activities (e.g. cranes, van carriers, trucks). It will therefore also be possible to validate the realisability of savings potentials. The modified and expanded system was used for the first time on behalf of bremenports Port Authority in its Emissions Model for the Ports of Bremen which was launched in 2013.

And most recently, ISL has also determined the Carbon footprint for the Ports of Bremen also on behalf of bremenports Port Authority. This assessment involves evaluating company questionnaires and determining the metrics so that assessments can also be made on the CO2 emissions of specific cargo types as the cargo is passing through the ports of Bremen.
The core competences of the **Information Logistics Department** are the customer-oriented support establishing and managing logistics services by providing innovative IT solutions. This concerns both the strategic (simulation) as well as the operative aspects of the transport industry. The products and services provided, as well as the innovative research carried out on logistics information and simulation technologies, is based on specialist knowledge on the characteristic business processes, efficient project management, and up-to-date expertise. In addition to technical solutions, the projects also look at and analyse other aspects such as regulations and physical processes. In the past year there was a further intensification of the focus on safety research aspects in particular. Furthermore, psychological factors are also taken into consideration in R&D projects, such as when implementing innovations in the logistics environment.

Selected projects and activities in the main areas looked at by the department in 2013:

**INFORMATION TECHNOLOGIES IN INTERMODAL TRANSPORT**

ISL continued its work on defining a standard transport document (single transport document) for all the modes of transport as part of the EU project **e-freight - European e-freight Capabilities for Co-modal Transport**. The elaborated findings were also demonstrated and validated in a pilot application with the ACOS Group. This enabled the project to be completed in 2013.

The follow up project **iPort II** began at the end of 2013 and is now focused on the development and marketing of satellite-based services for the transport industry. The initial task and duty of ISL in this context is to open up synergies in cooperation with dbh Logistics IT AG with respect to the SMART SC project, and to further develop a supply chain event management system accordingly.

Another project which began at the end of the year was the project **OPTIBAHN - IT Supported Optimization of Port Rail Processes in Bremerhaven** which is funded by BIS Bremerhaven Gesellschaft für Investitionsförderung und Stadtentwicklung mbH. Rail transport - primarily involving containers and cars - is an important factor in hinterland transport operations and to the German sea ports, and also involves a large amount of coordination work because of the large number of play-
ers involved in the transport and cargo handling processes. Although the data associated with these processes is already partially transferred electronically between some of the players, the day-to-day work involved still suffers from information deficits and problems with the workflows. This is exacerbated by the restricted capacities of the rail infrastructure in the ports - which make efficient use absolutely essential.

In other words, there is still considerable optimization potential with respect to coordinating the workflows and capacities, and in supporting these aspects by utilizing IT-based procedures. The aim of OPTIBAHN is therefore to create a basis for reducing the existing deficits, and establishing uniform standardized data communication between all of the players to diminish the number of problems associated with operational workflows, and to make more efficient use of the existing infrastructure.

» www.isl.org/research

AUTO-ID AND SECURITY IN CONTAINER TRANSPORT

At the end of the over three year project, the consortium involved in the ECSIT - Enhancing Container Security through Non-contact Inspection at the Seaport Terminal research project - which was funded by the Federal Ministry for Education and Research, initiated by the Senator for Economy, Labour and Ports in Bremen, and coordinated by ISL - was able to report a successful conclusion to the project activities. New inspection processes and technologies for containers aimed at increased security within the sea port terminal were presented to around 120 invited guests at the Eurogate Container Terminal in Bremerhaven at the end of October 2013.

Because of the increased global threat from terrorism and organized criminals on the one hand, and the strong growth in global cargo flows on the other hand, there has been a strong rise in recent years in the demand for security solutions along the supply chain. Terrorist attacks using radioactive substances in a shipping container would have a serious impact on the commodity chain and cata-
strophic consequences in the event of an explosion or the release of highly toxic substances. To prevent such an event from ever happening, attacks of this kind must be just as effectively prevented as the smuggling of toxic substances and goods, or weapons. The competent authorities and governments in particular are intensifying their demands for the greater transparency of international goods movements, with the aim of improving security. Companies as well have an economic interest in the streamlining of security-centric processes which, in some cases, are based on mandatory legislative stipulations.

An example of such a development is House Resolution no. 1 focused in ECSIIt which is usually referred to as the 100% scanning law, and which was adopted by the US American Congress. The US authorities have so far only released a minor amount of information on this law which stipulates X-ray and radioactivity scanning of all containers. According to the information currently available, one must assume however that from summer 2014 onwards, all containers exported in the direction of the USA must be scanned and monitored for radioactivity before leaving the port of departure. In turn, this means a massive upgrading of the current capacities for inspecting marine cargos in the ports. The volume scenarios elaborated as part of ECSIIt estimated that on busy days the container terminal in Bremerhaven alone handles over 1200 boxes destined for America.

One of the aspects looked at by the project was to analyse how new kinds of inspection technologies could increase the security of the containers, and how these could be incorporated within an all-embracing concept involving all players and authorities without hindering the performance of the port terminal - as well as to satisfy the scenario that the specifications stipulated by the USA will actually be implemented in summer 2014. In the first place, ECSIIt sketched out the possible sites for each scanning installation for trucks and rail at the access gates to the terminals, as well as within the transhipment zones. Special attention here was given to the demands of the terminal operators. For instance, the normal workflows within the terminals should be hindered to the least possible extent by the additional scanning. There should also be a limited time window to evaluate the scans, and a hazard management system which also needs to be established in the event of a real alarm.

In addition, individual scanning devices and the expected inspection procedures were also presented in detail. Containers heading for the USA could be X-rayed two-dimensionally in a so-called basic scanning device, at the same time as being monitored for radioactivity. If a defined limited is exceeded, the containers can be immediately transported to the dedicated parking area, at the same time as raising the alarm. If the radioactivity is below a specific limit – for instance because of the presence of natural radionuclides in ceramic articles or fertilizers - the container can be taken for more detailed analysis involved so-called nuclide identification. And if there are still doubts after undertaking the two-dimensional scanning, the concept involves a specially developed three-dimensional X-ray scanner which enables particularly precise visualization and inspection of especially critical zones. This is accompanied by the development of an information system which assists cooperation between all of the parties involved in the transport chain within and outside of the ports, such as the US authorities, port authorities, customs, police, and fire brigade, with a focus on container scanning. This so-called Logistics Collaboration Hub, links up the existing Port Community System of the Bremen ports - the Bremen Port Telematics - with the terminal scanner stations and the US authorities to exchange security-relevant information.

Although the project is not designed to look at the practical implementation of the requirements of the 100%
scanning law, ECSIT has nevertheless provided a complete concept and wide-ranging approaches to satisfy the demands for the increased security of export containers in German and European sea ports. This not only involved the development of demonstrators for the hardware and software systems, it also ensured that full consideration is also given to the interests of all the players involved in the transport chain, such as terminal operators and shipping companies.

However, the conclusion drawn at the end of the project is that although the immense effort involved in implementing the 100% scanning law is technically feasible, it will be associated with considerable disadvantages for smooth terminal operations - especially when considering that other container security concepts investigated by ISL research projects deliver very promising alternative approaches. An example is the multi-stage risk analysis for the whole transport chain which can identify potentially hazardous containers on the basis of the available data shared by the various players - as demonstrated in the following brief description of the CAssAnDRA project.

» www.isl.org/research
» www.ecsit-security.de

CASSANDRA - Common Assessment and Analysis of Risk in Global Supply Chains, which is part of the EU Commission’s 7th Research Framework Programme, is another project which looks at security research and which was continued in 2013. This project also has to take into consideration the different needs and requirements for the increased security of international container transport movements on the part of the companies involved on the one hand and government agencies on the other hand. CASSANDRA focuses in particular on transparency within the supply chain to improve international transport with respect to border controls and trade regulations, at the same time as guaranteeing a very high level of security. The aim of the project is to improve security by optimizing the transparency of the already existing information. To do this, the 26 partners from 10 different European countries are working together with a focus on electronic data traffic to develop a new data sharing concept on the basis of a risk-based approach for businesses and authorities. This approach is being pursued because the effectiveness of controls can be significantly improved if inspections can be focused exclusively on potentially risky container movements, while trustworthy transport operations can be handled more quickly and cheaply. The possibilities of assessing the risks in more detail therefore optimize the demands for more security along the transport chain.

To be able to efficiently exchange more secure and more reliable data on the whole supply chain, harmonization is required of the systems operated by the logistics and IT companies involved, as well as the customs and border control authorities, not to mention the different players involved in the ports. To do this, CASSANDRA is initially investigating the existing interfaces. The most important innovation derived from this project in this context is the development of a Data Pipeline for exchanging information along the whole supply chain, to enable the establishment of an open, flexible and standard-
The existing data paths and data channels are thus being investigated as part of the project in so-called Living Labs as an additional innovative idea. The Living Lab is a research approach which shifts the development of a new product from the laboratory into the real world. The Living Labs investigate in exemplary ways the three global trade routes: Asia-Europe, Europe-USA, and Europe-Africa. Each Living Lab analyses the systems and interfaces used in the transport of data between the parties involved along one or more trade routes. The Living Lab Europe-USA, for instance, involves ISL working together with the Senator for Economy, Labour and Ports in Bremen, and dbh logistics IT AG, in analysing the data traffic at the Bremerhaven container terminal, which is the most important European export hub for the transport of goods to the USA. After analysing the systems used, as well as their interfaces, they are integrated within the Living Lab and demonstrated - this means developing and putting into practice a new data sharing concept and a new software solution for an all-embracing Data Pipeline. When undertaking this work, the Bremen Port Department and ISL place a very high priority on satisfying the needs of all of the parties involved, as well as taking the local conditions into consideration. These include for instance the demands and risk parameters stipulated by German authorities as well as the American authorities with respect to container security. The restrictions specified by businesses with respect to data exchange and data security are also given special attention.

» www.isl.org/research
» www.cassandra-project.eu

OPTIMIZATION AND SIMULATION

The Competence Centre for Optimization and Simulation in Bremerhaven is involved in many projects in an inter-disciplinary way, for instance: for the simulation of logistics processes within a supply chain or a container terminal, for the virtual visualization of the workflows in a freight village or logistics centre, or when analysing the logistics chains involved in offshore wind farms. Simulation models are also developed which can depict future and current developments in shipping transport operations and visualize the potential and bottleneck situations on waterways and in ports. In addition to the traffic movements, this also involves simulation of the shipping emissions.

APPLICATIONS

Other important aspects looked at by the Optimization and Simulation Research area are virtual terminals and equipment emulators. The software developed by ISL for the optimization and simulation of container terminals is marketed under the CHESSCON brand by ISL Applications GmbH. CHESSCON is available in a range of different versions, such as CHESSCON Capacity for planning terminal capacities, CHESSCON Simulation for planning and optimizing the layouts and processes in a terminal, or CHESSCON Virtual Terminal based on the VITO research project for testing and optimizing new strategies for Terminal Operating Systems (TOS).

This involves the virtual testing and simulation via so-called emulators of the strategies of the IT systems used in a terminal for controlling the equipment - in other words, without disturbing the workflows and with an eye
on risk minimization. The computer virtually simulates a complete real container terminal with all of the equipment, as well as all of the movements and the layout. The simulation has the same interfaces to the TOS as the real container terminal. This guarantees compatibility with the TOS developed by NAVIS which is the world market leader in this segment.

ISL Applications GmbH succeeded here in winning a contract in 2012 from the port operator ICTSI to simulate/emulate their terminals in South and Central America. The global use of this application by ICTSI terminals is also planned and will be assisted by carrying out training courses in Buenos Aires, Bremerhaven and Manila. The virtual terminal module was connected to the NAVIS TOS in 2013.

In addition, the CHESSCON Simulation system and its (tandem lift) functionality was expanded for our client Transnet Port Terminals in South Africa. Tandem lift refers to the ability of a container bridge to move four 20’ containers or two 40’ containers in one step when handling a ship. Both of the aforementioned clients are continuously assisted within the framework of maintenance contracts.

With the aim of improving the flexibility of the simulation model on the basis of the architecture incorporated in the virtual terminal, work has started on a research-based further development primarily financed by license revenues. This means that in addition to implementing event-oriented simulations, it may also be possible in future to use this system for operative planning as well.

» www.isl.org/isl-applications
» www.isl-applications.com
» www.chesscon.com

SUPPLY CHAIN EVENT MANAGEMENT

The Supply Chain Event Management (SCEM) main field of research does work for all of the ISL departments just like the Optimization and Simulation area, and plays an important role in many of the already mentioned research topics, e.g. in the process optimization of transport chains in already finished projects such as RISING, INTEGRITY, OPIT-LOG and NS FRITS, and in the ongoing research projects such as SMITH and SMART SC. The SCEM...
approach is also used for the purposes of security research in the CASSANDRA project, as well as work being undertaken on the logistics for offshore wind farms.

» www.isl.org/research

FURTHER DEVELOPMENT AND MANAGEMENT OF OPERATIVE IT SYSTEMS

The software and simulation systems currently being used including LOMIS, KODISC, MODITO, SCUSY, CAPS, IYCAPS and MeGa have been expanded, modified or migrated onto new software platforms in accordance with the requirements of our clients. In some cases, this means configuring additional data interfaces or creating additional modules to meet the specific needs of the clients. The further development and servicing of the systems is handled by ISL Applications GmbH.

» www.isl-applications.com

INNOVATION AND PSYCHOLOGY

This field of research is aimed at incorporating psychological approaches in projects in a more intensive way right from the beginning when new solutions are being developed. The aim here is to strengthen acceptance for the new solutions and thus to simplify subsequent market launches. This approach is being implemented in particular in the LOGINN - Logistics Innovation Uptake project which is part of the EU Commission’s 7th Research Framework Programme.

LOGINN focuses on the implementation of innovations developed within the framework of European research. The aim of the project is to fill the gap between pilot implementation and ready-for-market solutions by coordinating and assisting research and development projects concerned with logistics aspects. This is in response to the fact that although innovative solutions for enhancing efficiency in transport logistics have been developed on the basis of many research projects in past decades, many of them have not been fully implemented in practice. The project analyses the background to these developments and uses the findings to develop instruments which promote the marketing of innovative solutions for enhancing efficiency in transport logistics - in particular with respect to intermodal transport.

LOGINN has developed a platform as part of this project which simplifies and assists cooperation between the most important players in the logistics sector (industry, small and medium sized enterprises, competent authorities, investors and research organizations). The intention of this so called Logistics Arena is to assist the commercial launch of logistics innovations with a special focus on intermodal transport.

» www.isl.org/research
» www.loginn-project.eu
» www.logisticsarena.eu
In addition to numerous regular teaching units covering all aspects of maritime logistics at universities and applied science universities in Germany and Europe, ISL also offers customized training measures on many logistics sectors and problems - ISL Logistics Training.

The content and duration of these training and further education courses are specially configured to the needs of our partners, and can be held in our offices in Bremen and Bremerhaven or in the offices of our clients. Each specific logistics training seminar programme includes elements such as teaching seminars by professors and scientists from ISL, excursions, team workshops or lectures and discussions by and with leading logistics experts. The topics focus on aspects such as the maritime industry and shipping, port industry and port operations as well as hinterland logistics and logistics hubs.

As part of a cooperation agreement with the Faculty of Maritime Studies of the Department of Ports and Maritime Transport at King Abdulaziz University in Jeddah, Saudi-Arabia, twelve bachelor students came to Bremen with their supervisor in 2013. The aim of this 30 day training seminar customized by ISL for this specific purpose was to give the students from the West Saudi port city an insight into individual links and inter-relationships in port-centric supply chains, and to provide a broad introduction to maritime logistics overall. In addition to various lectures, teaching seminars and workshops such as Stakeholders Driving Forces in Port Logistics, Loading and Unloading - Optimizing Strategies in Terminal Operation, Process of Port Planning in Germany, Supply Chain Security, Decentralized Control of Operations oder Green Ports and Shipping, the programme also included interesting excursions. In this way, the logistics students took part for instance in tours to the container terminal in Rotterdam, the car terminal in Bremerhaven, intermodal goods handling in the freight village of Bremen, and the sea port in Kiel.

At another seminar in summer 2013, 14 employees of the Vietnamese port operator Saigon Newport Corporation from Ho Chi Minh City, came to ISL. The logistics experts from the operations, planning, and marketing departments were especially interested in freight villages and logistics hubs. This was therefore incorporated in the lectures which included: Logistics Clusters and Shared Services, Extended Gateways and Dry Ports, Freight Village Operations oder Knowledge Management and Marketing in Logistics. In addition, ISL also organized excursions to the port and logistics operations in Bremerhaven, Hamburg and Wilhelmshaven, to leading haulage and logistics companies, as well as to the freight villages in Bremen and Berlin/Potsdam.

www.isl.org/logisticstraining
The ISL InfoCenter is a leading European service provider for information and documentation covering all aspects of the maritime industry and logistics. It provides a professional range of services and consultation on sectors, markets, and companies in the following industries:

- Shipping, shipbuilding and ports
- Transport and logistics
- Economy and trade

The range of offers includes contractual research, elaboration of customized client profiles, full text service as part of the copyright or the provision of information and personal consulting on all aspects of ISL’s online and reference resources. When they do their work in this regard, our employees place a high priority on the quality and completeness of the technical information which they compile. They are happy to provide offers for customized, topic-oriented research and information services. In addition to the comprehensive resources available to ISL, the research activities can also incorporate external sources of information.

The ISL Library in Bremen, which has existed since 1954, is one of the largest specialist scientific libraries covering maritime logistics. In addition to the purchase of reference books, the library also focuses its acquisition activities on market studies, research reports, conference proceedings, economics statistics, annual reports, as well as shipping registers. Moreover, the library also stocks around 230 current journals and technical magazines. In addition, digital publications are also now playing an increasingly important role as part of the acquisition of an e-library. The library has a total stock of more than 130,000 volumes (as at: January 2014), including 32,000 monographs and 31,500 annual publications. A new acquisition list is prepared every quarter to document the new additions to the library.

A comprehensive range of e-books was added to the library services in April 2013. Rooms in the library can be used to access over 80,000 e-books provided by the service provider E-Book-Library EBL. The general public have free access to the library with its reading room and online workplaces from Monday to Friday 9:00 to 16:30, and Friday from 9:00 to 14:30.

Another important module is the ISL SEABASE which functions as an online catalogue as well as a reference database. The catalogue lists the stock in the library and contains around 124,000 documents (as at: January 2014), and is thus an important research source which provides systematic access to the logistics know-how required by the maritime industry, as well as serving the needs of research and teaching. All of the new acquisitions made by the ISL Library are registered and summarized. In addition to reference books, it also takes into consideration market studies, research reports, conference proceedings, economics statistics, as well as annual reports. Articles from around 230 national and international journals are selectively evaluated according to relevance, and are also entered into the database. SEABASE also provides increasing access to full-text digital media available within the framework allowed by copyright laws. The list of references grows annually by around 4,000. The old stock (prior to 1984) can be researched via a card catalogue within the library itself.

» www.isl.org/infocenter  » www.isl.org/library
» www.seabase.isl.org
ISL InfoLine supplements the information we offer by numerous publications which are made available by the ISL Webshop as print or online versions.

The statistical publications concentrated again in 2013 on the international specialist publications ISL Shipping Statistics Yearbook (SSYB), ISL Shipping Statistics and Market Review (SSMR) which is published nine times a year, and ISL Monthly Container Port Monitor (MCPM).

SSYB and SSMR are recognized worldwide as standard works of reference for the maritime industry, and are subscribed by technical experts in over 40 countries. The way the data is prepared and analysed is specially adapted to the information needs of shipping companies, shipyards, port companies, agents, banks, consulting companies, as well as research institutions.

SSYB contains over 400 pages covering market information, comments and development trends in the shipping and shipbuilding markets, as well as global sea ports and marine canals.

SSMR looks at nine key aspects: World Merchant Fleet, World Tanker Market, World Bulk Carrier Market, World Container and General Cargo Shipping, World Merchant Fleet by Ownership Patterns, World Passenger and Cruise Shipping/ISL Cruise Fleet Register, World Shipbuilding and Shipbuilders, Major Shipping Nations und World Seaborne Trade and World Port Traffic. Every issue provides comments on the development of the key topics, as well as providing information and an overview on the most important supply and demand indicators in each of the markets. Furthermore, a detailed statistical analysis and assessment of the markets is covered. In addition, each issue of SSMR contains an ISL Market Review which presents the latest market trends on the basis of early indicators. These are: Economic Indicators, World Merchant Fleet, Freight and Charter Market, Shipping Prices and Costs, World Shipbuilding and Development of Major World Ports.

The MCPM is the ideal tool for monitoring the latest developments in the container transport market. It enables players in the container shipping markets to compare their own performance with the latest regional and global trends.

In addition, via its ISL InfoLine portal, ISL can undertake a range of customized searches. The basis for this is the ISL Port Database - which is one of the most comprehensive databases worldwide for transhipment information - as well as the ISL Fleet Database.

» www.isl.org/infoline
» https://shop.isl.org
PUBLICATIONS

ARENDT, F. / HAASIS, H.-D. / LEMPER, B. (Hrsg.): Reihe Maritime Logistik / Maritime Logistics - Band 6, Frankfurt am Main, 2012


HADER, A.: ISL World Cruise Fleet - Developments, Status and Trends, ISL Studie, Bremen, 2013


LEMPER, B.: Mehr Wettbewerb durch neue Kapazitäten; in: Verkehr - Internationale Wochenzeitung für Transport, Logistik, Wirtschaft, Jg. 69, Nr. 3, Wien, 2013


LECTURES & EVENTS

01.-03. November 2012

HAASIS, H.-D.: "Port Cooperations in Europe", Conference on Sustainable Growth through Green and Secure Logistics, Maritime University, Shanghai
02. November 2012  
LEMPER, B.: “Prospects for Global Shipping Markets - Overview of the Most Important Influences”, FAZ Maritime Forum - Trade and Shipping Perspectives - Ports and Hinterland Infrastructure, Hamburg

06.-10. November 2012  

07. November 2012  
ARENDT, F.: Erste Statustagung zum Nationalen Masterplan Maritime Technologien (nMMT), BMWi, Berlin

07. November 2012  

07.-09. November 2012  

07.-09. November 2012  

08. November 2012  

09. November 2012  

10. November 2012  
HAASS, H.-D.: “Green Logistics - A Sustainable Concept for German Logistics Enterprises”, Annual Academic Conference of CLA - China Logistics Association, Suzhou

14.-15. November 2012  
KRÄMER, H.: TEN-T Conference - Port Integration into the TEN-T Concept, EU-Commission, Brüssel

16. November 2012  

21. November 2012  

ARENDT, F.: Workshop Stärkung der Zusammenarbeit zwischen nationaler und internationaler Sicherheitsforschung, Brüssel

27. November 2012  
HAASS, H.-D.: “Cooperation Potentials between Estonia and Germany related to Sustainable Logistics and Production”, Tallinn University of Technology, Tallinn

04.-06. December 2012  
SCHÜTT, H.: TOC Container Supply Chain Americas, Konferenz und Fachausstellung, Panama City

05. December 2012  
TASTO, M.: „Aktuelle Untersuchungsergebnisse zum Containerhinterlandverkehr der Nordrangelhäfen“, Workshop Schifffahrt, Tag der Reformoptionen für die Verkehrsinfrastrukturfinanzierung und Verkehrspolitik in Deutschland, Friedrich-Ebert-Stiftung, Berlin

06. December 2012  
HAASS, H.-D.: “Nachhaltige Produktion und Logistik“, St. Petersburg State University of Finance and Economics, St. Petersburg

07. December 2012  
LANDWEHR, T.: „eBusiness-Standardisierung in der maritimen Supply Chain - Projektvorschlag SMART SC“, Nikolaus Open House der dbh Logistics IT AG, Bremen

11. December 2012  
ARENDT, F.: VIA Bremen - Bahn Frei Via Bremen - Möglichkeiten und Hindernisse beim Aufbau eines Hinterlandkonzeptes für den Hafen-
und Logistikstandort Bremen, Workshop, Handelskammer Bremen

14. December 2012

14. December 2012

17. December 2012
LANGE, K.: „Standortmanagement von Offshore-Windenergieanlagen - Logistische Aspekte am Beispiel Bremerhaven“, Institut Fresenius, München

04. January 2013
HAASIS, H.-D.: „Le Développement du Transport Maritime et de la Logistique internationale“, Verkehrsministerium Marokko, Rabat

29. January 2013

29. January 2013

31. January 2013
SCHÜTT, H.: “Virtual Terminals Support the Planning, Start-Up Operation of a Container Terminal during its Whole Life-Cycle“, 7th Philippine Ports and Shipping Conference 2013, Manila

06. February 2013
NEUJAHRESPFANG 2013 des Instituts für Seeverkehrswirtschaft und Logistik, ISL BREMEN

12. February 2013

27. February 2013

28. February 2013
HAASIS, H.-D.: „Das ISL und seine Entwicklung in den letzten 50 Jahren“, Hafenseniorenkreis, Bremen

05. March 2013

06. March 2013
LEMPER, B.: „Umweltsicherheit - Schiffsemissionen“, NMMT-Workshop, BMWi, Berlin

07. March 2013
WEHLING, W. / PETERS, L. / ARENDT, F.: Einfach Wissenswert Logistik, Ausstellungseröffnung, Haus der Wissenschaft, Bremen

08. March 2013
HÜBSCHER, A.: „Globale Logistik in der Nachölzeit“, Evangelische Akademie zu Berlin

09. March 2013

13. March 2013
LEMPER, B.: „Mögliche Beiträge des ISL zu einem City-Development-Projekt in Indien“, Round-Table mit dem Indischem Generalkonsulat, Hamburg

13.-14. March 2013

14. March 2013
TASTO, M.: „Die Rolle des Containers für den weltweiten Warenverkehr“, Vortragsreihe Einfach Wissenswert Logistik, Haus der Wissenschaft, Bremen

... AND TOGETHER WITH STUDENTS IN AMMAN / JORDAN
ACTIVITIES 2013

17.-19. March 2013

17.-19. March 2013
ARENDT, F.: Moderation und Chairman der Session „Recent Development in the International Transport Industry“, MARLOG2 - International Maritime Transport and Logistics Conference - Sustainable Development for the Suez Canal Region, Alexandria

06. April 2013
ARENDT, F.: „Maritime Sicherheit und Territorialwar - Transport ohne Risiko“, Vortragsreihe Einfach Wissenswert Logistik, Haus der Wissenschaft, Bremen

08.-09. April 2013
ARENDT, F. / LEMPER, B.: Achte Nationale Maritime Konferenz der Bundesregierung und des BMWi, Kiel

09. April 2013

10. April 2013
KRAMER, H.: MARCO POLO Info Day, EU-Commission, Brüssel

11. April 2013

11. April 2013

13. April 2013
TASTO, M.: „Die Entwicklung der Containerschiffgrößen“, Vortragsreihe Einfach Wissenswert Logistik, Haus der Wissenschaft, Bremen

16. April 2013
NOBEL, T.: „EcoHubs - Example Freight Villages in Germany/Europe“, EU Green Efforts Conference, Handelskammer Bremen

16. April 2013
SCHÜTT, H.: “Simulation für die Maritime Logistik“, Diskussionsveranstaltung zu Chancen der interdisziplinären Simulation, Hochschule Bremen

17.-18. April 2013
DOVBISCHUK, I.: 1st International Conference - European Research Strategy for Intermodal Transport, Las Palmas de Gran Canaria

18. April 2013
PETERS, L.: Via Bremen Veranstaltung zum Tag der Logistik 2013, Fachausstellung, BLG Forum Bremen

18.-19. April 2013
ARENDT, F.: Annual ARTES Applications Workshop der esa, Rom

19. April 2013
LEMPER, B.: „Überkapazitäten im Containerumschlag in der Nordostpassage“, Europäischer Hafentag, 24. Internationales Wirtschafts- und Transportforum der DGAW, Bremerhaven

19. April 2013

23.-24. April 2013
PETERS, L.: Bremer Logistiktag 2013 - Kostensenkung in Wertschöpfungsketten, Fachausstellung, Congress Centrum Bremen

23. April 2013
LEMPER, B.: “Impact of Financial Crisis on Global Shipping and Outlook Spring 2013“, STIP - Sekolah Tinggi Ilmu Pelayaran, Jakarta

23. April 2013
LEMPER, B.: “Impact of Financial Crisis on Global Shipping and Outlook Spring 2013“, Indonesian-German Seminar on Logistics, Jakarta

24. April 2013
LEMPER, B.: “Impact of Financial Crisis on Global Shipping and Outlook Spring 2013“, Seminar on Ports and Logistics, Makassar

24. April 2013
HAASIS, H.-D.: „Intelligente Disposition und Güterverkehrsplanung“, Bremer Logistiktag 2013, Bremen
A CENTRAL EVENT OF THE YEAR WAS THE THREE-MONTH EXHIBITION „EINFACH WISSENSWERT LOGISTIK“ IN THE BREMEN HOUSE OF SCIENCE. THE ISL CONTRIBUTED SEVERAL EXHIBITS.
ACTIVITIES 2013

05. June 2013
NOBEL, T.: „GVZ Klimaschutzbenchmarking am Beispiel ausgewählter Güterverkehrszentren in Deutschland“, 1. Roadshow im Projekt GVZ Klimaschutzbenchmarking, München

06. June 2013

08. June 2013
HAASIS, H.-D.: “Status Quo of the FV-Development in Germany”, International Logistics Symposium, Ankara

11. June 2013
KRAMER, H.: EU Transport Sector Seminar, Permanent Representatives of the European Member States, Brüssel

12. June 2013
NOBEL, T.: „Klimaschutz in GVZ - Wo liegen die Benchmarks?“, 1. Roadshow im Projekt GVZ Klimaschutzbenchmarking, Bremen

14. June 2013
LANDWEHR, T.: „eBusiness-Standardisierung in der maritimen Supply Chain - Projektvorschlag SMART SC“, LogiTa Fachtagung, Hochschule Osnabrück

17. June 2013
HÜBSCHER, A.: „Nachhaltiger Seeverkehr“, Universität Bremen

17. June 2013

18. June 2013

18. June 2013

18. June 2013

19. June 2013
MACKENTHUN, F.: „Green Freight Villages in Germany - Structures and Experiences“, Delegationsbesuch der Universität Rotterdam, Universität Bremen

19.-20. June 2013

19.-20. June 2013

19.-20. June 2013

20. June 2013
TASTO, M.: “Port Logistics - Extended Gateways and Dryports”, Training Seminar on Port-related Economics and Logistics for the De-
ACTIVITIES 2013

21. June 2013

25.-27. June 2013
SCHÜTT, H.: Moderation des Workshops “Optimized Equipment Control”, TOC Container Supply Chain Europe 2013 Conference and Exhibition, Rotterdam

25.-27. June 2013

26. June 2013

27. June 2013

28. June 2013
MEYER-LARSEN, N.: “Vorstellung des ISL”, Brasilianischer Delegationsbesuch, Bremerhaven

02. July 2013
HAASIS, H.-D.: „Nachhaltiges Clustermanagement“, AWV - Arbeitsgemeinschaft für Wirtschaftliche Verwaltung, Eschborn

02. July 2013
MACKENTHUN, F.: „Freight Villages in Germany - Development of FV Locations“, Delegationsbesuch und Trainingsseminar des chinesischen Verbandes CFLP, Bremen

03. July 2013

04. July 2013

04. July 2013
LEMPER, B.: „Schifffahrtsmärkte 2013 Plus“, VWL Branchenforum Schifffahrt Hafen Logistik, Duisburg

04. July 2013
SCHÜTT, H. et al.: “Evaluating Approaches for the Analysis of Berthing Capacities - A Case Study for a Panamanian Container Terminal”, 26th European Conference on Operational Research, Rom

05. July 2013

08. July 2013

09. July 2013

10. July 2013

12. July 2013

15. July 2013
HAASIS, H.-D.: „Logistik und Regionalentwicklung“, Universität Ngaoundéré Kamerun

16. July 2013
MACKENTHUN, F.: „Green Freight Villages in Germany - Structures and Experiences“, Delegationsbesuch von Vertretern des chinesischen Transportministeriums, ISL Bremen

PROF. DR. BURKHARD LEMPER TALKS TO MARTIN GÜNTHNER, BREMEN SENATOR OF ECONOMY, LABOUR AND PORTS
07. August 2013
MACKENTHUN, F.: “Freight Villages in Germany - Development of FV Locations” sowie “Green Freight Villages in Germany - Structures and Experiences”, Trainingsseminar einer chinesischen Expertengruppe im Programm „Vocational Education in Transport and Logistics“, WTC Bremen

15. August 2013
HAASIS, H.-D.: „Entwicklung der Verkehrsströme unter strukturellen Aspekten“, Moderation im Rahmen des 34. Deutschen Seeschiffsfahrts-Tags, Wilhelmshaven

15. August 2013
MEYER-LARSEN, N.: Serious Gaming, Workshop des BIBA, Bremen

19. August 2013

20. August 2013
HÜBSCHER, A.: “Green Ports and Sustainable Shipping - Regulations, Inventories, Best Practice Examples, Upcoming Techniques”, Training Seminar on Port Logistics for the Vietnamese Saigon Newport Corporation from Ho Chi Minh City, ISL Bremen

21. August 2013
TASTO, M.: “Zum Stand der aktuellen Wettbewerbssituation in der maritimen Wirtschaft“, Informationsveranstaltung zur Relevanz von Innovationen in der maritimen Wirtschaft, BIS Bremerhaven

22. August 2013
TASTO, M.: “Port Logistics - Extended Gateways and Dryports”, Training Seminar on Port Logistics for the Vietnamese Saigon Newport Corporation from Ho Chi Minh City, ISL Bremen

23. August 2013

26. August 2013

26. August 2013

27. August 2013
ARENDT, F.: Maritime IT - Big Data, Workshop des Maritimen Clusters Norddeutschland und des Clustermanagements Digitale Wirtschaft Schleswig-Holstein, Tremsbüttel

27. August 2013

27. August 2013

28. August 2013
TASTO, M.: “Port Logistics - Stakeholders Driving Forces”, Training Seminar on Port Logistics for the Vietnamese Saigon Newport Corporation from Ho Chi Minh City, ISL Bremen

04.-06. September 2013

05. September 2013

05. September 2013

05.-06. September 2013

06. September 2013
**ACTIVITIES 2013**

### 10. September 2013

### 11.-13. September 2013

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<td>12.</td>
<td>LEMPER, B.: „Containerschifffahrtsmärkte und Nordwesteuropäischer Hinterlandverkehr“, Logistics meets IT, MSC Bremen</td>
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<td>18.</td>
<td>KRAMER, H.: Expert Round Table in Port Infrastructure, AS-SIST-Project Workshop, Brüssel</td>
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<td>23.</td>
<td>HAASIS, H.-D.: „Future Developments in Logistics: Decentralized Control, Cyber Physical Systems, Logistics on Demand, Cloud Logistics“, BMW-Brilliance, Shenyang</td>
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### 25. September 2013

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<td>25.</td>
<td>MACKENTHUN, F. / NOBEL T.: „Sustainable Best Practice in Climate Protection - The Example of the Leading Freight Village Bremen (Germany)“, MLB International Symposium, Nagoya</td>
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<td>27.</td>
<td>HAASIS, H.-D.: „New Silk Road: Cooperation Potentials between China and Europe“, Chang’an University, Xi’an</td>
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### 01. October 2013

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### 08. October 2013

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<th>Date</th>
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<tr>
<td>08.</td>
<td>HAASIS, H.-D.: „International Trade through Efficient Ports“, Conference on International Trade, Logistics and Port Development, Guangxi University, Nanning</td>
</tr>
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<td>08.</td>
<td>KILLE, G. / WUNSCH A.: „PreparedNET - Simulationsbasierte Notfallkonzepte für komplexe Logistiksysteme - Entwicklung”</td>
</tr>
</tbody>
</table>
und Anwendung", ISL Arbeitskreis Logistik Bremerhaven

10. Oktober 2013
HÜBSCHER, A.: “Green Ports and Shipping - International Conven-
tions”, Exchange of Experiences concerning Sustainable Port Deve-
lopment in the ASEAN Region with a Delegation of Ministry of Trans-
port and the Maritime Administration of Vietnam, ISL Bremen

11. Oktober 2013
HAASIS, H.-D.: „Logistics Centers Planning and Operations - Euro-
pean Situation and new Innovative Trends“, Zhengzhou Airport Eco-
nomic Integrated Experimental Zone, Zhengzhou

16. Oktober 2013
LANGE, K.: “Analysis of Logistics Concepts for a Cost-efficient Instal-
lagation of Offshore Wind Farms”, IMAM Conference, La Coruna

17. Oktober 2013

23.-25. Oktober 2013

23.-25. Oktober 2013

23.-25. Oktober 2013

24. Oktober 2013
SCHÜTT, H.: “Virtual Terminals as Training Instruments for Terminal Operators“, 8th Southern Asia Ports, Logistics and Shipping Conference 2013, Mumbai

28.-30. Oktober 2013
SCHWARZ, L.: „Improving Energy Efficiency of Passive Temperature-
controlled Transports - Design of a Rule-based Expert System“, 5th International Conference on Industrial Engineering and Systems Management (IESM), Rabat

29. Oktober 2013
ARENDT, F.: “Vorstellung des ISL”, Bremerhaven im Aufbruch - Ent-
wicklungen, Innovationen und Projekte in der Logistikbranche, Ind-
dustrie- und Handelskammer Bremerhaven

29. Oktober 2013
HAASIS, H.-D.: “Sustainable World Trends in Container Shipping and Logistics“, University of Transport, Ho Chi Minh City

29. Oktober 2013
KRÄMER, H.: Nationale Abstimmung zum Vorgehen für Horizon 2020, Workshop mit BMVBS, BMWi und Ptj, Berlin

30. Oktober 2013
HAASIS, H.-D.: „Logistics Trends - Sharing of Profit, Costs and Risk“, National Economic University, Hanoi

31. Oktober 2013
ARENDT, F.: Einführung und Gesamtmoderation, Abschlussveran-
staltung des Projekts ECSIT, CT Bremerhaven

31. Oktober 2013
MEYER-LARSEN, N.: „Demonstration des ECSIT Gesamtsystems am Beispiel des Containerterminals Bremerhaven“, Abschlussveranstal-
tung des Projekts ECSIT, CT Bremerhaven

31. Oktober 2013
HAASIS, H.-D.: “Port and Logistics Development - International Trade through Efficient Ports, Hai Phong

01. November 2013
HAASIS, H.-D.: 3rd International Conference on Integration - Achie-
vements and Emerging Issues, Vietnam University of Commerce, Hanoi

07.-08. November 2013
ARENDT, F.: Logistics in 2030 - Challenges and Way Forward, Logis-
tics Conference, Brüssel
11.-12. November 2013
ARENDT, F.: Die Deutschen und die Sicherheit - Gesellschaftliche Konstruktionen, Workshop des Forschungsforums Öffentliche Sicherheit, Berlin

14. November 2013
KLEIN, O.: „e-Freight: Mehr Transparenz, Verkehrssicherheit und Bürokratieabbau oder alter Wein in neuen Schläuchen?“, Thementag Binnenschifffahrt und Wasserstraßen 2.0, Verein für europäische Binnenschifffahrt und Wasserstraßen e.V., Duisburg

19. November 2013
ARENDT, F.: “Entwicklung einer hafenübergreifenden Import-Plattform“, Sitzung des Deutschen Seeverladekomites (DSVK) im VDI, Berlin

03. December 2013
MEYER-LARSEN, N.: Workshop „Für die Erde ins All - Transport & Logistik: Herausforderungen und mögliche raumfahrtbasierte Lösungsansätze“, European Space Operations Center (ESA/ESOC), Darmstadt

17. December 2013
LANDWEHR, T.: „Smart Supply Chain - Effizienter und intelligenter Containertransport von und zu den deutschen Seehäfen“, 3. Regionalkonferenz Logistik, Bremerhaven

18.-20. December 2013
HAASIS, H.-D. / DOVBISCHUK, I.: „New Logistics Trends in Germany“, Workshop and Visit of School of Logistics and Supply Chain at Naresuan University, Phitsanulok

LECTURE COURSES

UNIVERSITY OF BREMEN
Study courses: Economic Sciences, Business Economics and Engineering Economics

UNIVERSITY OF APPLIED SCIENCES BREMEN
Study course: International Shipping and Chartering
LEMPER, B.: Principles of Maritime Economics
TASTO, M.: Chartering Practice, Commodity Practice and Logistics

UNIVERSITY OF APPLIED SCIENCES BREMERHAVEN
Study courses: Integrated Safety and Security Management, Transportation/Logistics, Logistics Engineering and Management, Informatics
ARENDT, F.: Information Technology Processes and Systems, Logistics Processes and Systems
MEYER-LARSEN, N.: Logistics Processes and Systems
MÜLLER, R.: Logistics Processes and Systems, Software Engineering, Programming
SCHÜTTE, H.: Hazard Potentials of Logistic Processes and Systems, Seaport Terminals
TASTO, M.: Transport Economics

JADE UNIVERSITY OF APPLIED SCIENCES ELSFLETH
Study courses: Maritime Economics and Port Management, International Transport Management
LANGE, K.: Offshore Wind Power Logistics

HANSE VOCATIONAL ACADEMY DELMENHORST
Study course: Logistics and Process Management

FRANKFURT SCHOOL OF FINANCE AND MANAGEMENT
Study course: Ship Financing
LEMPER, B.: Basics of Shipping Markets

DOCTORAL DISSERTATIONS


GOULD, JULIE E. / 05.02.2013: “A Decision Support System for Intermodal Logistics under Consideration for Costs of Security“

KOLMYKOVA, ANNA / 26.03.2013: “Supply Chain Integration. Entwicklung eines Integrators für die globale Supply Chain“

WU, JIANI / 27.05.2013: “Sustainable Development of Freight Villages based on Knowledge Management“

ZHANG, HONGYAN / 06.08.2013: “Process-oriented Knowledge Management in Business Logistics: A Dynamic Perspective“