KLU RESEARCH PROJECTS

DISCO - DATA-DRIVEN, INTEGRATED, SYNCROMODAL, COLLABORATIVE AND OPTIMIZED URBAN FREIGHT META MODEL FOR NEW GENERATION OF URBAN LOGISTICS AND PLANNING WITH DATA SHARING AT EUROPEAN LIVING LABS

May 2023 – November 2026
Prof. Rod Franklin (rod.franklin@klu.org)

The DISCO projects, funded by Horizon Europe (European Union) aims to test and adopt a new generation of urban logistics and smart planning services with the aim to reduce emissions and better manage urban infrastructures. It involves a federated community of logistics service providers, mobility and technology providers, real estate and infrastructure owners and cities supported by specialized consulting, EU associations and academics. The partners and stakeholders will co-design, deploy, demonstrate, evaluate, and replicate innovative urban logistics and planning solutions.

Digital Transformation, Infrastructure, Sustainability, Transport Logistics

INNOVATIVE WATERWAY TRANSPORTATION 2.0.

April 2023 – June 2026
Prof. Dr. Gordon Wilmsmeier (Kühne Logistics University - KLU) (gordon.wilmsmeier@klu.org)

The project contributes to understanding of different aspects, e.g., drivers, challenges, gains, and business requirements and perspectives of key stakeholders in the supply chain of waterway transportation (e.g., ship operators, shippers, operators, ports) and the implications of technologies and solutions adopted by the project’s freight flow coalitions (FFC) towards achieving green inland waterway FFC solutions. Funded by the EU.

Creating Value, Sustainability, Maritime Logistics

URBANE - UPSCALING INNOVATIVE GREEN URBAN LOGISTICS SOLUTIONS THROUGH MULTI-ACTOR COLLABORATION AND PHYSICAL INTERNET-INSPIRED LAST MILE DELIVERIES

September 2022 – February 2026
Prof. Rod Franklin, PhD (Kühne Logistics University - KLU) (rod.franklin@klu.org)

Co-funded by the new Horizon Europe Programme (HEU) the project focuses on developing flexible urban last mile delivery approaches based on the Physical Internet that lower emissions, congestion, and cost, by combining green automated vehicles and shared space utilisation models.

Digital Transformation, Environment, Sustainability, Transport Logistics

EFFECTS OF MONETARY AND NON-MONETARY INCENTIVES ON STRATEGIC BEHAVIOR OF CUSTOMERS AND COMPANIES

February 2023 – January 2026
Prof. Dr. Jan Becker (Kühne Logistics University - KLU) (jan.becker@klu.org)
Companies use monetary and non-monetary incentives to manage customers. The objective of the project is to gain insights that will help to make customer management more efficient for the benefit of both consumers and companies, and to find solutions to reduce the negative consequences of strategic customer behavior for the economy as a whole. It is funded by the German Research Association (DFG).

**SEMANTIC PROCESS DISCOVERY FROM USER INTERACTION LOGS (USERLOGS)**

**January 2024 – December 2025**

Prof. Dr. Henrik Leopold (Kühne Logistics University - KLU) (henrik.leopold@klu.org)

Process mining is widely used to discover, analyze, and improve business processes based on event data extracted from IT systems, stored in so-called event logs. This has an important limitation, however; it limits the scope of analysis to back-end events. To avoid this problem the goal of this project, supported by the DFG (German Science Council), is to enable process discovery based on user interaction (UI) logs, rather than on traditional event logs. The project aims to develop approaches that address the challenges in an automated manner. It will advance state-of-the-art research in process mining, particularly for situations involving raw, low-level event data.

**Digital Transformation**

**SCO - AFRICAN CENTER OF EXCELLENCE FOR SUSTAINABLE OPERATIONS FOR RESSOURCE MANAGEMENT AND FOOD SUPPLY**

**March 2021 – December 2025**

Prof. Dr. Maria Besiou (Kühne Logistics University - KLU) (maria.besiou@klu.org)

The project in cooperation with the Kühne Foundation is to establish the African Center of Excellence for Sustainable Operations for Resource Management and Food Supply (SCO) jointly with the University of Nairobi (UoN) in Kenya and the University of Dar es Salaam (UDS) in Tanzania with funding from the German Academic Exchange Service (DAAD). It aims to empower all who engage with it to organize in a sustainable fashion all kinds of operations, i.e. the production, movement, and processing of food and other natural resources. The Center will address issues of crucial importance to Africa with respect to, for example, sustainable value-adding in transportation, logistics, and warehousing.

**Creating Value, Sustainability, Transport Logistics, Food Logistics**

**WORM - WASTE IN HUMANITARIAN OPERATIONS: REDUCTION AND MINIMISATION**

**January 2024 – December 2025**

Prof. Dr. Maria Besiou (Kühne Logistics University - KLU) (maria.besiou@klu.org)

The project’s overall objective is to design guidelines and support actions for circular economy in the humanitarian sector in two selected settings: field hospital deployments, and humanitarian livelihood programmes with a waste picking component. Across these settings, the project focuses on several crosscutting focus areas, such as the integration of bio-based technological innovation solutions in the humanitarian context, and policy development, advocacy and a heightened local awareness of improved waste management in the relevant local contexts.

**Humanitarian Logistics, Sustainability, Creating Value**

**BRAND STRENGTH INFORMATION DURING CORPORATE CONFERENCE CALLS WITH INVESTORS AND ANALYSTS AND ITS**
IMPACT ON COMPANY VALUE - MARKS
September 2023 – August 2025
Prof. Dr. Alexander Himme (Kühne Logistics University - KLU) (alexander.himme@klu.org)
This project will analyze the role that brand equity information plays on earnings calls. Previous research has demonstrated that earnings calls are an important tool to disclose information to investors and financial analysts that enable them to better judge the future financial development of firms. The DFG-funded project aims at generating a better understanding of which brand equity information is discussed on earnings calls and to what extent it provides valuable information to the financial community.

Creating Value

ULEPRO (URBAN FOOD PRODUCTION) - DEVELOPMENT AND COORDINATION OF LOCAL FOOD PRODUCTION AND DISTRIBUTION NETWORKS (FABCITY)
April 2022 – December 2024
Prof. Dr. Sandra Transchel (Kühne Logistics University - KLU) (sandra.transchel@klu.org)
The ULePro project aims to strengthen the medium-sized agricultural sector, which is essentially responsible for the regional food supply, in the long term. It is to investigate the potential of regional and local food production and supply networks, considering all actors and decision-makers involved, i.e. agribusinesses, logistics service providers, and others engaged in local food production, storage and distribution. It should serve as an interface with final customers and buyers of the products, as well as with local authorities, policymakers, and others responsible for setting local framework conditions.

Food Logistics, Sustainability, Supply Chains

FAB CITY: DECENTRALIZED, DIGITAL PRODUCTION FOR URBAN VALUE CREATION - SUBPROJECT ON "SUPPLY CHAIN AND OPERATIONS MANAGEMENT"
July 2021 – December 2024
Prof. Dr. Kai Hoberg (Kühne Logistics University - KLU) (kai.hoberg@klu.org), Robin Kabelitz-Bock (Kühne Logistics University - KLU) (mailto:robin.kabelitz-bock@klu.org)
This subproject focuses on the impact of 3D printing on the Circular Economy and regionalization of supply chains. It aims to implement a living lab ("Reallabor") in Hamburg to research the business, supply chain, technical, legal, as well as social effects of decentralized, open, and digital production sites.

Creating Value, Infrastructure, Sustainability

HYPERNETWORK OF GERMAN LOGISTICS (HEGEL) - EXPLOITING THE POTENTIAL OF HYPERNETWORKS IN FREIGHT TRANSPORT AND LOGISTICS
January 2022 – December 2024
Prof. Dr. Hanno Friedrich (Kühne Logistics University - KLU) (hanno.friedrich@klu.org)
Although the global transport volume is constantly increasing, and international logistics is often carried out across several networks or even intermodally, there is still a lack of transparency in the transport market. A structured procedure for the representation of logistical hypernetworks is developed for a large dataset by means of supplementary scientific methods. The resulting transparency of the transport market enables better efficiency planning and more effective optimization of transport in terms of costs, sustainability and resilience. The new data
AUTOMATED PROCESS WEAKNESS IDENTIFICATION BASED ON SOCIAL MEDIA POSTS

September 2021 – December 2024

Prof. Dr. Henrik Leopold (Kühne Logistics University - KLU) (henrik.leopold@klu.org)

Process mining techniques, which reconstruct how processes are executed, can provide valuable input for process improvement initiatives but do not automatically identify concrete process weaknesses. Identifying such weaknesses still requires the extensive involvement of domain experts. At the same time, process problems experienced by customers are frequently shared on social media platforms. The goal of this project is, therefore, to address the problem of the manual work in the context of process improvement by developing techniques that automatically link process weaknesses described in social media posts to specific events from event logs, and rank the aligned weaknesses, so that they can effectively serve as input for process improvement.

FAB CITY: DECENTRALIZED DIGITAL INNOVATION PROCESSES FOR URBAN VALUE CREATION - SUBPROJECT ON "CITIZEN INNOVATION"

January 2022 – December 2024

Prof. Dr. Christina Raasch (Kühne Logistics University - KLU) (christina.raasch@klu.org)

How can citizens be included in the generation of ideas? This project study how citizens help create ideas (Ideation), evaluate others' ideas (Evaluation), and implement those ideas judged best (Implementation). It accompanies the FabCity innovation challenges and aim to expand our understanding of decetralized digital innovation processes. Funded by the Federal Ministry of Defense (Bundesministerium der Verteidigung BMVg).

HOW CAN RLH COOP AND CHORD COLLABORATE TO FURTHER REALIZE THE EUROPEAN COMMISSION EUROPEAN CIVIL PROTECTION AND HUMANITARIAN AID OPERATIONS (ECHO)'S HUMANITARIAN LOGISTICS POLICY AND ITS UNDERLYING PARADIGM SHIFT?

February 2023 – December 2024

Prof. Dr. Maria Besiou (Kühne Logistics University - KLU) (maria.besiou@klu.org)

This project aims to provide an independent and scientific evaluation of how the humanitarian logistics actors perceive the impact of Reseau Logistique humanitaire (RLH Coop, now: hulo) in the future development of their logistics policy and processes. The project is funded by Action Against Hunger.

CARGOSURFER

November 2021 – October 2024

Prof. Dr. André Ludwig (Leipzig University) (mailto:ludwig@wifa.uni-leipzig.de)
Passenger transportation and freight transport are virtually always strictly separated today. But it does not have to stay that way – especially for rural areas, innovative solutions are needed. The research project CargoSurfer, funded by the , is developing an IT solution that will allow parcels to be reliably delivered in rural contexts using public transportation.

**FOODDECIDE - DIGITAL TECHNOLOGIES FOR FOOD SAFETY DECISION SUPPORT**

June 2021 – May 2024

Prof. Dr. Hanno Friedrich (Kühne Logistics University - KLU) (hanno.friedrich@klu.org)

The agriculture- and food sector is among the three most important sectors of Montenegro’s economy, contributing a significant share to the Gross Domestic Product (8% in 2018). However due to delays in legal framework activities there has been partial dis-functioning of the food safety system, which lacks the science-based support necessary for the protection of the population’s health. FoodDecide’s vision is to develop efficient open source decision support software for Montenegrin food business operators and governmental agencies supporting food safety and disease outbreak investigations.

**CONTRACT-BASED COORDINATION OF MULTI-STAGE FRESH FOOD SUPPLY CHAINS TO REDUCE FOOD WASTE**

September 2020 – April 2024

Prof. Dr. Sandra Transchel (Kühne Logistics University - KLU) (sandra.transchel@klu.org), Nina Mayer (Kühne Logistics University - KLU) (mailto:nina.mayer@klu.org)

Food waste, from harvest losses to consumption losses at the end consumer, happens along the whole supply chain. This project, funded by the Deutsche Forschungsgemeinschaft (DFG), is to investigate to what extent contract mechanisms between individual actors in food supply chains (e.g., farmers, food producers, and retailers) can better coordinate the trade-off between profit orientation and sustainable demand planning, by influencing company-specific planning calculations. The overarching goal is to identify contract structures that align planning decisions and reduce the amount and distribution of food waste in a sustainable way throughout the entire supply chain.

**GANZHEITLICHE AUSWEISUNG VON TRANSPORTEMISSIONEN – GATE**

August 2022 – February 2024

Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org)

The GATE project, founded by the Federal Ministry for Economic Affairs and Climate Protection (BMWK) aims to sensitize logistics small and medium-sized enterprises (SMEs) to the relevance of emissions reporting. In light of the growing interest in decarbonization and the possible competitive advantage of offering low emission transport services, adequate reporting of emissions is crucial to make actions visible. The project looks into how carriers currently calculate and report emissions, and what data shippers include in their emission models. A consolidated set of tools is to be developed to make methods and decisions relating to the calculation, reporting and dissemination of CO2 emissions, more tangible for SMEs and provides recommendations for action appropriate to the situation.

**QUANTITATIVE RESEARCH STUDY ON ENVIRONMENTAL SUSTAINABILITY IN HUMANITARIAN LOGISTICS - WREC**
September 2022 – September 2023

Dr. Jonas Stumpf (HELP Logistics AG) (jonas.stumpf@kuehne-stiftung.org)

The project funded by the Danish Refugee Council aims to perform a quantitative study to measure the environmental impact along the supply chain of humanitarian logistics and to evaluate the effectiveness of existing and potential solutions to reduce that impact, to enable more sustainable approaches.

Humanitarian Logistics, Sustainability, Environment

IDEA EVALUATION IN OPEN, "DEMOCRATIZED" INNOVATION

September 2019 – August 2023

Prof. Dr. Christina Raasch (Kühne Logistics University - KLU) (christina.raasch@klu.org)

This research program focuses on the evaluation of ideas for new products or processes. While past research has mainly focused on idea creation, more recent research has recognized the importance of idea evaluation and selection in research and practice. Any mode of organizing for innovation can only succeed if ideas are effectively vetted such that ultimately the best ideas are selected for implementation. Being key to organizational performance, idea evaluation deserves a prominent role in economics and management research.

Digital Transformation

WASP - WIND ASSISTED SHIP PROPULSION

July 2019 – June 2023

Prof. Dr. Gordon Wilmsmeier (Kühne Logistics University - KLU) (gordon.wilmsmeier@klu.org)

This project, funded by the European Regional Development Fund, is to investigate and promote the application of Wind Assisted Ship Propulsion (WASP) technologies. It aims to promote the development and adoption of products, services and processes to accelerate a greening of the North Sea Region and to run WASP technology real life trials on sea going ships in operation, showcase proven concepts, market adoption, and thus support green(er) sea transport.

Sustainability, Maritime Logistics, Environment, Transport Logistics

CIRCULAR REVERSE SUPPLY CHAINS IN AUTOMOTIVES (CE:VERSA)

September 2022 – May 2023

Prof. Dr. Johannes Meuer (Kühne Logistics University - KLU)

The project aims to build a European alliance for a more circular economy between automotive manufacturers, component manufacturers, and logistics companies. With its focus on joint reverse logistics, Ce:Versa offers great potential for reducing CO2 emissions along the value chain.

Creating Value, Environment, Sustainability, Transport Logistics, Supply Chains

THE GREEN SHIPPING PROJECT GOVERNANCE AND INNOVATION FOR A SUSTAINABLE MARITIME SUPPLY CHAIN

November 2016 – December 2022

Prof. Dr. Michele Acciaro (Copenhagen Business School (CBS)) (mailto:mac.si@CBS.dk), Michael Stein (Hapag-Lloyd Center for Shipping and Global Logistics (CSGL)) (michael.stein@klu.org)

Sea transport is relatively under-investigated in the business management, political economy and global governance literatures. The Green Shipping research network aims to address this knowledge gap. The overall goal is to advance knowledge and understanding towards the progressive governance of sustainable maritime transport and the accelerating “green shipping” trend.
CREATOR: COLLECTION OF RAW MATERIALS, REMOVAL OF FLAME RETARDANTS AND REUSE OF SECONDARY RAW MATERIALS

June 2019 – November 2022

Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org), Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org), Moritz Jäger-Roschko (Kühne Logistics University - KLU) (moritz.jaeger-roschko@klu.org)

CREAToR (funded by the European Commissions EASME-Program) aims to contribute to a circular economy by removing hazardous, bromine-containing flame-retardants from waste streams. The project is set to implement ways to collect secondary raw materials, identify the presence of hazardous flame retardants, remove these contaminants from the materials and finally reuse the materials. While the project’s main focus is on developing and advancing process technology, logistics plays a major role for successfully collecting suitable amounts of waste. The project develops logistics concepts for CREAToR.

Creating Value, Environment, Sustainability, Logistics

PORT REFORM TOOLKIT (PRTK)

May 2022 – October 2022

Prof. Dr. Gordon Wilmsmeier (Kühne Logistics University - KLU) (gordon.wilmsmeier@klu.org)

The Port Reform Toolkit provides guidance to policymakers and practitioners on how to become more sustainable and promote environmental awareness in this sector of the shipping industry. This project, funded by the World Bank, serves as an input to review current developments in the ‘greening’ of a port and outline a road map and transferable methodology to identify and implement actions to improve the environmental performance of a port as an additional module input to the toolkit.

Sustainability, Maritime Logistics, Environment, Transport Logistics

COUNTRY CLIMATE AND DEVELOPMENT REPORT (CCDR)

May 2022 – October 2022

Prof. Dr. Gordon Wilmsmeier (Kühne Logistics University - KLU) (gordon.wilmsmeier@klu.org)

The Country Climate and Development Report (CCDR) analyzes how a country’s development goals can be achieved in the context of mitigating and/or adapting to climate change. This project, funded by the World Bank, is to prepare a standardized and transferable methodology and guidelines to identify, quantify, cost, and prioritize the mitigation and adaptation measures in a country’s port or ports as an input to a Country Climate and Development Report.

Sustainability, Maritime Logistics, Environment, Transport Logistics

CLEAN CARGO INITIATIVE – SUSTAINABILITY IN THE CARGO SHIPPING INDUSTRY

June 2020 – September 2022

Prof. Dr. Michele Acciaro (Copenhagen Business School (CBS)) (mailto:mac.si@CBS.dk), Prof. Alan C. McKinnon, PhD (Kühne Logistics University - KLU) (alan.mckinnon@klu.org)

In cooperation with the Clean Cargo Initiative (CCI), this project advances sustainable operations in the maritime transportation sector. The CCI is the leading buyer-supplier forum and involves major brands, cargo carriers, and freight forwarders while reflecting around 80 percent of global container cargo capacity. The project promotes informational transparency and strives to reduce the sector’s environmental impact.
**BLOCKCHAIN FOR THE CIRCULAR ECONOMY**

December 2020 – July 2022

Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org), Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org)

Only 6% of the materials processed worldwide are recycled. More recycling in material flows would not only be a great relief for the environment but also holds enormous savings potential for companies of all sizes, especially SMEs. Effective recycling of products and materials often fails due to insufficient availability of product information along the supply chain. This research project aims to design Blockchain-based digital twins that maps the product’s composition and origin in detail and evaluate them concerning their applicability in supply chains for the circular economy. As a result, companies can assess the technical scope, ecological and economic effects, and strategic implications.

Sustainability, Digital Transformation, Environment

**AUTONOMOUS LOGISTICS IN RURAL AREAS (AULORA)**

April 2020 – March 2022

Prof. Dr. André Ludwig (Leipzig University) (mailto:ludwig@wifa.uni-leipzig.de)

New business models are needed to make rural regions attractive and livable again. Digitization offers great opportunities. The logistics of goods plays a central role here. However: conventional logistics infrastructures are unsuitable for the low flows of goods in rural areas from an economic and ecological point of view. The network "Autonomous Logistics in Rural Areas" aims to develop novel logistics systems and concrete technical solutions with the help of autonomous means of transport in order to organize deliveries and flows of goods in rural areas in a demand-oriented, cost-effective and environmentally friendly manner. The primary use case is the village store, expanded as a local logistics node in postal and parcel delivery over the last mile. Further use cases in the area of local flows of goods, materials and energy are to be developed in the network.

Digital Transformation, Environment, Infrastructure, Transport Logistics

**ZUKUNFT.DE – ZUSTELLVERKEHRE KUNDENFREUNDLICH, NACHHALTIG, FLEXIBEL, TRANSPARENT. DURCH EMISSIONSFREIHEIT**

January 2018 – December 2021

Prof. Dr. Asvin Goel (Kühne Logistics University - KLU) (asvin.goel@klu.org), Dr. Steffen Pottel (Kühne Logistics University - KLU) (steffen.pottel@klu.org)

Due to increasing environmental awareness, many governments and municipalities are formulating goals to increase sustainability of urban logistics. The project ZUKUNFT.DE, funded by the Federal Ministry of Transport and Digital Infrastructure (BMVI), aims to render last-mile deliveries in the largest German cities emission-free. For this purpose, conventional internal combustion engine vehicles shall be replaced by battery-electric vehicles in the selected regions. In view of the fact that traffic restrictions in metropolitan areas and legal restrictions regarding pollutant emissions are perspective increasing, it shall be tested whether daily operations can be conducted unimpeded and economically with the new electric propulsion technology.

Sustainability, Transport Logistics, Environment

**CHAINLOG: IDENTIFIKATION UND BEWERTUNG VON EINSATZPOTENZIALEN FÜR BLOCKCHAINS IN LOGISTIK UND SUPPLY CHAIN MANAGEMENT**
The ChainLog project, funded by the Federal Ministry for Economic Affairs and Energy (BMWi), aims to identify current examples, good practices, and guidelines for decision-making regarding the Blockchain technology for SMEs. In the light of the many possibilities for applying Blockchain and the numerous implementation alternatives, ChainLog is to provide a web-based tool for these companies. It will allow them to identify existing potentials and to prepare strategic decisions regarding the application of blockchain in a well-founded manner.

MARKETING OF HEDONIC MEDIA PRODUCTS IN THE AGE OF DIGITAL SOCIAL MEDIA, PHASE 2: NEEDMINING – ANALYSIS OF SOCIAL NETWORKS FOR TARGETED PRODUCT DEVELOPMENT

Funding phase two builds upon the findings of the first funding phase, which investigated targeted marketing communication with social networks in the early phases after product launch of hedonic media products such as books, computer games or music. This project looks at the time before product launch to investigate methods of quantitative support for the ideation and product development phases. Existing text mining approaches are to be refined and extended, enabling automated Needmining, i.e. a quantitative, objective representation of potential customer needs. This datafication of the ideation- and product development phase is to be established, so that quantitatively collected, qualitatively edited wishes, filtered out of the communication of the potential customers can be used as decision support instead of biased instinct and creativity.

SECURITY IN FOOD PRODUCTION AND LOGISTICS WITH DISTRIBUTED LEDGER TECHNOLOGY - NUTRISAFE

The greater scope of NutriSafe (funded by the German Federal Ministry for Research and Education) is to ensure the security of food production and logistics via “Distributed Ledger Technology” (DLT). This sub project uses exemplarily work out of the Hamburg Region. It aims to analyze the resiliency of the food supply chain and explore the potential of increasing transparency in regional food supply with the implementation of DLT into practice. This is further examined through knowledge transfer via consumer experiments.

DISTRIBUTION OF HEDONIC MEDIA PRODUCTS, PHASE 2: IMPACT OF SOCIAL MEDIA AND USAGE FREQUENCY OF MEDIA CONTENT ON ITS MARKETING BY PLATFORM PROVIDERS

Hedonic media products (HMP) are increasingly marketed via platforms such as Netflix (movies), Spotify (music), and Skoobe (books) that offer large assortments for streaming as flat fee subscriptions. Among other subjects in funding phase two, this project will analyze whether music labels or artists should rather sell their physical CDs or downloads of songs exclusively for a while or whether they should offer their songs on Spotify either at the same time, delayed or...
never. The question extends to whether the offering via these platforms is profitable at all.

Creating Value

**TDR³ - TIME-DEPENDENT ROUTING OF REGENERABLE RESOURCES**

November 2017 – December 2020

Prof. Dr. Asvin Goel (Kühne Logistics University - KLU) (asvin.goel@klu.org)

It can be expected that road freight transport in the European Union will increase by around 50% until 2050. This growth in road traffic will increasingly lead to traffic congestion and travel times along some routes will increasingly depend on the traffic situation. This research project, funded by the German Research Foundation (DFG) aims to develop models and methods allowing transport service providers to tackle the economical, ecological, and societal challenges that arise due to this increase, with a particular focus on planning routes and schedules for regenerable resources, such as battery-powered vehicles.

Transport Logistics, Sustainability, Environment

**INTERNET OF FOOD AND FARM 2020**

January 2017 – December 2020

Prof. Rod Franklin, PhD (Kühne Logistics University - KLU) (rod.franklin@klu.org)

How can the Internet of Things (IoT) secure sufficient, safe and healthy food and strengthen competitiveness of farming and food chains in Europe? It is expected that the project, funded by the European Community, will pave the way for data-driven farming, autonomous operations, virtual food chains and personalized nutrition for European citizens.

Digital Transformation, Food Logistics, Environment, Sustainability

**HANSEBLOC: HANSEATISCHE BLOCKCHAIN-INNOVATIONEN FÜR LOGISTIK UND SUPPLY CHAIN MANAGEMENT**

April 2018 – December 2020

Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org), Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org)

Traditionally, transport and logistics companies have exchanged documents, waybills and customs documents in paper form or, more recently, through various digital means such as email. However, the lack of an integrated software solution, due to the large number of companies involved, causes errors and does not protect records against tampering. The HANSEBLOC project, funded by the German Federal Ministry for Research and Education (BMBF) aims to develop prototypes of such an integrated system using blockchain technology.

Creating Value, Digital Transformation

**ACCELERATING THE PATH TOWARDS PHYSICAL INTERNET - SENSE**

January 2017 – September 2020

Prof. Rod Franklin, PhD (Kühne Logistics University - KLU) (rod.franklin@klu.org), Prof. Dr. André Ludwig (Leipzig University) (mailto:ludwig@wifa.uni-leipzig.de)

The SENSE project objective is to accelerate the path towards the Physical Internet (PI), so that advanced pilot implementations of the PI concept are well functioning and extended in industry practice by 2030, and hence contribute to at least 30% reduction in congestion, emissions and energy consumption. The project is funded by the European Community.

Sustainability, Digital Transformation, Transport Logistics, Environment
SMART URBAN RETAIL SERVICES – INTEGRATED SERVICE SYSTEM FOR CROSSCHANNEL-TRADE IN THE CITIES OF THE FUTURE (SURTRADE)  
March 2017 – August 2020

The project is designed to help the retail sector meet the needs of urban customers and their environments. In the future, actual product-offering will no longer solely be the physical product, but the combination of the product and a number of related services, including logistics services.

Digital Transformation, Logistics, Retailing

FEASIBILITY STUDY AND SUPPORT FOR MISSING DATA FOR MARITIME SECTOR TECHNICAL SPECIFICATIONS  
November 2019 – May 2020

Prof. Dr. Michele Acciaro (Copenhagen Business School (CBS)) (mailto:mac.si@CBS.dk), Vasileios Kosmas, PhD (Carnival Maritime GmbH) (mailto:)

The usage of alternative fuels in the transportation sectors, although able to reduce emissions produced by their operations, requires further exploration. The Joint Research Center (JRC) is developing a state-of-the-art tool which will be applied for the market analysis of alternative fuels within the transportation sectors in order to contribute to policy development. KLU supports JRC in fulfilling the EU maritime fleet database used in this tool and to develop the conceptual framework related to the uptake of alternative fuels in the maritime sector.

Sustainability, Maritime Logistics

ASSESSMENT OF THE GERMAN FUNDING PROGRAM ADDRESSING INNOVATIVE PORT TECHNOLOGIES (IHATEC)  
September 2019 – May 2020

Dr. Katharina Renken (mailto:)

Assessment of the German funding program to support innovative port technologies in German sea ports and inland ports (IHATEC) with the aim to increase and stabilize competitiveness. The KLU Hapag-Lloyd Center for Shipping and Global Logistics (CSGL) conducts the interviews with beneficiaries, and supports the mapping out of suggestions for improvement of the program.

Creating Value, Infrastructure, Maritime Logistics, Transport Logistics

SMART EVENT FORECAST FOR SEAPORTS (SMECS)  
September 2017 – February 2020

Prof. Dr. André Ludwig (Leipzig University) (mailto:ludwig@wifa.uni-leipzig.de), Prof. Dr. Hanno Friedrich (Kühne Logistics University - KLU) (hanno.friedrich@klu.org)

In order to counteract disruptions in the transport process at seaports, the actors involved must be proactively informed about the disruption and the new estimated time of arrival. So far, however, there is a lack of comprehensive forecasting models, which can estimate the new times of arrival on the basis of planned and actual data. The SMECS research project, funded by the German Federal Ministry of Transport and Digital Infrastructure (BMVI) will provide this estimation and support actors in their decisions. Initially, the project will focus on container transport on rail and will be extended to other modes of transport later.

Digital Transformation, Infrastructure, Transport Logistics
SOCIAL COMPARISONS AND ORGANIZATIONAL LEADERSHIP
August 2016 – January 2020
Prof. Christian Tröster, PhD (Kühne Logistics University · KLU) (Christian.Troester@klu.org), Benjamin Korman, PhD (Leibniz Institut für Bildungsverläufe) (mailto:benjamin.korman@lifbi.de)

The purpose of this German Research Foundation (DFG) funded research project is to advance our understanding of the cognitive bases of organizational leadership. Most leadership theories since the 60s have viewed the leader-follower relationship in isolation. We challenge this perspective by investigating the social embeddedness of this relation. In a nutshell, we argue (and find) that followers form evaluations of their leaders based on comparisons with how their leader treats other coworkers. This simple but intriguing insight has the potential to change how leadership is theoretically conceived and may help gain new insights in how people should lead their subordinates.

MARKETING OF HEDONIC MEDIA PRODUCTS IN THE AGE OF DIGITAL SOCIAL MEDIA
August 2016 – July 2019
Prof. Dr. Christian Barrot (Kühne Logistics University · KLU) (christian.barrot@klu.org), Jan Schalowski (Kühne Logistics University · KLU) (jan.schalowski@klu.org)

Social interactions among customers play a key role in the purchase and consumption process of hedonic media products (HMP) because the quality of HMP is difficult to assess. The emergence and dissemination of digital social media (DSM) substantially change the nature of these interactions. The purpose of this research project funded by the German Research Foundation (DFG) is to focus on analyzing network structures in DSM. The objective is to model these structures and gain an understanding about how interactions emerge and develop. How and why do network activity affect individuals? What are market reactions to marketing activities in the age of DSM? And how does the DSM impact on firms in the HMP industry?

SEQUENTIAL DISTRIBUTION OF HEDONIC MEDIA PRODUCTS
March 2015 – September 2018
Prof. Dr. Dr. h.c. Sönke Albers (Kühne Logistics University · KLU) (soenke.albers@klu.org), Cord Otten (University of Hamburg) (cord.otten@klu.org)

Hedonic media products (HMP) are mostly published with sequential distribution strategies. For example, motion pictures are typically displayed in movie theatres first before subsequent releases on DVD/ Blue-Ray, video-on-demand and TV. In this research project we explore the interdependencies of company generated contend (“paid media”), user generated content (“earned media”) and sales success, specifically in subsequent distribution channels. The project is funded by the German Research Foundation (DFG).

ISSUES OF LEADERSHIP IN HUMANITARIAN AID OPERATIONS
October 2016 – September 2018
Mojtaba Salem, PhD (Technische Universität München) (mojtaba.salem@klu.org), Prof. Dr. Maria Besiou (Kühne Logistics University · KLU) (maria.besiou@klu.org), Prof. Dr. Niels Van Quaquebeke (Kühne Logistics University · KLU) (niels.quaquebeke@klu.org)

Given the number of disasters such as famine, earthquakes and floods in our world, there is a need for well-executed humanitarian aid. Yet, aid organizations continue to face many problems during their operations. While the field of humanitarian aid has traditionally been looked at from an operational angle this research project, financed by the Friedrich Naumann Foundation, seeks to advance behavioral insights in the respective dynamics of the execution by leaders to better understand the organizational dynamics such as teamwork and communication in order to make
EURO HOPE MINI-CONFERENCES ON HUMANITARIAN OPERATIONS

March 2016 – June 2017

Prof. Dr. Maria Besiou (Kühne Logistics University - KLU) (maria.besiou@klu.org)

The EURO HOpe mini-conferences aims to further exchange among researchers within the field of humanitarian operations. The project is financed by the German Research Foundation (DFG) and takes place in Hamburg (2016) and Vienna (2017). Several future goals for the conference working group have been defined: improving coordination within the research area, creating a shared database to benchmark the work, achieving higher practical relevance and direct cooperation with practitioners to get to the most pressing problems and generate interesting research in theory and practice, build trust and long-term relationships with humanitarian organizations, more collaboration within the group to generate big research projects, achieve more interdisciplinary work, and create a special issue to publish the specific papers on Humanitarian Operations.

MODELING FOOD SUPPLY SYSTEMS TO IDENTIFY OUTBREAK ORIGINS

January 2017 – March 2017

Prof. Dr. Hanno Friedrich (Kühne Logistics University - KLU) (hanno.friedrich@klu.org), Abigail Horn, Post-Doc (Massachusetts Institute of Technology (MIT))

The aim of this research project, funded by the German Research Foundation (DFG), is to efficiently identify the source of large-scale outbreaks of foodborne disease while contamination-caused illnesses are still occurring, in order to resolve investigations earlier and avert potential illnesses. It proposes a holistic system for real-time source detection, which combines a dynamic commodity flow model with a spatio-temporal method for source localization on networks.

DEVELOPMENT OF AN ASSESSMENT TOOLKIT TO DETERMINE LOGISTICS COMPETENCES, SKILLS AND TRAINING

September 2016 – December 2016

Prof. Dr. Kai Hoberg (Kühne Logistics University - KLU) (kai.hoberg@klu.org), Prof. Alan C. McKinnon, PhD (Kühne Logistics University - KLU) (alan.mckinnon@klu.org), Prof. Dr. Moritz Petersen (Kühne Logistics University - KLU) (moritz.petersen@klu.org)

A recent study for the World Bank showed a shortage of people with the right skills to meet the needs of the logistics industry. A series of recommendations to governments wishing to raise the level of logistics skills in their countries was made. This research project aims to develop a toolkit that governments can use to (1) assess the availability of logistics skills, certifications and training in their countries and (2) find out how to deal with logistics skill shortages.

DIFFERENTIATED PORT INFRASTRUCTURE CHARGES TO PROMOTE ENVIRONMENTALLY FRIENDLY MARITIME TRANSPORT ACTIVITIES AND SUSTAINABLE TRANSPORTATION

January 2015 – March 2016
The project aims to make recommendations and offer a toolbox for European ports to be more environment-friendly. The project study showed how rebates on port fees to promote greener shipping have become common in the sector. If incentive schemes like this are to make a difference, they should be combined with other instruments and all ports in the EU should offer them. Funded by the European Commission.

Maritime Logistics, Environment, Sustainability

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**A GLOBAL OVERVIEW ON LOGISTICS COMPETENCES, SKILLS AND TRAINING**  
**July 2015 – March 2016**

Prof. Dr. Kai Hoberg (Kühne Logistics University - KLU) (kai.hoberg@klu.org), Prof. Alan C. McKinnon, PhD (Kühne Logistics University - KLU) (alan.mckinnon@klu.org), Christoph Flöthmann, PhD (Roland Berger, Hamburg) (christoph.floethmann@klu.org)

On behalf of the World Bank a study was conducted as part of this research project to provide a global overview on logistics competences, skills and training. Based on a global survey the research provides strong evidence for a global shortage of qualified logistics personnel on all occupational levels. The problem is most acute in emerging regions. To solve the skills shortage, the study provides numerous recommendations to the various stakeholder groups, i.e. governments, companies, logistics associations, and educational institutions, to get access to talent and to facilitate the “upskilling” of logistics labor through training and development. Those include facilitation of multi-stakeholder collaboration, updating of outdated university curricula, application of blended learning approaches, and creation of more appealing working environments for operative logistics staff.

Logistics, Creating Value

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**PREVENTING SHORTFALLS IN FOOD LOGISTICS**  
**September 2015 – January 2016**

Prof. Dr. Hanno Friedrich (Kühne Logistics University - KLU) (hanno.friedrich@klu.org)

Reliable food supply is a basic human need. In order to meet this, an efficient risk management for the prevention of food supply shortfalls is required by public authorities and private enterprises. The objective of this research project (SEAK, funded by the German Federal Ministry for Research and Education) is to support this by developing decision-support systems to analyze different scenarios of food supply shortfalls in Germany. One of the main outcomes is a macroscopic dynamic commodity flow model that describes the supply of food on a regional level. This can be used to determine the vulnerability of regions in food supply.

Food Logistics, Sustainability