# THE KÜHNE FOUNDATIONS IN THE YEAR 2017





"My Kühne Foundation has an enduring commitment to advancing the causes of education, training, research and science in the area of logistics; this also includes humanitarian logistics.

Medical education and research into allergic conditions are particularly important as well.

Finally, the Foundation is very receptive to the promotion of cultural projects, primarily in music and literature."

Prof. Dr. h.c. Klaus-Michael Kühne

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### PREFACE BY THE FOUNDER

# DEAR FRIENDS AND PROJECT PARTNERS OF THE KÜHNE FOUNDATIONS, DEAR READERS

For the Kühne Foundations, 2017 was characterised by numerous activities in their main areas of support: logistics, medicine and culture.

For over seven years now, the Kühne Logistics University (KLU) has qualified international executives in logistics and business management and has continuously expanded its range of services in the areas of research and teaching. In September 2017, on the recommendation of the Scientific Council, the Hamburg Senate awarded KLU the right to confer PhDs - a milestone in the development of the university. The growing number of students confirms the attractiveness of the University's courses and doctoral programmes: In September we welcomed 133 new students, more than ever before.

In addition to this, the Kühne Foundation has established endowed chairs at universities in Switzerland, Germany and China for many years now. In 2017, this involvement was extended to include the logistics chair

at the renowned School of Management at the Universidad de los Andes in Bogotá, Colombia. One of the main areas of research associated with this chair is the economic development of maritime transport. Supervision of master's and bachelor's theses in this field and in port logistics is also provided. The lively exchange between and close networking of the chairs and educational institutions supported by the Kühne Foundation is very encouraging. It benefits both the students and the entire logistics industry.

For over 40 years, the Kühne Foundation has been committed to education and training in logistics and has carried out its activities on an increasingly international basis. New momentum in efforts to build logistics processes and structures in developing countries in a sustainable way is expected to arise as the result of close collaboration with the Bill & Melinda Gates Foundation, accompanied by an educational offensive, primarily in African countries. The three-year cooperation agreement was signed in October 2017.



Prof. Dr. h.c. Klaus-Michael Kühne, President of the Board of Trustees of the Kühne Foundations

Consultancy services and training in the field of humanitarian logistics is of great importance to national and international aid organisations and governmental agencies, as it enables them to provide disaster and emergency aid in a more efficient manner. In 2017, HELP Logistics AG, a subsidiary of the Kühne Foundation, supported international NGOs and governmental agencies in 29 countries with its logistics and supply chain management know-how.

My wife and I have made it our aim to minimise the health-related and social consequences of widespread allergies, which is why we founded the Christine Kühne - Center for Allergy Research and Education (CK-CARE) back in 2009. In research, important insights were gained, which have been passed on to doctors and medical students as well as professionals working in the healthcare sector. Now, we focus on establishing an Allergy Campus in Davos. The aim is to create an internationally recognised centre of excellence in the field of research, diagnostics, personalised prevention and allergy treatment, in collaboration with Hochgebirgsklinik Davos and the SIAF research institute.

With regard to cultural projects, the emphasis is placed on music and literature. In Switzerland, support was once again given to Lucerne Festival, Zurich Opera House and the Music Summer on Lake Zurich concert programme.

With a substantial donation, distributed over the next five seasons, the Klaus-Michael Kühne Foundation has not only supported the extension of the contract of Kent Nagano, the General Music Director of the Hamburg Philharmonic State Orchestra, but has also created the basis from which he can succeed in carrying out his planned measures to improve the quality of the orchestra.

On the occasion of an opera gala forming part of the Mecklenburg-Vorpommern Festival, the first "Christine Kühne Prize" was awarded to charismatic and versatile singer Olena Tokar.

In cooperation with the Free and Hanseatic City of Hamburg, significant support has been given to the 9th edition of the Harbour Front Literature Festival, which once again drew in many literature enthusiasts and saw the "Klaus-Michael Kühne Award" given to author Fatma Aydemir. The "Hamburger

Tüddelband" award, reserved for the best children's book, was presented to author Birte Müller.

My wife and I would like to extend our special thanks to all those who have provided valuable input to the Foundation over the past year. Particular mention should be given to Prof. Dr. Karin von Welck and Mr. Rolf Hunck, long-standing members of the Klaus-Michael Kühne Foundation's Board of Trustees who ended their time with the Foundation last year for reasons of age.

In addition, I would like to thank all the members of the Board of Trustees, and the Managing Director, Prof. Dr. Marc Gottschald, who left the Foundation at the end of 2017 following a relocation for personal reasons, as well as the employees and our project partners. They all contributed to a successful year for the Foundation.

Kind regards,

Klaus-Michael Kühne President of the Board of Trustees

## THE KÜHNE FOUNDATIONS

#### KÜHNE FOUNDATION

The public-benefit Kühne Foundation was established by the Kühne family in Switzerland in 1976. The Kühne Foundation is an operative organisation which initiates and implements most of its projects itself.

The deed of the Foundation specifies the following two main areas of support:

- Support for training, further education, scholarships, and research in the fields of transport and logistics.
- 2. In addition, support of other especially medical sciences, humanitarian, charitable and church issues, as well as cultural projects.

The Kühne Foundation has established three companies to fulfil these goals: the Christine Kühne - Center for Allergy Research and Education (CK-CARE) was established in Davos in 2009. Domiciled in Hamburg/Germany, the Kühne Logistics University (KLU) was founded in October 2010, and HELP Logistics AG was incorporated in 2014 with headquarters in Schindellegi/Switzerland.

In 2017 the total sum contributed by the Kühne Foundation was 20.5 Mio. Swiss Francs.

#### KLAUS-MICHAEL KÜHNE FOUNDATION

The second Foundation of the Kühne family, the Klaus-Michael Kühne Foundation, was established in Hamburg, the hometown of the founder, in 2008.

This Foundation mainly supports the following areas:

- 1. Culture, in particular music and literature in Hamburg.
- 2. According to its statutes it also supports the preservation of historical monuments, science and research as well as vocational education establishments for training and further education.

Over the past year the Klaus-Michael Kühne Foundation has focused on the support of cultural events in Germany, particularly in Hamburg, organising selected projects to ensure the continued development of the Hanseatic city as a major city of culture. The further development of the Hanseatic city as a cultural metropolis is supported with selected projects.

In 2017 the total sum contributed by the Klaus-Michael Kühne Foundation was around 1.3 Mio. Euros.





### **BOARD OF TRUSTEES**

#### KÜHNE FOUNDATION

Prof. Dr. h.c. Klaus-Michael Kühne, President Dr. Thomas Staehelin, Vice-President Christine Kühne Michael Behrendt Dr. Jörg Dräger Karl Gernandt Dr. Wolfgang Peiner

#### KLAUS-MICHAEL KÜHNE FOUNDATION

Prof. Dr. h.c. Klaus-Michael Kühne, President Prof. Dr. Karin von Welck Karl Gernandt Rolf Hunck

#### PROF. DR. H.C. KLAUS-MICHAEL KÜHNE

He joined Kühne + Nagel in 1958 after completion of his commercial apprenticeship and was appointed Chief Executive Officer in 1966. From 1975 onwards he was Delegate and member of the Board of Directors and later became Executive Chairman at the company's international head office in Switzerland. He is majority shareholder in Kühne + Nagel International AG. Together with his parents he founded the Kühne Foundation in 1976, mainly to promote research in logistics and medicine; the Klaus-Michael Kühne Foundation was established in 2008, supporting numerous projects in the areas of music and literature.

#### DR. THOMAS STAEHELIN

He holds a PhD in law and has been a partner in the law firm Fromer Advokatur und Notariat in Basel since 1981. Chiefly responsible for international clients, his focuses include corporate law, mergers and acquisitions, tax law, contract and commercial law, as well as banking and securities law. He is member and/or President of the Board of Directors of several Swiss and international companies. Moreover, he is director and president of the tax and finances commission at economiesuisse and president of the Chamber of Commerce of both Basels.

#### **CHRISTINE KÜHNE**

She is married to Klaus-Michael Kühne and supports him in all of the projects by the two Foundations. The Christine Kühne - Center for Allergy Research and Education was founded in 2009 on Mrs. Kühne's initiative to make a lasting impact on research into allergies. She is patron of the Children's and Young Adult Literature Authors Award in the context of the Harbour Front Literature Festival, where she presents the "Hamburger Tüddelband" prize. The Mecklenburg-Vorpommern Festival organised the first "Christine Kühne Prize" in 2016.

#### MICHAEL BEHRENDT

After studies in law, Michael Behrendt joined VTG Vereinigte Tanklager und Transportmittel GmbH in 1985, where he was appointed Managing Director in 1994. He became Chief Executive of VTG-Lehnkering AG in 1999. He was Chairman of the Executive Board of Hapag-Lloyd AG from 2002, and in 2014 he took over as Chairman of the Supervisory Board of Hapag-Lloyd AG. He is also President of the Übersee-Club e.V. in Hamburg and board member of the nonprofit science organisation Stifterverband für die Deutsche Wissenschaft e.V.

#### DR. JÖRG DRÄGER

Dr. Jörg Dräger studied physics and business administration in Hamburg and New York. After graduating, he worked for the consultancy firm Roland Berger in Frankfurt/Main. He returned to Hamburg as CEO of Northern Institute of Technology. Dr. Dräger (independent) was Senator for Science and Research of the City of Hamburg from 2001 - 2008, member of the Conference of Ministers of Education and the Arts, and deputy member of the Federal Council. He has been a Director of the Bertelsmann Foundation since 2008.

#### KARL GERNANDT

Karl Gernandt started his career with Deutsche Bank after graduating with an MBA from the University of St. Gallen. He moved on to A.T. Kearney, focusing on strategic financial services projects, and then to Alsen AG and Holcim, most recently as CEO of the Region Western Europe. He was Chairman of the Board of Directors of Kühne + Nagel International AG from 2011 - 2016, and has been Vice-Chairman since 2016. He is Executive Chairman of Kühne Holding AG and member of the Supervisory Boards at Hapag-Lloyd and VTG.

#### **ROLF HUNCK**

Rolf Hunck worked at the Deutsche Bank for the investment business of private customers for over 50 years. In 1993, he was appointed to the Management Board of Deutsche Bank and has also been Vice-Chairman for the private wealth management division in Germany since 2002. Moreover, he contributes his experience as a member of various supervisory and advisory boards. He is involved in a number of nonprofit foundations as an expression of his charitable commitment.

#### DR. WOLFGANG PEINER

He initially completed an apprenticeship at Kühne + Nagel before going on to study in Hamburg and Kansas/USA. Thereafter he worked as a tax adviser and auditor for Arthur Andersen & Co., the Werner Otto Group and as a Director/Chief Executive of the Gothaer Group. For many years he was member of the Board of Directors of Treuhandanstalt and Kühne + Nagel International AG, as well as on the Supervisory Board of Deutsche Lufthansa. He was Senator of Finance in the City of Hamburg from 2001 - 2006, thereafter founding president of KLU.

#### PROF. DR. KARIN VON WELCK

She read political sciences, ethnology, German and linguistics (Hamburg/Cologne) and then worked for the Rautenstrauch Joest Museum for Ethnography Cologne and as Director of the cultural history section of the Reiss Museum Mannheim. From 1998 - 2004, she was Secretary General of the German Federal Cultural Foundation, being then appointed Senator for Culture in Hamburg and later Senator for Culture, Sport and Media from 2008 - 2010. She is an active member of numerous foundation boards and committees on cultural policies.

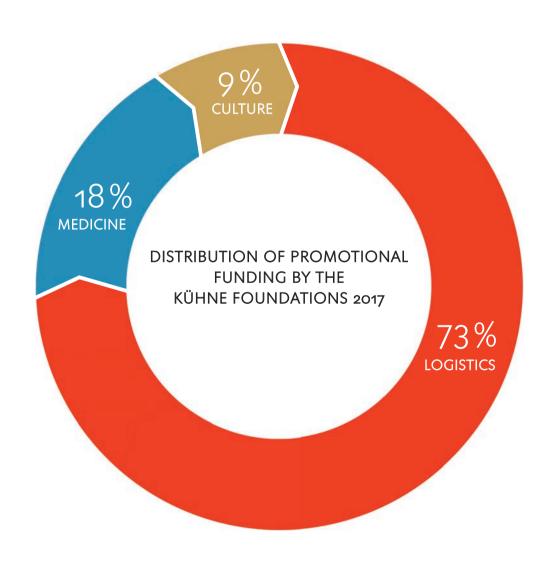
# GLOBAL ACTIVITIES OF THE KÜHNE FOUNDATIONS





### **FUNDING AREAS**

The Kühne Foundations support projects with a focus on education and training, research and science in the area of transportation and logistics, as well as in other - especially medical - areas of science. They also provide funding for humanitarian, charitable and church issues, as well as for cultural projects.



#### FUNDING IN THE AREA OF LOGISTICS

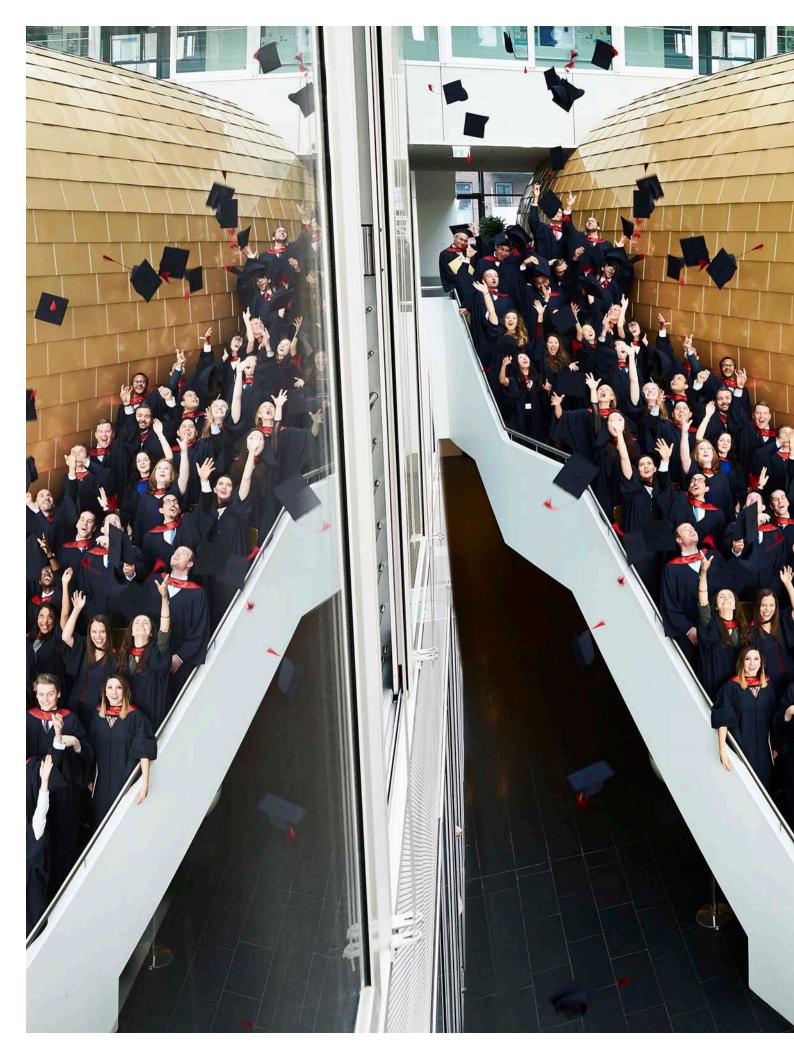
The Kühne Foundation has endowed professorships at a number of universities around the world for many years. Particularly noteworthy is the commitment to the Kühne Logistics University - the Scientific University of Logistics and Management (KLU), which was established in 2010. It is the flagship of the Foundation. Seminars have been offered in cooperation with leading universities and training organisations for years. Further education in areas of logistics was transferred to a separate department in 2015 in order to emphasise its particular importance. In response to the growing challenges in humanitarian operations HELP Logistics AG was established in 2015. It provides pro-bono services through operational and executive level training, consulting services on complex supply chains and also outreach activities, such as publications and conferences.

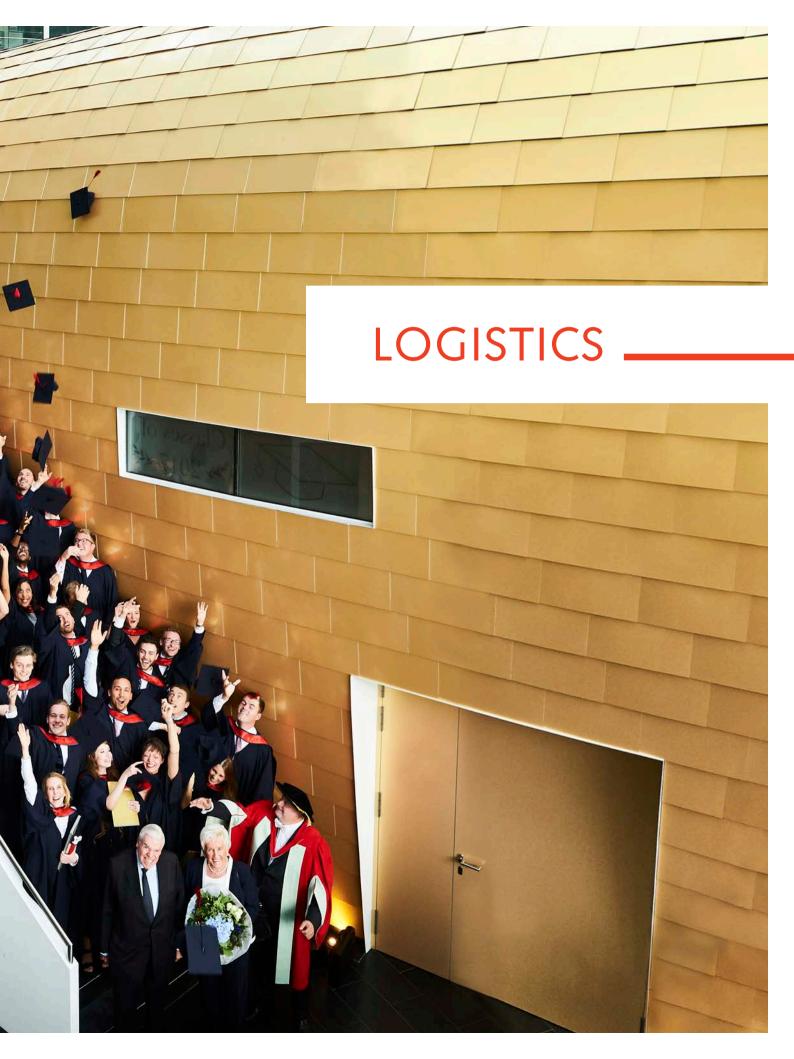
#### FUNDING IN THE AREA OF MEDICINE

The medical interests of the Kühne Foundation focus on allergic conditions. For instance, it founded the CK-CARE (Christine Kühne – Center for Allergy Research and Education) 2009 in Davos. The stated objective is to minimise the medical impact of widespread allergy conditions through research and education. Cooperating closely with Hochgebirgsklinik Davos and the research institute SIAF, CK-CARE is currently building the Davos Allergy Campus, a unique facility that will fully exploit the synergies between treatment, research and education in a manner unparalleled anywhere else in the world.

#### FUNDING IN THE AREA OF CULTURE

In the area of culture, the Kühne Foundation mainly provides support in the areas of music and literature. It has again funded numerous concerts, operas and festivals in Switzerland, Germany, Austria and Italy. The preservation of churches and chapels is another of the Foundation's concerns. In the literary world, the Kühne Foundation supports the annual Harbour Front Literature Festival in Hamburg.





### LOGISTICS PROJECTS

Logistics forms the backbone of the modern economy and lays the foundation for international trade and exchange. The logistics industry is facing major challenges as digitalisation, globalisation and the call for more sustainability are creating new complex dependencies and interrelationships. The Kühne Foundation links research institutions working on these developments and promotes the training and further education of managers who face the new challenges. Furthermore, the Kühne Foundation is engaged in the field of humanitarian logistics and supports humanitarian organisations with the HELP Logistics AG in the implementation of efficient and effective humanitarian responses.

#### KÜHNE LOGISTICS UNIVERSITY (KLU)

#### KLU

The Kühne Logistics University was founded in 2010 with the aim of offering a first-class academic education in the fields of management and logistics. KLU generates a strong link between scientific theory and practice and maintains an international outlook. Professors, students and staff from all over the world come together on the campus in Hamburg's HafenCity where the

entire course programme is taught in English. KLU provides a full range of academic opportunities, including undergraduate and post-graduate degrees and MBAs for professionals seeking further education. In addition, Kühne Logistics University hosts public events such as summer schools, workshops, seminars, and customised training programmes for companies.



Kühne Logistics University



#### KÜHNE LOGISTICS UNIVERSITY (KLU)

KLU is a private, independent and stateapproved university with 23 professors and roughly 330 students representing 35 countries. It is located on a state-of-the-art campus in Hamburg's HafenCity. KLU offers the following degrees instructed in English:

- BSc in Business Administration
- MSc in Management
- MSc in Global Logistics and Supply Chain Management
- TriContinent MSc in Global Supply Chain Management

- Master in Maritime Law and Logistics
- MBA in Leadership and Supply Chain Management (extra-occupational)

KLU also offers a structured PhD programme and management seminars for professionals.

KLU prides itself on outstanding research and excellent teaching, offering an interdisciplinary approach to current issues in the key competence areas "Digital Transformation", "Creating Value" and "Sustainability" in the areas of transport, global logistics and supply chain management.



Klaus-Michael Kühne at the graduation ceremony 2017



Right to confer PhDs: KLU President Prof. Thomas Strothotte with Senator Katharina Fegebank

#### 2017 Highlights

2017 was a year of milestones for KLU. The institution was able to expand its range of services in research and teaching, including the year's most important achievement: earning the right to confer PhDs.

#### Right to Confer PhDs for KLU

Since its inception KLU has been committed to working toward this achievement. In September, the Hamburg Senate granted the university, on the recommendation of the Science Council, the right to confer PhDs.

As a result, KLU is now one of only 15 of the 118 private universities in Germany that are allowed to award doctorates independently. In the future, doctoral candidates at KLU will be able to obtain a doctorate in management with a special focus on logistics. The professors at KLU currently supervise 25 doctoral candidates.

#### **New Institutional Cooperation**

KLU established three new professorships in cooperation with the Bucerius Law School in Hamburg, the Institute for World Economics in Kiel and the Hasso Plattner Institute in Potsdam. In cooperating with these leading scientific institutions, KLU is expanding its profile and focusing even more on interdisciplinary approaches. The three appointed professors do research on digital transformation in logistics from the perspectives of law, economics and computer science.

### New Degree Programme on Three Continents

In September, the first cohort of students of the TriContinent MSc in Global Supply Chain Management began studying at KLU. For this new programme, KLU cooperates with the Tongji University in Shanghai, China, and the University of Tennessee in Knoxville, USA. The students will spend one semester at each of the three universities before writing their final thesis in the fourth semester. In this way, they experience three of the most important economies of the world firsthand. In addition to gaining expertise in their chosen field, the students also expand their intercultural skills and international network.



Prof. Dr. Catharina Maracke, Prof. Dr. Dimka Karastoyanova and Prof. Dr. Christina Raasch (from left to right). Three new professors join research in the field of digital transformation.

#### Visitor Record at the Night of Science

In November, KLU once again opened its doors for the Hamburg Night of Science. Participants were invited to join in on games and information on humanitarian logistics, route optimisation, supply chain management and warehouse management. Lectures offered an insight into the research fields of the KLU. The diverse programme was very well received by a record number of more 650 visitors for the event at KLU.

#### Teaching and Research

KLU offers its students excellent conditions. Professors, belonging to the world elite in their respective fields, conduct small classes. What is more, students benefit from the inspiring atmosphere on campus and KLU's impressive network of business contacts. In September 2017, 133 young people began their studies at KLU - more than ever before.

### University Award Freight Transport and Logistics for KLU

KLU received the University Award for Freight Transport and Logistics from the Federal Ministry of Transport and Digital Infrastructure for its outstanding courses in the field of logistics. At the award ceremony, Federal Minister Alexander Dobrindt drew special attention to the international focus of KLU. He also added that KLU prepares its students practically and comprehensively for careers in the globalised world of logistics.

#### Top Marks in CHE Ranking

Once again, the non-profit CHE Centre for Higher Education Development set out to compare German universities according to rank. KLU scored, yet again, very well. In addition to research criteria, the fact that students themselves assess the academic environment at their institutions makes the CHE ranking all the more special.





Night of Science at KLU



#### **Current Research Projects**

The research at KLU focuses on the key competence areas of digital transformation, value creation and sustainability in transport, global logistics and supply chain management. In 2017, research projects funded by various federal ministries, the German Research Foundation (DFG) and the European Union have started. In addition, KLU entered into research cooperations with renowned companies.

The project SURTRADE (Smart Urban Retail Services), which is funded by the Federal Ministry of Education and Research, deals with the dwindling boundaries between online and stationary trade. Customers no longer buy only online or only locally, but use a variety of different channels. The project, led by KLU Professor André Ludwig, is developing a service concept for specialist dealers and retailers that takes into account the entire purchasing process from the creation of needs to advice, purchase and delivery of goods through to customer loyalty.

In the project SMECS (Smart Event Forecast for Seaports), KLU professors André Ludwig and Hanno Friedrich are working together with Professor Frank Straube from the Technical University of Berlin, a chair sponsored by the Kühne Foundation. The aim of the project is to forecast emerging disruptions such as delays and terminal overloads in international freight traffic even before they occur and to make recommendations for action. The project is funded by the Federal Ministry of Transport and Digital Infrastructure.

The Internet of Things (IoT) and its use in agriculture is the subject of the "Internet of Food and Farm 2020" project, funded by the European Union as part of its Horizon 2020 programme. For KLU, Professor Rod Franklin is participating in the project that investigates the application of the IoT in agriculture and possible benefits such as improving crop yields, reducing the negative effects of fertilizers, pesticides and water consumption.

#### New Advisory Board for KLU

In order to further develop its links with business, science and politics, KLU appointed an advisory board in June 2017. The members, top managers and renowned scientists, will support KLU with their wide-ranging expertise. The Advisory Board includes

- Prof. Dr. Burkhard Schwenker (chairman) -Chairman of the Advisory Council, Roland Berger GmbH;
- Michael Behrendt (vice-chairman) Chairman of the Supervisory Board, Hapaq-Lloyd AG;
- Milagros Caiña-Andree Member of the Executive Board, BMW AG;

- Hans-Georg Frey Member of the Executive Board, Jungheinrich AG;
- Dr. Fabian Heilemann Partner, Earlybird Venture Capital;
- Dr. Rainer Hillebrand Deputy CEO, Otto Group;
- Zhengrong Liu Member of the Executive Board, Beiersdorf AG;
- Prof. Dr. Frank Straube Head of the Logistics Department, Technical University of Berlin and Member of the Kühne Foundation Network:
- Prof. Dr. Stephan Wagner Chair of Logistics Management, ETH Zurich and member of the Kühne Foundation Network.





Federal Institute of Technology (ETH), Zurich

# CHAIR FOR LOGISTICS MANAGEMENT AT THE SWISS FEDERAL INSTITUTE OF TECHNOLOGY ZURICH (ETH ZURICH)

The areas of focus for the team under the leadership of Professor Stephan Wagner at the Chair for Logistics Management are innovation, start-up companies in supply chains, digitisation, sustainability, ethics in supply chains and humanitarian logistics.

In the course of research, the team does not merely rely on publishing their results in top-class scientific and practice-oriented journals, but also present and discuss them at numerous international scientific conferences. When supporting students, special attention is paid to those who tackle practice-oriented topics in their master's theses. This is reflected by the fact that apart from the Chair's researchers students have also been awarded remunerated prizes. Furthermore, international cooperation has been strengthened through research stays of PhD students from the Chair for Logistics Management at the University of California at Berkeley and the University of Cambridge.

With over 1,200 citations, frequency of publication - a meaningful indicator of research's significance - has increased once again. Thus, the number of citations has been growing continually from year to year for over a decade. This is ample proof that the work carried out by the Chair for Logistics Management has been adopted by the expert community and is inspiring researchers around the world.

#### Management of Start-Up Suppliers

More and more companies are working to intensify their cooperation with start-up companies. In addition to investment through venture funds, the involvement of start-ups in the role of suppliers is growing in importance. Start-ups are flexible, innovative and drive technological developments. In order to be able to benefit from these characteristics, companies are trying to build supplier relationships with these start-ups. As part of a recently completed research project, carried out in collaboration with CAPS Research, a research think

tank in the field of procurement and supply chain management, the challenges of such cooperation and the approaches that would be required were analysed. Based on interviews with large and medium-sized customers as well as a large number of start-up companies, it was possible to identify "best practices". At the same time, it is important that supplier management adapts to the requirements of start-ups. This involves identifying and evaluating start-up suppliers, and integrating them into the supplier portfolio. Unlike the traditional, established suppliers, start-ups require rapid progress and the opportunity to implement pilot projects in partnership with the customer. These requirements are incompatible with the traditional procedure for selecting suppliers. Ultimately, promising start-ups will develop alongside the customers who have a supplier management approach that is tailored to their needs.

#### Insuring against Supply Chain Risks

On behalf of and in collaboration with a Swiss insurance company, the task was to obtain a better understanding of extended business interruption coverage for interruptions to supply chains. When unforeseen interruptions to the supply chain occur (e.g. due to quality defects on the part of the suppliers, failure of warehouse management systems as the result of an IT problem or supply disruption following a natural disaster), customers can suffer huge losses. This is why customers insure themselves against these risks. As part of the project, large quantities of claims data from the insurance company were analysed using data analytics. By examining the resulting findings, e.g. those relating to the characteristics of the extent of damages due to operational disruptions in the supply chain, their relation to property insurance, the times required for normal operation to resume or the differences between industries, insurance companies will be able to better adapt their offers and premiums to the needs of their industry customers.

#### From Research to Practice

In 2017, the team working at the Chair for Logistics Management was once again successful in bringing the findings of research projects closer to corporate practice. Important aspects of this work include publishing practice-oriented material as well as providing education and training in a range of different formats. In addition to the basic teaching offered as part of ETH Zurich's degree programmes, current findings in management training were integrated in seminars and Executive MBA programmes.

## SWISS FEDERAL INSTITUTE OF TECHNOLOGY ZURICH (ETH ZURICH)

Freedom, self-responsibility, entrepreneurial spirit and cosmopolitanism: These Swiss values are also those upon which ETH Zurich is based. The roots of one of the world's leading universities for engineering and natural sciences reach back as far as 1855, when the founders of modern-day Switzerland established this place of innovation and knowledge.

At ETH Zurich there are around 19,800 students from more than 120 countries, of whom 4,000 are doctoral candidates. Roughly 500 professors currently teach and research in the fields of engineering sciences, architecture, mathematics, natural sciences, system-oriented sciences, as well as management sciences and social sciences. ETH Zurich regularly places as one of the best universities in the world in international rankings. Since 1996, 355 spin-off companies have emerged from ETH Zurich. The fact that there are 21 Nobel Prize winners who have studied, taught or conducted research at ETH Zurich, emphasises the university's outstanding reputation.



WHU-Campus, Vallendar

# KÜHNE INSTITUTE FOR LOGISTICS MANAGEMENT AT WHU - OTTO BEISHEIM SCHOOL OF MANAGEMENT, VALLENDAR

The Kühne Institute for Logistics Management, led by Professor Spinler and Professor Wallenburg, is responsible for all logistics-related education and training activities at WHU, which range from bachelor's degrees to the Executive MBA programme and also include the WHU's Kid's University.

Moreover, the institute is in charge of all logistics research being carried out at WHU. Research activities focus on the topics of sustainability and risk management in supply chains and logistics networks, humanitarian logistics, e-commerce, innovation management in logistics, the management of logistics companies and logistics alliances, as well as logistics outsourcing.

The current research at the Kühne Institute allows trend-setting recommendations to be made on how to structure logistics management. In addition to publications in high-profile journals, such as "Decision Analysis" and "Transportation Research", two of 2017's specific research projects are worth mentioning:

In a project involving HELP Logistics AG, the Humanitarian Logistics consultancy and training organisation set up by the Kühne Foundation, and the World Food Programme (WFP), the supply chain for Bhutan's school food programme was analysed and optimised. Data collection proved to be difficult at times; however it was successful thanks to the efforts of a HELP employee on site. Possible savings of up to 15 per cent were identified and subsequently realised.

In a project carried out in collaboration with the British Universities of Cambridge and Lancaster, focus was directed towards the structure of contract logistics business relationships and the design of the underlying contracts. Based on interactions with more than 200 logistics companies, it was, for instance, analysed why performance-based contracts do not achieve the intended improvements in performance in many instances. Here, special attention was paid to customer behaviour.

In the area of executive education, which provides senior executives with the latest logistics knowledge, numerous groups from China were familiarised with the opportunities and challenges of Industry 4.0. The guests from renowned universities such as Peking University, Sun-Yat Sen Business School and Xiamen University were introduced to the basic elements of cyber-physical systems, which are characterised by the constant exchange of data between machines and production components. Furthermore, company visits allowed the participants to evaluate the current state-of-the-art and to discuss this against the backdrop of the Chinese "Made in China 2025" initiative.

In March 2017, under the motto "connectivity", the 14th annual "WHU-Campus for Supply Chain Management" took place, also supported by the Kühne Foundation. In the speeches and workshops held by company representatives and scientists, the ways in which logistics both enable and benefit from networking were discussed. The two-day conference was characterised by a broad mix of innovative approaches, that prompted intensive discussions.

## WHU - OTTO BEISHEIM SCHOOL OF MANAGEMENT

The WHU - Otto Beisheim School of Management is a privately financed business school with an international focus that is afforded the rank of a university. The institution, founded in 1984, is one of Europe's most renowned business schools and enjoys an outstanding reputation on an international level. In October 2012, the WHU opened its second campus in Dusseldorf. Since then, these two sites have given fresh impetus to the German university system, and shaped the education of future executives.

The WHU sets an example for future-oriented research and teaching in the field of business administration. There are currently close to 1,300 students enrolled in the school's bachelor's, master's and doctoral programmes. WHU also offers tailor-made executive education programmes, which are adapted to meet companies' individual needs. Its international network comprises over 200 partner universities allowing the exchange of lecturers and students, and the forming of research partnerships, across all continents. The WHU is certified by the most highly respected German, European and American accreditation agencies.





Berlin Institute of Technology (TU), Berlin

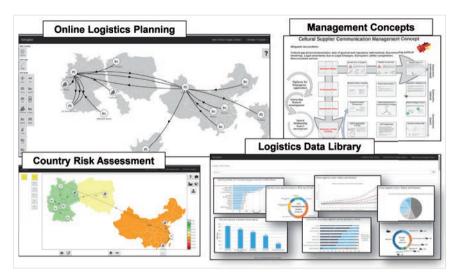
# "INTERNATIONAL LOGISTICS NETWORK" COMPETENCE CENTRE AT THE LOGISTICS FACULTY OF THE TECHNICAL UNIVERSITY OF BERLIN (TU)

Since 2005, the Kühne Foundation has given support to the "International Logistics Network" competence centre, which is part of the Logistics Department at the TU Berlin Institute for Technology and Management.

Professor Frank Straube heads the department of around 18 employees, who provide teaching and research in the field of integrated logistics. Around 80 degree theses with a high level of practical relevance are supervised each year. The faculty is involved in international networks. It maintains an especially close collaborative relationship with the Chair for International Logistics Networks and Services which the Kühne Foundation supports at the Sino-German School for Graduate Studies at Tongji University in Shanghai and the Kühne Logistics University in Hamburg. In cooperation with the Tongji University, a double master's and double doctoral degree programme with an emphasis on logistics has been developed.

In 2017, the extension of an Internet-based navigation tool proceeded as planned. It is aimed to optimise international, particularly Sino-German, logistics networks as a systematic planning tool for scientists and managers working in the industrial and logistics services sectors. Furthermore, three working groups involving managers of notable companies in Germany and China and several case studies were formed and completed as part of the research project.

Contentwise, the research project deals with, among other topics, volatility management in logistics networks, with the aim of developing a tool for measuring and managing volatility as of 2018. Research into the impact of different cultures on risk management in an international context was also conducted. Against this backdrop, several scientific papers were published in 2017 in both application-oriented and academic specialist media (e.g. International Journal



Functionalities of the logistics planning tool

of Physical Distribution and Logistics Management, Supply Chain Management: An International Journal, Journal of Supply Chain Management, Supply Chain Forum: An International Journal).

The online navigation tool is available free of charge to any interested users. The overarching objective of the navigation tool is to assist specialists in the strategic and tactical planning of robust logistics networks. Other functions for the planning tool, such as a country-specific risk assessment, have been successfully implemented. A new broadcasting function supports the planning tool's international co-creation planning process.

The design of the online navigation tool and the organisation of the working groups were carried out in cooperation with the Kühne Foundation's endowed chair at Tongji University, led by Professor Sidong Zhang.

At TU Berlin, the Competence Centre supported the "International Procurement" and "Global Logistics Management I, II" courses that form part of the industrial engineering master's degree, which frequently occupies one of the top spots in the faculty-wide teaching evaluation.

#### TECHNICAL UNIVERSITY OF BERLIN (TU)

The TU Berlin is a globally recognised traditional university based in Germany's capital. With around 33,000 students, 345 full professors and approximately 2,700 scientific staff members, the TU Berlin is one of Germany's largest universities. As a well-known research university, the TU Berlin fosters cooperations between corporate practice and science both within Germany and abroad. It conducts research at a top international level. The TU Berlin initiated the Berlin Digitisation Work Group. Transforming into a digital capital, companies will finance 50 new IT professorships in Berlin.

The wide range of courses offered by TU Berlin allows students to receive a transdisciplinary, scientific education, which takes account of the university's social and global responsibilities. With over 3,000 students, business engineering is the largest academic programme at TU Berlin. The students' demand for bachelor's and master's courses in logistics has increased significantly. Approximately 200 students from the TU Berlin and international academic programmes are trained on integrated logistics each year.



Tongji University, Shanghai

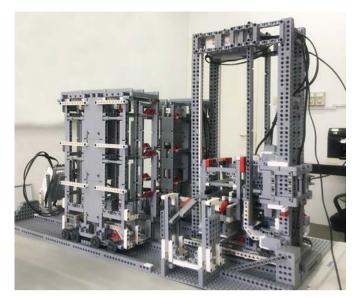
# CHAIR OF LOGISTICS MANAGEMENT AT TONGJI UNIVERSITY, SHANGHAI

The "International Logistics Networks and Services" Chair within the framework of the CDHK (Chinese-German Graduate School) at Tongji University is supported by the Kühne Foundation and headed by Professor Sidong Zhang. It operates within a wide research area, offers a range of courses for Chinese and foreign students and strengthens collaborative ties with industry and logistics.

In June 2017, the logistics chair set up the "LEGO Laboratory for Supply Chain Technology and System Research". The laboratory is used to design and investigate different supply chain operations using robots and IT technology for innovative research, application-oriented teaching and training. Three systems have been installed in the

LEGO laboratory: 1. Automatic Warehouse System, 2. Queuing and Manufacturing System, 3. Automatic Guide Vehicle (AGV) System.

Cooperation with the logistics department of TU Berlin as part of the "Navigator for German-Chinese Logistics Networks" research project also continued in 2017. The Chair also worked together with the Alibaba Research Institute at Arizona State University to carry out a data analysis (using large quantities of data from Alibaba's real-time transactions) to study the sensitive relationship between responsiveness and the demand for multiple price structures for complementary products. A multi-variant inventory model was developed in partner-ship with Arizona State University.



Automatic Warehouse System of the LegoLab

The Kühne Foundation's Logistics Chair offers students of Tongji University and its partner universities (including ETH Zurich, University of Mannheim, ESC Rennes Business School, ESCP Europe Business School, Marquette University) a range of courses and lectures. In March 2017, the "Designing Low Footprint Distribution Networks" module was taught to a group of Executive MBA students of Kühne Logistics University (KLU). Supervision has also been given to joint masters students at TU Berlin.

In April 2017, the establishment of the "Xiongan New Area" in Hebei province was announced. After the Shenzhen Special Economic Zone and the Shanghai Pudong New Area, this will be another area of national importance and represents a historic and strategic decision by the Central Committee. Professor Zhang is a member of an expert group at the research campus which deals with smart logistics planning for the Xiongan New Area.

#### TONGJI UNIVERSITY, SHANGHAI

Tongji University is among the most prestigious institutes of higher learning in the People's Republic of China and was founded in 1907 by German doctors. It is governed by the Chinese Ministry of Education as a specialised university. Cross-sectional subjects in engineering and business disciplines including logistics and transportion are of particular importance. The university's School of Economics and Management (SEM) ranks among the top 5 business schools in China. As a joint institution linked to both the German Academic Exchange Programme (DAAD) and Tongji University, the Chinese-German Graduate School (CDHK) has been one of the most successful scientific exchange projects for both countries.

More than 50,000 students are enrolled at Tongji University, which currently employs over 4,200 lecturers and researchers. As one of the country's most important research centres, Tongji University hosts 15 state research institutes with specialised laboratories at a national, provincial and ministerial level, in addition to research institutions for engineering. The university is also affiliated with six clinics.



Universidad de los Andes, Bogotá

# LOGISTICS DEPARTMENT OF THE SCHOOL OF MANAGEMENT AT THE UNIVERSIDAD DE LOS ANDES IN BOGOTÁ

Since March 2017, the Kühne Foundation has supported the Logistics Chair at the School of Management at the Universidad de los Andes in Bogotá, under the leadership of Professor Gordon Wilmsmeier. It runs courses in logistics and operations research as part of its bachelor's programme and Executive MBA.

The Chair's research focuses on the economic development of maritime transport as well as port development, port management and port politics. To this, the book Maritime Mobilities, edited by Professor Wilmsmeier and Professor Monios (Kedge Business School, Marseille; France), was published in December. Supervision of master's and bachelor's theses in the subject areas of maritime transport and port logistics (including sustainable performance and energy efficiency) is also provided.

The position of the Logistics Chair is demonstrated by its leadership of the global Port Performance Research Networks (PPRN) with its annual meeting taking place in the scope of the International Association of Maritime Economists (IAME) conference, and in its lead of the research project on sustainable performance in terminals, which is being conducted in collaboration with the University of Bremen, Germany, the University of Gran Canaria, Spain, and the Global Logistics Emissions Council.

The Chair works closely with the Kühne Logistics University and is an active member of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) working group and the World Association for Waterborne Transport Infrastructure (PIANC), which are developing a system of classification for inland waterways for South America.

In April 2017, the Chair hosted a seminar on the topic of electromobility on inland waterways, including representatives from private companies and public institutions (German-Colombian Chamber of Industry and Commerce) with over 80 participants, during which the potential of electromobility on the water in Colombia's peripheral and post-conflict regions was discussed.

This first year also saw intense collaboration with the Inter-American Development Bank (IDB) in the area of port and maritime transport politics.



# LOGISTICS DEPARTMENT OF THE SCHOOL OF MANAGEMENT AT THE UNIVERSIDAD DE LOS ANDES IN BOGOTÁ

The Universidad de los Andes was founded on 16 November 1948 by a group of young people under the leadership of Mario Laserna Pinzón and was the first private, secular and politically independent university in Colombia.

The School of Management at the Universidad de los Andes was established in 1972 with the aim of educating the leaders of the future in order to contribute to the innovative and sustainable development of private companies and public organisations in Colombia and Latin America. The range of programmes offered by the faculty includes undergraduate, graduate, doctorate and executive education degrees, which are distinguished by the quality of the education provided and the recognition of their alumni within the private economy and the public sector, both in Colombia and much further afield.

Excellence and high quality standards have enabled the university to obtain the most important national and international accreditations. In Colombia, the bachelor's and master's management degrees have received the highest level of accreditation from the National Accreditation Council. At an international level, the faculty belongs to the "triple crown" of accredited institutions and to the one per cent of the most renowned business schools in the world. This includes the EQUIS accreditation awarded by the European Foundation for Management Development (EFMD) (since 2003) as well as the AMBA given by the Association of MBAs for the MBA programme (since 2004) and the AACSB awarded by the Association to Advance Collegiate Schools of Business (since 2010). The School of Management is the only faculty with these accreditations in Colombia.



BVL Campus, Bremen

# GERMAN FOREIGN TRADE AND TRANSPORT ACADEMY (DAV) IN BREMEN

Since 2015, the Kühne Foundation has supported DAV in Bremen: an institute belonging to the BLV Campus, around which the Federal Logistics Association (BVL) has concentrated its activities in the area of further training since 2008. Since 1960, the DAV has been offering practice-oriented and innovative training in logistics, transport and foreign trade to young people with basic professional experience who are looking to take the next step in their career. In order to take part in a course of study or further education, the participant must hold a commercial qualification and have at least one year of relevant work experience.

In 2017, an innovation in logistics training was realised in partnership with Liverpool's John Moores University (LJMU): a joint degree including a state-certified business administration qualification and Bachelor of Science (Hons.) can now be earned as part of the International Logistics Management programme. This provides the next

generation of logistics experts with a highly efficient way to combine practice-oriented training with an academic degree - unknown in Germany up to now. The course lasts for either two years (full-time study) or three years (part-time study) and both options are only available in Bremen. Both degrees are fully accredited by the relevant authorities and organisations in Germany and the United Kingdom, recognition is not dependent on the United Kingdom being a member of the European Union.

The curriculum of the preparatory course for the specialised management of freight transport and logistics programme (IHK) has been expanded in cooperation with logistics service providers to ensure that its contents are adapted to further address current challenges and include future-oriented topics. The participants of the course will be equipped to take on a team leader or project management position in the logistics and forwarding industry.



Graduates at DAV, Bremen

With regard to further education, some more managers of logistics and industrial companies have joined the ranks as new lecturers, to give lectures and seminars in the areas of contract logistics, ocean freight, chemical logistics and sales. Cooperation with business has also continued during the writing of degree theses.

2017 also saw international seminars organised in partnership with the Kühne Foundation. At the Malaysia University of Science and Technology (MUST), lecturers presented the current developments in warehouse management as part of an event on the topic of "Industry 4.0". At the University of Singapore (NUS), a crash course tackled the issue of ocean freight for operations managers working in trade, transport and transshipment.

In addition to this, vocational seminars were held on the practice-oriented training of teachers in vocational colleges offering teaching in the specialist fields of forwarding/logistics and foreign trade. Two seminars took place in Duisburg for the first time, to complement events in Bremen. Organised in partnership with the Walter Rathenau commercial vocational college, these were aimed at the region's vocational school teachers.

#### **BVL CAMPUS, BREMEN**

The BVL Campus organises seminars and courses, awards recognised qualification at the German Foreign Trade and Transport Academy (DAV) and provides dual bachelor's degrees at the University of International Business and Logistics (HIWL) to promote education and training in business, logistics and supply chain management.

Lifelong learning and the efficient transfer of knowledge into practice are the fundamental principles of the BLV campus. There are also new developments, including the revision of the DAV's business management degree programmes and the redesigned course in freight transport management and logistics.

The students have access to an excellent network of graduates and companies.

As member of the "Association of sponsors and graduates" alumni stay in close contact with this network.



International Logistics Seminar, Bandung

#### **EDUCATION AND TRAINING IN LOGISTICS**

The global education and training programme of the Kühne Foundation focuses on the development and support of study programmes in logistics and the organisation of practice-oriented seminars for participants from the commercial logistics sector. In October 2017, the Kühne Foundation entered into a partnership with the renowned Bill & Melinda Gates Foundation (BMGF) in order to launch a joint educational offensive dealing with logistics-related topics in eight selected developing countries and emerging economies. Using financial support from the BMGF, the education programme will be scaled and will reach a large target group comprised of students and logistics employees to assist with the sustainable construction of commercial logistics structures and processes in developing countries.

#### Africa

In Ethiopia, a priority country, the Kühne Foundation supported the Mekele University, which was offering a bachelor's course in logistics and supply chain management for the first time. Two professors of the university took part in the two-week Professional Logistics Summer School at Kühne Logistics University in Hamburg and the first group of bachelor students participated in a week-long study trip through Ethiopia.

The 35 students visited the logistics centres for ocean and air freight (Mojo Dry Port und Ethiopian Airfreight Hub) as well as manufacturing businesses in the automotive and clothing industry.

In order to ensure short-term strengthening of the logistics sector, the Kühne Foundation developed a range of practice-oriented seminars for the African continent. In addition to these activities in Ethiopia, training sessions on inventory and warehouse management amongst others were held in Kaduna State, Nigeria, to tackle the "last mile" issue in the distribution of pharmaceutical products. The year-long project resulted in a 25 per cent greater availability and a 30 per cent increase in efficiency on the previous year. Overall, around 150 participants were able to receive intensive training on logistics-related topics through the education and training programme in 2017.

#### South/Central Asia

In Southeast Asia, various logistics seminars were successfully conducted in Singapore, Malaysia and Indonesia. A two-day training event on issues in forwarding and logistics for industrial and trading companies took place in Jakarta, in partnership with the German-Indonesian Chamber of Industry

and Commerce. A total of 80 logistics professionals from across these three countries were supported by seminars and excursions when giving guest lectures at universities for over 600 students.

In Central Asia, the Kühne Foundation continued its established partnership with eight local universities, enabling more than 200 students to receive a high quality education via an elective logistics module, available as part of business administration and engineering degree courses. A total of 20 professors and faculty lecturers were given further training in matters of logistics and didactics as part of two training sessions and over 30 participants successfully completed the annual logistics manager training seminar. More than 80 participants from politics, economics and unions attended the conference in Bishkek, organised by the Kühne Foundation, on opportunities and risks for Central Asia presented by a revived "Silk Road".

#### NetloP and ENLoP

Kühne Foundation's renowned NetloP series, developed to provide training for logistics specialists and management in industry, trade and logistics, took 25 participants to six academic locations in Germany and Switzerland. The comprehensive programme, amounting to over 100 hours, gave the logistics specialists insight into the latest concepts and technologies in the logistics sector and promoted personal networking across different sectors. A number of excursions served to deepen the participants' understanding of various logistics processes in trade, industry and forwarding.

Fifteen managers took part in the follow-on, English-language series "European Network Management for Logistics Processes (ENLoP)" over the course of the year. The participating universities are: Kühne Logistics University, Hamburg/Germany; Heriot-Watt University, Edinburgh/United Kingdom; Copenhagen Business School, Denmark; University of Economics, Wroclaw/Breslau/Poland; KEDGE Business School, Bordeaux/France, Eidgenössische Technische Hochschule (ETH), Zurich/ Switzerland and University of Naples, Italy. Six two-day events provided an opportunity for intense discussion of international challenges in logistics and the faculties' latest research findings.



Further education, Kaduna

#### HELP - HUMANITARIAN LOGISTICS

#### **HUMANITARIAN SITUATION**

#### 60 - 80 per cent of Humanitarian Cost is in the Supply Chain

The year 2017 witnessed a dramatically high density of disasters around the globe. Devastating storms, earthquakes, volcanic eruptions, military conflicts, famines, refugee crisis or cholera outbreaks - there was almost no month without a major event affecting millions of people. At one point in the year, the humanitarian community was confronted with up to seven concurrent high level emergency operations.

HELP was able to support 34 humanitarian organisations and local governments in 29 countries through the successful delivery of 44 supply chain and logistics projects.

#### **ACTIVITY OVERVIEW**

Predominantly, HELP Logistics has been providing its services and products to support humanitarian actors to better prepare for emergencies and to enhance ongoing humanitarian operations.

Across the many operations, food security, health and population displacement had the most pressing humanitarian needs. HELP and its partners therefore delivered special focus projects on food security and medical supply networks throughout 2017.



ACF food distribution, Bangladesh

#### **EMERGENCY PREPAREDNESS**

Delivering fast and efficient aid to people affected by disasters is a task of utmost importance for governments and humanitarian relief organisations. This task though is becoming more and more challenging considering that the funds to meet the ever growing humanitarian need is not available. On a global scale, 40 per cent of US\$ 19.7 billion appeals coordinated through the United Nations remain unmet (UNOCHA 2017) and the gap is growing.

Together with Action contre La Faim (ACF France) and the Kühne Logistics University (KLU), HELP conducted an extensive study on how this gap can be closed. The study found that a powerful driver of cost efficiency would be to invest in supply chain functions prior to the disaster happening. With a newly developed Return on Investment model, HELP and KLU proved that every Euro invested prior to an event would save more than seven Euros in the response operation.



#### HELP LOGISTICS AG (HELP)

HELP Logistics AG was registered in 2014 as a non-profit organisation in Schindellegi, Switzerland. Since 2016, HELP has three regional offices in Singapore (Asia), Amman (Middle East) and Nairobi (East Africa) with 11 dedicated full-time supply chain and logistic experts.

The ambition of HELP is to make humanitarian responses more efficient (to save costs) and more effective (to save time). HELP initiates, manages and actively contributes to the following three main focus areas:

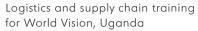
- Analysing and optimising supply chain processes to enhance procurement, transportation, storage and distribution of relief commodities
- Standardised and customised learning programmes to managers and practitioners in the humanitarian sector

 Fostering collaboration among organisations and institutions across governments, academic, commercial and the humanitarian sector

Focused on the needs of the actors in the humanitarian sectors and the countries, HELP has developed a comprehensive service and product portfolio consisting of innovative consulting tools and high quality training packages.

HELP works closely with actors in the humanitarian sector such as UN agencies, Red Cross/Red Crescent societies, donors, international and local Non-Governmental Organisations (NGO) and national governments to achieve sustainable changes and positive impact in humanitarian operations.







Sean Rafter, Managing Director HELP Logistics AG, at the International Transport Forum in Leipzig

In addition, the time to reach the affected population could be potentially four times faster. The importance of preparedness was further emphasised through a joint collaboration with World Food Programme (WFP) in East Africa. The innovative Logistics Resilience Analysis (LRA) was developed to evaluate a country's logistics capacities and contextual constraints and how these might influence the future supply chain performance. The LRA can be used to identify actions such as investment in infrastructure or pre-positioned stock that can increase resilience and greatly enhances the accuracy of national emergency plans.

#### **HUMANITARIAN OPERATIONS**

HELP has contributed significantly in the area of preparedness which has become a global priority for the humanitarian community. At the same time, HELP has not neglected ongoing operations. Numerous projects have been conducted in all regions investigating the "as-is" current situation in organisation structures, processes and infrastructure. Many organisations have benefitted from key findings and recommendations on how to deliver aid more efficiently and effectively. For example, HELP conducted an extensive

Value Stream Mapping of the emergency commodities supply chain in South Sudan for the International Organization for Migration (IOM). The results including 30 recommendations were shared with IOM's top senior management in Geneva and Juba. The recommendations will positively impact the ongoing operations in South Sudan and be a key component to IOM's long term supply chain strategy.

Also the "Cross Border Optimization Analysis" for the Save the Children Regional Office in Jordan dealt with the manifold logistics challenges in Syria, in particular those related to the importation of life saving relief items. The analysis resulted in a supply routing decision-matrix to enable the organisation to react to changing external geopolitical, border control and infrastructure changes. Furthermore, a regional supply market analysis was conducted to source and plan effective transportation for core relief items required in this emergency response.

In 2017, demand increased strongly for the Advanced Spend Analysis (ASA) tool, that HELP developed in the last year. It provides organisations with a detailed oversight of their expenditure and better visibility on supplier markets. World Vision and IOM

requested HELP to assess nine of their country offices across East Africa, Middle East and Asia. The spend analyses provided important overviews of patterns and trends in expenditure, helping the country offices to save money and time, and better allocate resources.

#### **FOOD SECURITY**

In many parts of the world shortage of food supplies is increasingly becoming a severe threat to people's health and well-being. This not only affects victims of disasters but also people in remote areas as well as overpopulated places such as urban slums. HELP is working closely with humanitarian organisations and local governments to increase the performance of local food supply chains and make them stronger and more resistant to future shocks.

In Nairobi there are approximately 2.5 million residents of informal settlements (slums), which represent up to 60 per cent of the population.

Ensuring the needs of these residents is of critical importance. HELP worked with the UN Food Agriculture Organisation (FAO), UN-Habitat and municipal Departments of Agriculture to examine the 'informal' supply network through which fresh food moves from the rural hinterlands of Nairobi into impoverished urban areas in the city. HELP conducted over 300 assessments to understand the network of farmers and traders and to define the issues and bottlenecks that slow the system down, cause wastage or increase costs.

The NGO One Acre Fund operates across East Africa and supplies over 400,000 smallholder farmers with both agricultural training services and asset-based financing. One Acre's vision is to support farmers to improve their harvests in order to pull themselves out of poverty and start producing food for their neighbours. HELP provided One Acre with new lean processes to improve its supply chain set-up.





IOM off-loading relief items, South Sudan

In Bhutan, HELP continued its collaboration with the World Food Programme (WFP) and the Royal Government of Bhutan to enhance the implementation of its School Feeding Programme throughout the country. Based on the research work of WHU - Otto Beisheim School of Management in 2016, a workshop was held in Bhutan to agree on a new supply chain set-up that optimises transportation time and cost as well as storage handling.

Odisha is amongst the poorest states of India. Every month, the livelihood of approximately 29 million people relies on the support of the state government through its national food assistance programme. HELP and WFP India were asked to run an assessment of the complexities of the extensive programme. The assessment included both the physical infrastructure evaluation as well as the application of IT solutions such as biometric identity cards for beneficiaries.

#### MEDICAL SUPPLY NETWORKS

Besides the challenge of food shortages many people in developing countries struggle with limited access to medical supplies. Poor infrastructure and equipment as well as insufficient knowledge on how to handle the sensitive shipments leave many patients at the end of the supply chain without urgently needed assistance.

The International Organization for Migration (IOM) works with large numbers of refugees and displaced people throughout the East African region by supporting the relocation and resettlement of refugees in host countries or back to their home countries. The health of these populations, while in the refugee camps or during their relocation process, is a critical component of this work. HELP dedicated two project managers to run a medical supply chain assessment for IOM in Kenya. The project team, supported by a pharmacist and the IOM Head of Logistics,



Medical supply chain assessment for IOM, Kenya



Klaus-Michael Kühne presents the first "HumLog Prize" of the Kühne Foundation to Prof. Helmut Baumgarten

used HELP's recently developed Medical Supply Chain Assessment (MSCA) toolkit to understand and evaluate the medical supply chain set-up, processes and capacities at refugee camps in Dadaab and Kakuma, as well as the IOM Medical Assessment centre in Nairobi. Numerous recommendations were implemented such as the improvement of inventory systems, critical improvements in the main Nairobi warehouse and improvements in cleaning and safety processes for incinerators.

HELP continued its support for the Somalia Ministry of Health and UNICEF by gathering data from 100 health facilities in Somalia to ascertain the critical break points in the network. This was the first evidence-based quantitative assessment of the network in the last decade. The medical assessments carried out by HELP in 2017, consistently showed a gap in medical supply chain knowledge. HELP therefore delivered four one week Medical Supply Chain Trainings in Kenya, Rwanda, Malaysia and Myanmar for a total of 125 participants from Governments, NGOs and UN agencies.

#### **HUMANITARIAN LOGISTICS ADVOCACY**

Together with Airport Halle/Leipzig, HELP organised a side event to the OECD International Transport Forum in Leipzig, Germany. High level representatives from different sectors presented and discussed their perspective on the criticality of air operation in the humanitarian supply chain. HELP also actively contributed to the Global Logistics Cluster Meetings in Bonn (May) and Leysin (November).

At the BVL's 34th International Supply Chain Conference Professor Helmut Baumgarten received the first "HumLog Prize" of the Kühne Foundation. Starting from this year the award will be presented every two years for excellence in humanitarian supply chain.





## MEDICINE PROJECTS

# UP TO 30 PER CENT OF PEOPLE IN INDUSTRIALISED COUNTRIES SUFFER FROM ALLERGIES

# ALLERGIES - THE MOST COMMON NON-COMMUNICABLE DISEASES

In industrialised countries, up to 30 per cent of the population are affected by allergies. In many regions of the world, allergic diseases have reached epidemic proportions. It has not been like this ever since. The incidence of allergies has risen rapidly over recent decades. We now recognise various reasons for this trend, all of which ultimately have to do with our modern lifestyle: our diet, our hygiene standards, our environmental situation. People with allergies can suffer severe reactions when they come into contact with certain allergy triggers. Children and adolescents are disproportionately affected by allergies. Relatively harmless symptoms can become chronic or spread into other organ systems, which again broadens the scope of the whole topic.

#### **ALLERGIES OVER A LIFETIME**

The so-called "allergic march" (or atopic march) defines the situation where children predisposed to allergies can "grow out" of an allergic disease as they get older. However, it is also possible for them to start suffering from a subsequent form of alleray. The alleraic march often follows a characteristic pattern: in infancy neurodermatitis predominates in most cases, which is associated with a food allergy in one-third of children. Up to the age of three years, 10 - 15 per cent of all infants are affected by this. Over the course of months and years, many cases may experience spontaneous improvements or the itching eczema disappears completely. However, around half of the children affected go on to develop bronchial asthma, often combined with allergies to house dust mites and animals, and typically they may experience symptoms as early as the second year of life. In many cases, pollen allergies develop once they reach school age. As a matter of fact an allergy can occur for the first time but also disappear again at any stage of life - even in advanced age.



The CK-CARE head office at the Hochgebirgsklinik Davos



# CHRISTINE KÜHNE – CENTER FOR ALLERGY RESEARCH AND EDUCATION

In July 2009, the Kühne Foundation has launched the Christine Kühne - Center for Allergy Research and Education (CK-CARE), with locations in Davos, Munich and Zurich. The main pillars of this initiative are highly qualified and well-connected research work in the field of allergies and education of medical professionals based on recent findings.

With the establishment of CK-CARE, one of Europe's largest private initiatives in the field of allergology was launched. After a successful external evaluation by international experts of the services provided and an internationally validated development of the project, the initiative was expanded to the locations of Bonn, Augsburg and St. Gallen.







Interprofessional seminar for neurodermatitis trainers

# ALLERGIES AS AN IMPORTANT ISSUE FOR THE KÜHNE FOUNDATION

Allergic diseases result in billions of healthcare costs in industrialised countries. Additional costs, difficult to quantify, result from illness-related absences from work and accidents. Allergies often lead to a substantial restriction in the quality of life, both in the social and working environment. Despite decades of research effort, there are still gaps in what is known about the complex clinical conditions and, because of this incomplete scientific knowledge, the preventive and therapeutic options available are still limited. As a result allergies is a subject that our society must tackle. Because of the large number of people affected and the relatively limited resources that are invested in research by pharmaceutical companies, combating allergies is a self-evident matter for a foundation to address.

# CK-CARE - CHRISTINE KÜHNE - CENTER FOR ALLERGY RESEARCH AND EDUCATION

# Managing allergies with research and education

The CK-CARE programme (Christine Kühne - Center for Allergy Research and Education), was set up by the Kühne Foundation in 2009 in Davos. It was and remains the declared aim of this globally unique initiative to promote research in the allergy field through close collaboration between leading international research groups brought together in Davos, while supporting the appropriate training of professionals.

In 2014, following a review and validation by external experts, CK-CARE restructured its work as part of an innovative concept. Besides continuing its successful activities in the area of education, CK-CARE further intensified the existing close research collaboration between a number of institutions at various locations (Davos, Zurich, St. Gallen, Bonn and Augsburg). Integrated research teams from the different locations coordinate their work on selected key questions. This allows combining expertise in close collaboration, using technological facilities efficiently and creating synergies.



A visit to CK-CARE: Dr. Christian Rathgeb, Councilor from the Canton Graubünden, with Dr. Georg Schäppi, Director of CK-CARE

# Learning from the natural course of allergic diseases

The basic idea of the research activities of CK-CARE has been, and continues to be, monitoring people with allergies over a lengthy period of time, analysing blood and skin samples regularly and learning from the course of the allergies. Typical considerations include: What factors in the blood or in layers of the skin cause or accompany spontaneous healing of an allergy? How can these factors be stimulated, created or prescribed in order to precipitate a healing process therapeutically? Answering these questions will help to develop effective preventive and therapeutic measures to combat allergies.

# Samples and information are collected in a biobank and database

To research the multifaceted causes and very individual developments of allergies, the CK-CARE research groups must have access to blood and skin samples as follows:

- from as many as possible well-characterised patients (phenotyping)
- over as long an observation period as possible.

The patients and the samples must be recorded and characterised in detail and can then be examined at appropriate times using state-of-the-art analysis methods.

The value of such a sample collection is that



Research



In the Allergo-Refresher seminar paediatricians learn with and from each other

samples from a broad spectrum of patients and at various stages of their allergy history can be compared and a huge amount of knowledge can be gained about causes, clinical courses and suitable treatments. In addition, it should be possible that the stored samples may be analysed in future with even better test methods. The CK-CARE biobank was set up in Davos (currently at SIAF - and from 2019 in the new allergy campus building) for central storage of blood and skin samples.

As a result of the financial difficulties of the Hochgebirgsklinik a new funding period, with a reduced total budget, was initiated in mid-2017. In this new phase the scientific directors working for CK-CARE are concentrating their activities on managing the core of the project - the "Biobank/Database". The focus of the activity lies in patient recruitment, in the preparation and central collection of samples and data for inclusion in the database and biobank, as well as the jointly coordinated analytical work on the samples and data within the scope of available financial resources.

# RESULTS OF CK-CARE RESEARCH AND EDUCATION IN 2017

For 2017 CK-CARE can again point to significant results in both research and education, which will also have a direct impact on allergy sufferers. Examples of selected aspects of the work accomplished are described below.

The manifestation of neurodermatitis is linked to differing levels of risk for other allergies. This is an important finding of CK-CARE Research in 2017, based on studies on the development of neurodermatitis in children. Three different manifestations of neurodermatitis were identified. Two of these had an early onset, starting under the age of two years: one form had an early onset with transient symptoms while the other had an early onset with existing symptoms. The third, later phenotype started after the age of two years. Children with early-onset neurodermatitis, especially with persistent symptoms, exhibited the highest risk of developing asthma and food allergies. This shows that, above all, children with an early onset of neurodermatitis and with existing symptoms should be monitored specifically with a view to allergy prevention.

It is well known that microbes on traditionally run farms protect children against asthma and allergies. A study supported by CK-CARE shows that an acid found in animals and on farms has a protective effect against allergic inflammation in the lungs. This has a positive impact on the development of the immune system because it learns not to react against intrinsically harmless substances, as happens in the case of an allergy.

Previously no proper, causal explanation had been found for the fact that the disease-causing bacterium Staphylococcus aureus intensively colonises the skin of patients with neurodermatitis. Recent work with the skin samples from the CK-CARE biobank demonstrated that the bacterium spreads at the expense of "good" germs and disrupts the protective shield of the skin. At the same time, defensive cells of the skin, which under normal conditions are responsible for combating these bacteria, appear to be virtually "paralysed" and are no longer able to perform this important recognition function.

This realisation opens up the option of developing new kinds of therapies. The aim should be to stop this paralysis so that the immune system is again capable of fighting







Dermatology residents perform the allergy skin prick testing under supervision of the expert the disease-causing bacteria. Similar links are likely to be found in the colonisation of the skin by certain yeasts (Malassezia). These findings will now be investigated in terms of their relevance to neurodermatitis and studied for possible treatment options.

CK-CARE is already involved in studies and the actual implementation of ultramodern targeted therapies against neurodermatitis that have ample efficacy and few side effects.

At the CK-CARE Allergy Education Week, held from 16 - 23 September 2017, various practical and interactive learning activities were organised in Davos for doctors, assistants and medical students as well as other healthcare professionals. In the various education units the participants were able,

through effective allergy education, exchange of personal experiences and time for discussion, to put the lessons into everyday practice and bring about a change in their clinical decision-making. The different formats, such as elective courses, master classes, trainer and specialist training courses, were partly held in the new pre-mises on the Allergy Campus Davos.

On the Allergy Campus Davos, the first-ever elective course on "Allergology translational" was offered for medical students from Zurich University in collaboration with CK-CARE, SIAF and Hochgebirgsklinik Davos. The combination of proven experts, direct contact with patients and modern teaching methods were greatly appreciated by the students.





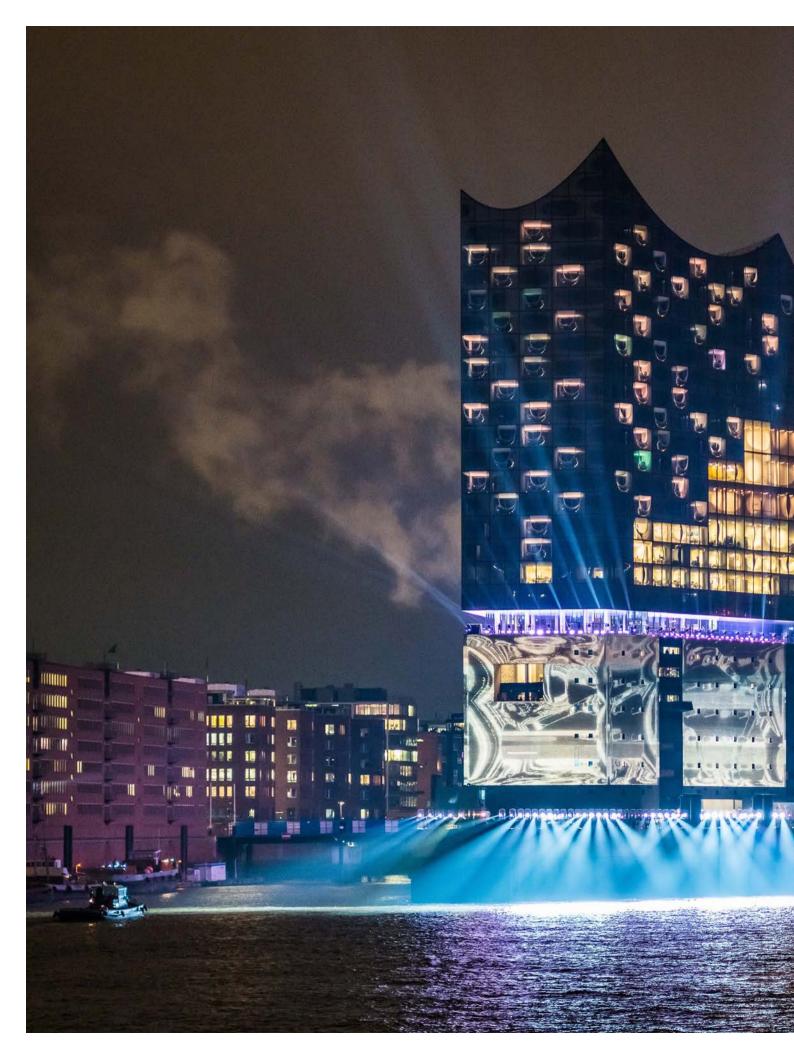
CK-CARE Team Meeting 2017

# FURTHER EXPANSION OF THE CAMPUS FOR ALLERGY RESEARCH, EDUCATION AND TREATMENT

In the reporting year the campus for allergy research, education and treatment was further expanded. As a result of the close cooperation between the three partners CK-CARE (education), Hochgebirgsklinik (treatment) and SIAF (Swiss Institute for Allergy and Asthma Research), unique conditions are being created for collective, patient-oriented research and education. In this translational collaboration - and thanks to physical and organisational proximity - the results of research directly benefit patients in the clinical setting. With the CK-CARE Study Center at the Hochgebirgsklinik Davos, an interface has been established that guarantees close integration of research and treatment.

The healthcare and Allergy Campus is intended to have an innovative structure, making it possible to offer patients individually tailored care in both the field of rehabilitation and the area of acute diagnostics, prevention and treatment of chronic inflammatory diseases and especially in allergology. To accomplish this aim, the campus is built upon the three classic and highly interdependent pillars of university medicine: healthcare provision, research and education/teaching. This traditional structure is backed up by an innovative incubator department.

It is the overriding strategic goal of the Allergy Campus Davos to create an internationally recognised centre of excellence in the field of diagnostics, personalised prevention and treatment of allergic diseases.





## **CULTURAL PROJECTS**

Music and literature represent the focus areas of the cultural funding activities. As such, numerous concerts, operas and festivals in Switzerland, Germany, Austria and Italy were once again supported by the Kühne Foundation.

#### MUSIC AND FESTIVALS

#### **ELBPHILHARMONIE HAMBURG**

The opening of the Elbphilharmonie Hamburg on 11 January 2017 was without a doubt one of the most important and impactful cultural events of the year in Germany, perhaps even in the whole of Europe. It was of particular significance for the Kühne Foundation to support both the opening concerts on 11 and 12 January and the subsequent opening festival, which spanned a period of several weeks.

Originally, the doors of the Elbphilharmonie's Grand Hall high above the Elbe river were supposed to have opened back in 2010. Due to delays in construction, the date was pushed back again and again until being finally set for 2017. Expectations were high, and the anticipation for this cultural highlight of 2017, taking place so early in the year, was just as great. The programme, put together by Thomas Hengelbrock, principal conductor of the NDR Elbphilharmonie Orchestra, is designed to demonstrate for the first time the wide stylistic and sonic range that the music can achieve in the hall, within the architectural surroundings of Swiss firm Herzog & de Meuron and the

acoustic environment created by Japanese acoustician Yasuhisa Toyota.

The opening concert was performed exclusively for special guests, including Federal President Joachim Gauck, President of the German Parliament, Norbert Lammert, Chancellor Angela Merkel und President of the Federal Constitutional Court Norbert Vosskuhle, four leading representatives of The Federal Republic of Germany. In addition to numerous other guests from the worlds of politics, economics and culture, 1,000 complementary tickets for both opening concerts (the programme was repeated on 12 January) were entered into a raffle, in which over 230,000 interested parties from around the world took part.

The opening was a great success and covered by media all over the world. Until the end of January, the Elbphilharmonie delivered a number of spectacular concerts in rapid succession, featuring world-class orchestras and soloists, from the Chicago Symphony Orchestra to the Vienna Philharmonic, from Mitsuko Uchida, Thomas Hampson to Yo-Yo Ma.



Elbphilharmonie Hamburg - opening concert

With her solo evening performance, the titular organist, Iveta Apkalna, commanded the audience's undivided attention, and high-calibre concerts featuring chamber music, jazz and non-European music offered proof of the concert hall's open attitude towards other styles of music, whilst making no comprises with regard to the quality of the performances.

An especially delightful retreat on the 20th floor of the Elbphilharmonie, designed to host exclusive meetings of supporters and friends of the concert hall and the music, has been named the "Christine and Klaus-Michael Kühne Sky Lounge".



Klaus-Michael Kühne, Christine Kühne, Dr. Susanne Mayer-Peters and Dr. Wolfgang Peiner at the opening of the Elbphilharmonie



Lucerne Festival 2017: English Baroque Soloists and the Monterverdi Choir led by Sir John Eliot Gardiner

#### LUCERNE FESTIVAL

Festival director Michael Haefliger chose the highly topical issue of "identity" as the theme for the 2017 summer festival's programme. How are people shaped by their origin, homeland, belief, culture and religion? These questions were explored from a wide range of perspectives: From 11 August to 10 September 2017, over seventy concerts took place in Lucerne, including an exciting supporting programme featuring projects for refugees, moderated concerts and discussions.

The Kühne Foundation supported the semi-staged production of the opera L'Orfeo in the run-up to the great Monteverdi Cycle, which included the English Baroque Soloists, Monteverdi Choir and numerous soloists, led by Sir John Eliot Gardiner. The occasion for this ambitious project, showcasing the three surviving operas of Claudio Monteverdi, was the composer's 450th birthday, which was celebrated in 2017. Over 78,000 visitors travelled to Lucerne last summer, with the festival recording an overall capacity utilisation of 91 per cent.

#### SALZBURG FESTIVAL

With the Young Singers (YSP), Salzburg Festival created a top-class platform for promoting young artists in 2008. Following international auditions, young singers were chosen to receive the opportunity to work with festival artists as part of a scholarship. Teaching did not only include training in music and repertoire development, but also staged rehearsals, language coaching and song interpretation.

Thanks to the support of the Kühne Foundation, 14 young talents from a number of different countries - the United Kingdom, Italy, Malta, the Netherlands, Austria, Poland, Russia, South Korea and the USA - were given the chance to participate in masterclasses and be involved in Salzburg Festival productions as part of the YSP-programme. Many important qualities were displayed by these young artists prior to their participation, which they applied to the collaborative work they carried out as part of the Young Singers Project: a special voice, natural stage presence, solid technical know-how and passion for their vocation.





Young Singers in Majorca at "Castell Son Claret"

The aim of the YSP is to enable up-andcoming singers to further develop these qualities within the extraordinary environment of Salzburg Festival. In doing so, the young singers not only get to perform in front of a high-profile audience at the renowned Salzburg Festival, they also receive attention at an international level and are able to use their festival debut as a springboard from which to take a forward leap in their careers.



#### MECKLENBURG-VORPOMMERN FESTIVAL

The first "Christine Kühne Prize" was awarded during the 2017 summer festival at a festival concert. On 3 September 2017, at the soldout opera gala in the Wismar Heiligen-Geist church, the Mecklenburg-Vorpommern festival celebrated the world of arias and bel canto. The gala, featuring the orchestra of the Komische Oper Berlin, was led by Hermann Bäumer and enriched by a number of outstanding soloists. The highlight of the evening was the awarding of the "Christine Kühne Prize" 2016 to Olena Tokar, who was recognised as a sensitive, versatile and charismatic singer in the honouring speech of director Dr. Markus Fein. The opera gala programme featured classic operas including Puccini's Turandot, Rossini's L'Italiana in Algeri and Handel's Ariodante.

The Founders, Christine and Klaus-Michael Kühne, attended the gala and personally presented the first "Christine Kühne Prize" to Olena Tokar.

Since the inaugural concert in 1990, Mecklenburg-Vorpommern Festival has evolved into Germany's third-largest classical music festival with around 170 events and over 90,000 visitors. Throughout the summer festival, which lasts from mid-June to mid-September, music fans have the opportunity to see both young artists and the big stars of the classical music scene perform in old manor houses, barns, factory buildings, castles and under open skies. In addition to the music, there is also the unforgettable landscape of lakes, sea and coastline, and the 80+ venues which make the concerts of Mecklenburg-Vorpommern Festival a truly special experience.



The Founders with award winner Olena Tokar and Director Dr. Markus Fein, Wismar





General Music Director Kent Nagano and the Hamburg Philharmonic State Orchestra

#### MUSIC SUMMER ON LAKE ZURICH

This festival, brought to life in 1993 by conductor Giovanni Bria, is based around Lake Zurich and has long been a great public attraction. Even from the very beginning it was of special concern of the Music Summer to sometime pair historic performance venues with appropriate music in a meaningful way, thereby creating a sense of harmony. A varied musical programme is put together to ensure that all interested parties can enjoy a special concert experience.

In partnership with the Mecklenburg-Vorpommern Festival, the Kühne Foundation supported a gala concert in 2017, organised under the motto "An Italian Night", which took place on 29 August in Feusisberg Catholic Church in the Canton of Schwyz. The focal point of this gala was the core of Italianità: the virtuoso, passionate vocals embodied by the much-adored voice of Ukranian singer Olena Tokar. The German Baritone Samuel Hasselhorn made an appearance as her partner. Together they performed arias and duets written by the greatest Italian composers: Donizetti, Puccini, Rossini and Verdi. The famous Italian Concerto BWV 971 for solo piano by Johann Sebastian Bach allowed the internationally successful pianist Igor Gryshyn to shine in his solo performance.

#### **OPERAS**

#### HAMBURG STATE OPERA

Since the 2015/2016 season, the Hamburg State Opera and Hamburg Philharmonic Orchestra have been led by Georges Delnon, Director, and Kent Nagano, General Music Director, with great success. Their work is shaping Hamburg's image as a city of music, e.g. through the premiere of "Arche" by Jörg Widmann and "Lulu", directed by Christoph Marthaler, which was named event of the year by the specialist magazine Opernwelt.

By awarding a substantial donation of five million Euros, to be distributed over five seasons, the Klaus-Michael Kühne Foundation has not only supported the extension of Kent Nagano's contract by an additional five years, but has also created the basis from which he can succeed in carrying out his planned measures for improving the quality of the orchestra in order to reach a top position. In addition, youth work will be strengthened.



Aspiring opera singers of the International Opera Studio (IOS) at the Zurich Opera House

#### **ZURICH OPERA HOUSE**

The International Opera Studio (IOS) has been running since 1961. It was founded under the patronage of the Friends of Zurich Opera House and has since grown into one of the major educational institutions for aspiring opera singers. Each year, young singers from around the world are given the opportunity to earn their first professional artist spurs under competent guidance.

The Kühne Foundation again supported the International Opera Studio during the 2016/2017 season thereby making an important contribution to the reputation of the IOS at Zurich Opera House as one of the world's most highly regarded training institutions for young singers.

#### LA SCALA, MILAN

The Teatro alla Scala di Milano is one of the world's best-known and most prestigious opera houses. It opened its doors on 3 August 1778, replacing the Teatro Regio Ducale, which burned down in 1776.

Since 1 October 2014, Alexander Pereira has been Director of the Milan opera house and offers a great deal of support to the next generation of artists. For a number of years, Milan's Scala opera house has close partnerships in the foundation segment.

#### LITERATURE

#### HARBOUR FRONT LITERATURE FESTIVAL

From 13 September to 15 October 2017, Hamburg once again became the destination of choice for numerous national and international authors, who gave readings at the most beautiful locations in and around the harbour. A total of 79 events of all genres were put on for the public - including, as always, the autumn's most important new publications. The festival's ninth year saw it make an appearance on a new stage: The opening event took place in the Recital Hall of the Elbphilharmonie. Three further readings with Joachim Meyerhoff, John le Carré and Salman Rushdie took place in the Grand Hall of Hamburg's new landmark.

Author Fatma Aydemir, born 1986 in Berlin, received the "Klaus-Michael Kühne Award" for her novel "Ellbogen". The jury's comments stated that her novel was "a brilliant, unsettling and disconcerting book on German identity and biculturalism".



Karl Gernandt, member of the Board of Trustees, with award winner Fatma Aydemir and the Directors of the Harbour Front Literature Festival

Eight authors in total gave readings before the jury and public during the competition as part of the "Debutant's Salon" series of events.

Birte Müller received the prize for the best children's and youth book author. She was presented the "Hamburger Tüddelband" from the award's patron Christine Kühne.



Harbour Front Literature Festival:

Patron Christine Kühne
presents the
"Hamburger Tüddelband"
to Birte Müller

#### **OFFICES**

#### KÜHNE FOUNDATION

Dorfstr. 50 CH - 8834 Schindellegi Tel. +41 44 786 95 40 info@kuehne-stiftung.org www.kuehne-stiftung.org

#### KLAUS-MICHAEL KÜHNE FOUNDATION

Großer Grasbrook 11 - 13 D - 20457 Hamburg Tel. +49 40 30 333 1011 info@kmk-stiftung.org www.kuehne-stiftung.org

#### **CK-CARE AG**

Dr. Georg Schäppi, Director Herman-Burchard-Strasse 1 CH - 7265 Davos Tel. +41 81 410 13 00 info@ck-care.ch

#### Board

Dr. Jörg Dräger, President Prof. Dr. Dr. h.c. Ernst Rietschel

#### KÜHNE LOGISTICS UNIVERSITY

Prof. Dr. Thomas Strothotte, President Fabian Berger, Head of Administration Großer Grasbrook 17 D-20457 Hamburg Tel. +49 40 328 707 110 info@the-klu.org

#### Supervisory Board

Karl Gernandt, Chairman Prof. Dr. h.c. Klaus-Michael Kühne Dr. Thomas Staehelin

#### **HELP LOGISTICS AG**

Sean Rafter, Managing Director Dorfstr. 50 CH - 8834 Schindellegi Tel. +41 44 786 9670 sean.rafter@kuehne-stiftung.org

#### Supervisory Board

Karl Gernandt Prof. Dr. Stephan Wagner

#### HELP LOGISTICS LLC

Alia Gharaibeh, Regional Director, Middle East 158 Makkah Street Al Hijaz Towers Center Amman, Jordan Tel. +962 (6) 550 78 70 alia.gharaibeh@kuehne-stiftung.org

#### HELP LOGISTICS LTD

Cormac O'Sullivan, Regional Director, East & South Africa 2nd Floor, Eaton Place United Nations Crescent Muthaiga P.O. Box 63946 - 00619 Nairobi, Kenya Tel. +254 205 147 041 cormac.osullivan@kuehne-stiftung.org

#### **KUEHNE EDUCATION CENTER LTD**

Temmy Tanubrata, Regional Director Asia 352 Tanglin Road Tanglin International Centre #02-01 Strathmore Building Singapore 247671 Tel. +65 64 752 150 temmy.tanubrata@kuehne-stiftung.org

#### **IMPRINT**

#### **EDITOR**

Kühne-Stiftung Dorfstr. 50 CH - 8834 Schindellegi Tel. +41 44 786 95 40 info@kuehne-stiftung.org www.kuehne-stiftung.org

#### **EDITORIAL STAFF**

Inge Lauble-Meffert Birgit Schranz

#### **DESIGN**

Simone Angerer Kommunikationsdesign www.simoneangerer.de

#### **PHOTO CREDITS**

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#### KÜHNE-STIFTUNG

Dorfstr. 50 CH - 8834 Schindellegi Tel. +41 44 786 95 40 info@kuehne-stiftung.org www.kuehne-stiftung.org

#### KLAUS-MICHAEL KÜHNE STIFTUNG

Großer Grasbrook 11 - 13 D-20457 Hamburg Tel. +49 40 30 333 1011 info@kmk-stiftung.org www.kuehne-stiftung.org