The Kühne Foundations in the year 2015
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:

1. Support for training, further education, scholarships, and research in the fields of transport and logistics.
2. Support for medical sciences, humanitarian, charitable, and cultural projects.

In 2015 the total sum contributed by the Kühne Foundation was 20.3 million Swiss Francs.

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.

In 2015 the total sum contributed by the Klaus-Michael Kühne Foundation was around 1.3 Mio. Euros.
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2015 was again an eventful and successful year in the charitable work of the Kühne Foundations. The two foundations have now expanded their operations to approximately 45 countries, comprising activities in a variety of projects extending from partner universities to Kühne Logistics University (KLU) to foundation chairs, training and consulting within the HELP programme and a number of prestigious cultural events.

Kühne Logistics University (KLU) has qualified international executives in logistics and business management for five years now. It fills me with pride that the German Council of Science and Humanities and the Senate of the Free Hanseatic City of Hamburg have awarded the University permanent state accreditation. This accolade acknowledges KLU’s outstanding achievements in the field of research, its diversified network of international partners and the speed at which the University has incorporated the entire spectrum of academic qualification and training since its inception just five years ago. Now, approximately 250 students from 28 nations benefit from the government-accredited courses taught here in English. Moreover, the Kühne Foundation endows chairs at universities in Germany, Switzerland and Austria. The annual Kühne Foundation Logistics Day in 2015 was held at ETH Zurich under the auspices of Prof. Stephan Wagner, holder of the Chair for Logistics Management. I look back with pleasure on the successful event, attended by over 250 participants.

“Humanitarian logistics” is becoming an increasingly important field which led to the foundation of HELP Logistics AG operating in Southeast Asia, the Middle East and in the eastern and southern regions of Africa. A regional office was established in Singapore under the name Kuehne Education Center. HELP now collaborates with a number of aid organisations in its efforts to improve efficiency, professionalism and transparency in the logistic processes of international disaster relief. Besides its ongoing consulting to humanitarian organisations and government agencies, HELP assists in the training of their staff.

My wife and I have set ourselves the goal of minimising the repercussions of widespread allergic diseases on public health and the economy as a whole. This concern prompted the Kühne Foundation to establish CK-CARE (Christine Kühne-Center for Allergy Research and Education) a number of years ago. Its purpose is to research the causes of allergic illnesses and to provide educational courses for general practitioners and patients. Close cooperation between scientists and experts is a vital aspect within medical research. Accordingly, the third Global Allergy Forum (GAF), an event organised by CK-CARE, was held this year in Davos. It is planned to build an allergy campus, which will include both clinical and laboratory facilities on the grounds of the Hochgebirgsklinik Davos, purchased by Kühne Real Estate AG.

Dear Friends and Project Partners of the Kühne Foundations
With regard to its cultural projects, the Kühne Foundations focus on music and literature. Once again, the Lucerne Festival, the Salzburg Festival, the Music Summer on Lake Zurich and the Mecklenburg-Vorpommern Festival were supported. The performance of “Anna Bolena” in the Zurich Opera House as well as the production of “The Trojan”, the inaugural work by the new musical director at the Hamburg State Opera, were the most prominent highlights this year. Our cultural promotion also extended to the Teatro alla Scala in Milan; we were among the key sponsors of the opening concert at EXPO Milano featuring the Berlin Philharmonic Orchestra under Sir Simon Rattle. A close bond has also formed with the Festspielhaus Baden-Baden, where my wife and I have been appointed to the Foundation Board.

For seven years now, the Klaus-Michael Kühne Foundation has been the main benefactor of the Harbour Front Literature Festival, held each autumn at a large number of venues around HafenCity in Hamburg. My wife and I were delighted to award prizes to a famous author of children’s books and a highly respected young writer.

I hope that this annual report will provide you with some interesting glimpses into the varied and challenging work of the Kühne Foundations.

Yours sincerely

Klaus-Michael Kühne
President of the Board of Trustees
Global Activities of the Kühne Foundations

- Bogotá: Universidad de los Andes / KLU Partner University
- Valparaíso: Universidad Técnica Federico Santa María / KLU Partner University
- Mexico City: IPADE Business School / KLU Partner University
- Zurich: ETH Chair of Logistics Management / Logistics Day 2015 of the Kühne Foundation
- Davos: Christine Kühne-Center for Allergy Research and Education (CK-CARE)
- Salzburg: Young Singers at the Salzburg Festival
- Hamburg: Kühne Logistics University (KLU) / Harbour Front Literature Festival / Hamburg State Opera
The Kühne Foundation has been supporting professorial chairs across various universities worldwide for many years now. Particular attention should be drawn to the commitment of the Kühne Logistics University (KLU), which was founded in 2010 and is the Foundation’s flagship.
1. Logistics Support Projects

The foundation aims at developing and promoting logistics as a scientific field. To this end, the educational institutions it supports are encouraged to network and mutually inspire each other. The annual Professorial Circle offers an opportunity for all professors funded by the Kühne Foundation to exchange ideas and profit from each other’s research results. The foundation promotes a number of projects: events, seminars and the publication of scientific work.

KÜHNE LOGISTICS UNIVERSITY (KLU)

In 2015, Kühne Logistics University not only celebrated its fifth anniversary, but also its successful accreditation by Germany’s most important academic board, the German Science Council. KLU’s high academic performance received special recognition in the process. In addition, five new professors were appointed in 2015; among others, the increasing effects of digitalisation on the logistics sector will be covered by a dedicated Professorship for IT-Logistics.

With its internationality, KLU is reacting to the increasingly interlinked global supply chains which have changed the logistics sector more than any other industry. Accordingly, all KLU programmes are taught in English and half of the students are from abroad. This way, students not only learn to use industry-specific English terms, but also practice soft skills like intercultural communication during their studies.

Since the autumn of 2013, the campus is located in the heart of HafenCity: In a modern building with a view on Hamburg’s Elbphilharmonie, students, researchers and staff are offered a two-floor library, an IT-Lab as well as the inevitable cafeteria, in addition to the necessary
office and seminar rooms. The Audimax developed especially for KLU, it’s “Golden Egg”, is used not only for lectures and seminars, but also as a location for professional conferences and cultural events, such as the opening ceremony of the annual Harbour Front Literature Festival.

HIGHLIGHTS 2015
While last year the university’s quality was confirmed mostly by renowned rankings, the formal recognition of the university followed suit in 2015:

On the one hand, the Science Council granted KLU the institutional accreditation, which comprises both its study programmes and question of infrastructure and academic governance. The Science Council’s members were especially impressed with the broad, international partner network, which includes both companies and universities, as well as the speed at which KLU has covered the entire spectrum of academic education within five years. This resulted in an accreditation for the next five years, after which the university will have to undergo another comprehensive process.

On the other hand, and in reaction to the excellent results of the systemic accreditation, the Senate of the Free and Hanseatic City of Hamburg granted KLU permanent state recognition. Hamburg’s Science Senator Katharina Fegebank honoured the extraordinary research performance of KLU’s professors, which enrich Hamburg’s scientific profile through their high-ranked publications on current questions in their respective fields.

TEACHING & FURTHER EDUCATION
KLU’s programmes cover the entire spectrum of academic teaching and further education:

In 2015, the Kühne Logistics University (KLU) celebrated its fifth anniversary: Since 2010, the Kühne Foundation’s flagship project, which is located in Hamburg, has been educating international leaders in logistics and management. KLU is interdisciplinary and international in its teaching and research, thereby following the vision of its founder, Prof. Dr. h.c. Klaus-Michael Kühne. By selecting Hamburg’s HafenCity as the location for its campus, both the university and the foundation emphasise their firm belief that the city of Hamburg will continue to grow as a successful economic and educational hub. By doing so, the Kühne Foundation is helping to create and to sustain a logistical environment in which science and business are closely connected.

Today, around 250 students from 28 nations use KLU’s programmes taught in English to lay the groundwork for their future careers. The private, state-recognised university offers a Bachelor’s, two Master’s and an Executive MBA programme, which ensure an optimal learning environment through integrated semesters abroad, internships and small class sizes.
Experienced leaders can expand their existing professional skills and acquire new insights in management. The 18-months programme, which can be studied part-time, offers two study trips to China and the USA respectively, thereby ensuring the internationality which is typical for KLU programmes.

In addition, KLU has a structured PhD accompanying programme which completes its academic spectrum. In 2015, companies increasingly used this opportunity to have qualified young researchers work on current questions in their organisations, thereby both supporting the next generation of scientists and developing their own company. KLU PhD candidates explored whether humanitarian organisations should hand out aid supplies in exchange for vouchers only, in order to facilitate the reintroduction of a monetary system later on. Another research project at the intersection between Humanitarian Logistics and Leadership focuses on the special conditions under which international aid teams must be led. Besides renowned industry representatives, KLU also partnered with the World Bank, which

The Bachelor of Science in Management programme teaches the basics in management and economics and can be studied in two tracks. While students in the “standard track” programme take the average number of courses, the “intensive track” offers the opportunity to expand their knowledge through additional seminars. Language courses and trainings in intercultural communication or self-organisation complete the programme.

The Master of Science in Management and the Master of Science in Global Logistics & Supply Chain Management programme allow students to deepen the knowledge they acquired in their Bachelor’s. The Master programmes teach methodical skills like statistics and modelling, but also specific knowledge in areas like Humanitarian Logistics, Sustainability or Maritime Logistics. All students complete a customised Career & Personal Development Programme, which comprises both coaching on how to achieve their own interests and expectations as well as interview trainings or workshops on subjects like networking and self-marketing.
commissioned a study on the current status and potential support of logistics education in six developing countries. Company specific offers in areas like negotiations or Supply Chain Analytics as well as open seminars like e.g. a Summer School complete the range. More and more, these contents are distributed not only via physical seminars and lectures, but also through digital learning platforms.

The official graduation ceremony in KLU’s “Golden Egg”, including the traditional hat-throwing, represents the highlight of each academic year. In 2015, university president Thomas Strothotte handed degree certificates to 88 graduates in the presence of their families and friends. Founder Prof. Dr. h.c. Klaus-Michael Kühne recognised the students’ performance and, as this year’s graduation speaker, shared some of his experience as an entrepreneur with them. At the same time, 159 freshmen started their studies – the biggest intake at KLU so far.

RESEARCH
Five new professors joined KLU’s faculty in 2015, thereby adding a wide range of topics from accounting, transport planning and supply chain management to KLU’s portfolio. All in all, KLU faculty consisted of 20 professors in two departments by the end of 2015. Furthermore, the university will appoint additional professors in peripheral areas in logistics, especially in Legal, Economic and Computer Sciences. In order to ensure a professionally inspiring environment for these professors, cooperation contracts were signed with renowned institutes in the respective discipline. In Law, this is the Bucerius Law School, in Economics the Institute for World Economy (IfW) at the University of Kiel and in Computer Science it is the institute funded by SAP-founder Hasso Plattner, with which KLU will do joint research on the influence of digitalisation in logistics.

Apart from this expansion of KLU’s academic offer, both research foci were strengthened in 2015: In the area of Maritime Logistics, several articles on topics ranging from European port policies to energy efficiency in maritime supply chains were published. KLU’s network in organisations like OECD, the EU or the Clean Cargo Working Group (CCWG) are of crucial advantage here. It was in such a consortium that KLU was granted the

Presentation of the KLU Best Student Award 2015 to Tobias Gawor by Prof. Dr. h.c. Sönke Albers
With her presentation at one of the conferences organised by the internationally renowned Online-Network TEDx, Professor Maria Besiou gained worldwide attention for the issue of Humanitarian Logistics: In a twenty-minute speech, she explained the importance of her research for successfully handling the current refugee crisis to a broad audience. Furthermore, her academic colleagues awarded her the Best Paper Award at the world’s largest conference on Operations Management in 2015.

NETWORK
In 2015, KLU organised its “KLU Forum” for the first time: This annual event will offer leaders and professionals from all over the world a place to discuss current developments in their industry in an exclusive setting. The 2015 KLU Forum focused on the increasing digitalisation in logistics, which questions both processes and business models.

KLU’s academic network was expanded as well: New partner universities in South and North America as well as Asia further increase the number of partner universities at which students can spend their obligatory semester abroad. Overall, KLU’s partner network now consists of 55 universities worldwide, thereby offering its students the possibility to study around the world. In return, the number of exchange students coming to KLU grew as well: Two of these incoming students even decided to switch to Kühne Logistics University for their entire studies in 2015.

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

The Chair for Logistics Management, led by Prof. Dr. Stephan Wagner, is not only committed to undergraduate programmes, but also involved in the qualification of young executives as well as in the organisation of an Executive MBA in Supply Chain Management. This highly respected, international programme has been taught since 2003 and represents a unique selling proposition at the Chair for Logistics Management. Its education and training courses have been very warmly received. Undergraduates in the courses provided at ETH again created vigorous demand for master courses in the fields of logistics and supply chain management. With regard to training, the 13th year of the Executive MBA in Supply Chain Management got underway in September 2015. Besides talking to the ETH President Prof. Dr. Lino Guzzella, Klaus-Michael Kühne used his visit to the ETH to acquire a personal impression of the outstanding work performed at the Chair. He also took the time for questions and answers sessions with the students at the Executive MBA, giving his own insight into questions of logistics and what makes a successful entrepreneur.

The team at the Chair for Logistics Management led by Prof. Dr. Stephan Wagner continued with the successful research it had commenced in the years before. It looks into issues of supply chain strategy, customer / supplier relationships, risk, innovation and start-up enterprises, sustainability and humanitarian logistics.
The research team at the Chair run by Prof. Stephan Wagner received four awards at international conferences in 2015 alone, underlining its outstanding reputation in the wider scientific community. The number of citations the team’s publications received in papers, emphasises the importance of the research it conducts. In 2015, the team was involved in field research in Beirut, Nairobi and Amman, where it gave courses in humanitarian logistics.

**USING LOGISTICS TO CUT FOOD WASTE**

One area in which the Chair conducts successful work is the interface between logistics and sustainability. Here the focus is not merely on how ecological and social implications of logistics can be controlled, but also how sustainability can actively be promoted through logistics. In this respect, the research team at the Chair has developed a procedure that is aimed at reducing food wastage in supermarket logistics. Technically speaking, the method centers on a barcode-assisted, more accurate shelf management system that enables supermarkets to monitor all food inventories precisely. The system uses an automated discounting process to incentivise consumers to purchase larger quantities of older stocks. The project is currently in the implementation phase with a Swiss retail chain, where it is supported by the World Food System Center at ETH Zurich. The aim is to substantially reduce the wastage levels in retail trade caused by unsold, out-of-date produce. Not only will this lead to cost savings, it will also preserve natural resources consumed in the production of goods, for instance energy, while at the same time simplifying the purchasing process.
Run by Professors Stefan Spinler and Carl Marcus Wallenburg, the Kühne Institute for Logistics Management is responsible for the entire logistics-related range of education and further training activities at the WHU, which extends from Bachelors to MBAs and which also includes the WHU Children’s University.

Moreover, the Institute is in charge of all logistics research at WHU. The focus of the research activities lies in the areas of sustainability and risk management in supply chains and logistics networks, humanitarian logistics, e-commerce, innovation management in logistics, management of logistics companies, logistics alliances and logistics outsourcing.

Current research at the Kühne Institute is producing ground-breaking proposals on how to structure logistics management. Here are two examples from 2015:

The first item was the development of a method for the ideal deployment of resources in the fight against ebola, which was developed in cooperation with Prof. Elisa Long from the University of California, Los Angeles (UCLA). The actual infection data were used to demonstrate that a 40 per cent reduction in cases would have been possible compared with the status quo. The jury at the worldwide Best Paper Award in the area of Public Sector Operations Research (INFORMS) was impressed, conferring the second prize on the research team members Eike Nohdurft (doctoral student at the Kühne Institute), Prof. Long and Prof. Spinler.
The second example was a project in the area of e-commerce that demonstrated how newly established e-commerce companies apply substantially different procedures in terms of how they outsource logistics services. Here, the aspects of flexibility and growth, but also the sustained acquisition of skills, are considered particularly crucial. Besides, it is far more important that the client and the logistics service provider’s corporate cultures produce the right fit compared with traditional outsourcing relationships.

Also supported by the Kühne Foundation, the annual WHU Campus for Supply Chain Management took place for the twelfth time in March 2015 under the motto “Supply Chain 2025 – Expect the Unexpected?”. Lectures and workshops were held by company representatives and scientists to discuss how global supply chains will develop in the coming decade and how the companies are likely to respond.

The two-day conference yielded a rich array of different ideas that extended from behavioural sciences issues to the latest technical developments and the best way to handle digitisation and other disruptive aspects.

The professional careers by alumni of the Kühne Institute make them outstanding ambassadors for the highly practical and academically rigorous doctoral degree programme at the Kühne Institute.

For instance, the firm Xioneer Systems was founded around three years ago in Vienna by the WHU alumni Dr Andrei Neboian and Dr Robert Hein. As a recipient of state grants, it is a high-tech start-up aimed at developing professional 3D printers that are tailored precisely to the needs of SMEs. Their possible uses range from design and architecture models to functional prototypes and even spare parts for special machines.

Comprising seven highly qualified employees, the team has already built numerous prototypes and applied for patents. The official rollout is imminent and scheduled for mid-2016. The expertise and the network of contacts that the two founders established during their doctoral studies at the WHU Chair in Logistics Management have proven almost invaluable here.

The WHU alumnus Dr Matthias Winkenbach has been in charge of the MIT Megacity Logistics Lab at the Center for Transportation & Logistics (CTL), Massachusetts Institute of Technology (MIT) in Cambridge, Massachusetts, USA, since September 2015. The primary focus of this research group is to investigate issues relating to deliveries in the so-called ‘last mile’ of urban settings, especially in densely populated areas of major cities where there is particularly heavy traffic, for instance in the large metropolitan centers of Latin America or the emerging markets of Asia. Moreover, the MIT Megacity Logistics Lab takes an interdisciplinary approach to explore the implications of the latest vehicle technologies and developments in the areas of autonomous driving and urban logistics processes.

Dr Winkenbach is engaged in a large number of additional collaborative projects with private companies, universities, government ministries, urban planners and NGOs around the world. In addition, he cooperates with the WHU Chair of Logistics Management WHU and the French postal services, Le Groupe La Poste, in issues relating to consolidated delivery in urban centers of Europe.
The TU Berlin is a university known and renowned around the world and located in the German capital. With almost 34,000 students, 336 professors and around 2,700 scientific assistants TU Berlin is one of the biggest universities in Germany. As a research-centered university TU Berlin supports the cooperation between business and science in Germany and abroad. Both its basic and applied research are known for their top quality. TU Berlin initiated the “Berlin Digitisation Work Group”. Transforming into a digital capital, Berlin’s aim is to encourage companies to endow 30 new IT professorships.

Its biggest study programme with more than 3,000 students focuses on business engineering. Bachelor and Master courses in logistics are in high demand by students from all areas. Each year, 200 students from TU Berlin and another 200 from international academic programmes receive training in all aspects of integrated logistics.

The Kühne Foundation has been supporting the Competence Center “International Logistics Networks” which is part of the Logistics Department at the Institute for Technology and Management at TU Berlin, since 2005. The department is run by Professor Dr. Ing. Frank Straube and employs approximately 20 people to provide teaching and research within the field of integrated logistics. Each year, around 80 highly practical theses and dissertations are supervised. The faculty maintains a strong international network. There is a particularly strong cooperation with the Chair for International Logistics Networks and Services, which the Kühne Foundation endows at the Chinese-German School for Graduate Studies (CDHK) at Tongji University in Shanghai, and Kühne Logistics University in Hamburg. Here, a double masters and a double doctoral degree programme with a strong emphasis on logistics is organised in cooperation with the Tongji University.

The Kühne Foundation funds two research assistants (doctoral students) and one undergraduate assistant working at the “International Logistics Networks” competence center.

An internet-based navigation instrument was introduced on schedule in 2015 to optimise international, particularly Sino-German, logistics networks as a systematic planning instrument for scientists and managers in the industrial and logistics services sectors. The consideration of factors causing interruptions or volatility in value added or logistics networks were given special consideration alongside specific areas to improve the planning of network optimisation. Various
An initial freeware version of the online navigation instrument was made available to all interested users in October 2015. The overarching aim of the navigation instrument is to assist specialists in their strategic and tactical planning of robust logistics networks. To create an effective network, the tools allow several users from different locations to be included in the planning. It also enables users to visualise and analyse logistics networks. Furthermore, an integrated logistics library is connected to the planning tool; it provides additional assistance in the form of useful information for logistics planners. Those interested can access content concerning German-Chinese networks that may be relevant to their planning. Besides macroscopic data on a national level, this information also includes logistics parameters and data on costs, infrastructure and Chinese market circumstances that may impact planning.

The design of the online navigator, as well as the organisation of work groups, was carried out in cooperation with the Kühne Foundation’s Endowed Chair at Tongji University under Prof. Dr. Sidong Zhang.

At CDHK, Prof. Straube regularly taught the one-week block seminar on “Supply Chain Management”; he was also heavily involved in the double masters and double doctorate programmes in business engineering with a specialisation in logistics, organised by TU Berlin and Tongji University. Promoted by the Kühne Foundation, the competence center at TU Berlin supports the courses in “International Procurement” and “Global Logistics Management I, II”, taught as part of the master degree in business engineering. These courses regularly occupy top positions in the intra-faculty course rankings. More than 50 students attend each of these courses every semester.

In 2015, the competence center submitted several papers that were accepted for publication by industry and academic journals (e.g. International Journal of Physical Distribution & Logistics Management, Logistics and Supply Chain Management Journal).

**CHAIR OF LOGISTICS MANAGEMENT AT TONGJI UNIVERSITY, SHANGHAI**

The Kühne Foundation has promoted the Chair for “International Logistics Networks and Services” within the framework of the CDHK (Chinese-German School for Graduate Studies) at Tongji University in Shanghai under the leadership of Professor Dr. Sidong Zhang for seven years now. Professor Zhang teaches advanced courses in logistics / supply chain management as part of the CDHK degree programme in business administration and at the School of Economics and Management, both of which are extremely popular among German and Chinese students. He cooperates closely with the chairs and institutions supported by the Kühne Foundation. Joint research projects, also the double masters and double doctoral degree programmes, are organised with TU Berlin successfully. Here courses and regular meetings with leading companies in the local business community are welcome additions to the KLU EMBA Excursion Programme in Shanghai.
The main focus of research at the Chair of Logistics endowed by Kühne Foundation is on network and route optimisation. Among others, two doctoral students conduct research into “Optimisation strategies in uncertain environments within distribution networks”. Moreover, master theses were supervised in 2015 in the area of integrated logistics (including “Automation strategies in distribution centers” and “Model development to optimise efficiency in procurements and purchasing”). The courses were equally popular among German and Chinese students.

Seeking to optimise logistics networks, the Chair of International Logistics Networks and Services cooperates with the YTO Group to conduct research into routing and allocation strategies. The theoretical analyses were completed in 2015, and a pilot project is now being planned. Furthermore, there is ongoing research into challenges and solutions for the fulfilment of cross-border e-commerce between China and Europe, conducted in cooperation with various companies.

The Logistics Chair endowed by Kühne Foundation cooperates with the Shanghai Municipal Transport Commission and BVL Campus Bremen. These two parties were invited to take part in discussions in March 2015 with the aim of establishing a system of dual training in China. An executive training in Supply Chain Management was developed in cooperation with the School of Economics and Management. Moreover, there were executive training courses with 80 representatives of the Yi Yu town council, also workshops with the Shanghai Automobile Industry Corp. Prof. Sidong Zhang is involved in several international education and executive training programmes at Tongji University, where he receives outstanding feedback for his logistics teaching.
There was close collaboration with the logistics department at TU Berlin in 2015. Besides conducting workshops with prestigious companies, the partners joined in the publication of a study on the challenges facing Sino-German logistics networks; it contained initial results from the “Navigator for German-Chinese Logistics Networks” project. A colloquium with 100 participants from both science and industry was held during the visit by the President of TU Berlin in Shanghai to mark the anniversary of the cooperation between Tongji University and TU Berlin, topic being “Smart Logistics – Trends and future potentials for the economy and society”. In addition, a proposal was submitted in cooperation with TU Berlin to receive funding from the Chinese National Natural Science Fund. Here, the aim is to investigate issues relating to electro-mobility and smart logistics in China. The Chair was equally involved in the preparation of a study to explore the digital transformation in logistics. The World Bank-initiated research project entitled “Subnational Logistics Performance Index” is another area to which the Chair contributes under the guidance of Dr.-Ing. Frank Straube. This project seeks to investigate tools to support efficient logistical processes for policy decisions within business and society. Prof. Sidong Zhang was promoted within the Tongji University academic system in recognition of his outstanding performance in research and teaching.

By far the largest support project undertaken by the Kühne Foundation in the area of logistics education is the DAV (German Foreign Trade and Traffic Academy) in Bremen which has been promoted since July 2015. DAV, as part of the BVL Campus, is Germany’s oldest educational facility for logistics and transport; it was founded by the Bremen Chamber of Industry and Commerce and the logistics industry 55 years ago. It offers a two-year degree course to become a state-certified graduate of business management. Students are also invited to complete one more year of studies in Great Britain in order to acquire a bachelor or master degree. It is also possible to complete a doctorate (PhD) after graduating from the master course. The academy offers advanced training in transport management in addition to the degree course in business management; its purpose is to qualify graduates to accept mid-management positions within logistics and to provide a university entrance qualification. Moreover, the DAV curriculum includes pedagogical seminars for vocational college teachers from throughout Germany and one-day seminars, including the nationwide popular course in customs formalities.

The Kühne Foundation provides support with the aim of equipping DAV to become fit for the future. DAV has always been a highly practical educational facility awarding ideal qualifications with the operational knowledge needed to build complex supply chains, fulfil multimodal haulage services using all means of transport (road, water, air, rail) and organise sophisticated warehousing concepts (contract logistics, integrated logistics, dedicated logistics). The students also receive practical training in companies and are therefore empowered to lead branches and departments of logistics companies within the industrial and trade sectors. A significant number of alumni go on to found their own companies or to take over their parents’ firms.

**FEDERAL ASSOCIATION OF LOGISTICS – BVL CAMPUS, BREMEN**

The Kühne Foundation supported and promoted the establishment of BVL Campus in Bremen in 2008, and continues to provide assistance to the work of the institutions located there.
BVL CAMPUS, BREMEN

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

The BVL Campus, Bremen

The newly structured support provided by the Kühne Foundation is designed to maintain the quality of teaching, open up new target groups through intensification of marketing and sales marketing efforts, and strengthen cooperation with vocational colleges. The plan is to further internationalise the programmes taught at DAV. Some of the courses will be completed in cooperation with foreign academies or abroad. Besides funding the academy, the Kühne Foundation offers vigorous support in the recruitment of benefactors and students.

The institutions apply different – but at all times highly competent – methods to their declared intention of ensuring a good supply of skilled and well-trained young professionals for technical and managerial tasks within the logistics sector. DAV caters to the needs of young people with initial professional experience who are seeking to take the next step in their career development and are keen to acquire relevant knowledge within a comparatively short time frame. Experts from the logistics sector come together in seminars to build on their knowledge of current topics and developments.

The institutions share a common belief in the central importance of networks.

The Kühne Foundation helped fund HIWL’s development in the initial years following its foundation in 2009 and during this period made a key contribution to the university’s seed phase. Three graduate years have since completed their degree courses at HIWL.

The close and trusting cooperation between the Kühne Foundation and the BVL Campus lays an important foundation to enable young people equipped with state-of-the-art qualifications and practical experience to accept responsible tasks within the logistics sector.
FURTHER EDUCATION IN LOGISTICS

Kühne Foundation transferred the area of further education to a separate department in 2015 in order to emphasise the importance of training in logistics. For years now, the Kühne Foundation has cooperated with leading universities and institutes of higher education to offer seminars that were increasingly internationalised over the past years.

ASIA

Attended by 30 participants, a seminar on “International Freight Operations” was held in Singapore in September 2015. It was organised in cooperation with DAV (German Foreign Trade and Traffic Academy), Bremen, the Singapore Chapter of BVL (BVL – German Logistics Association), Bremen and the Logistics Institute Asia Pacific at NUS (National University of Singapore). Although many logistics employees in Singapore are excellently qualified, they are sometimes lacking in operative knowledge acquired in a practical setting. This seminar focused on: Global Supply Chains, The Importance of Transportation, Overview of Modes of Transport: Sea Freight, Air Freight, Land Transportation, Liability of Carriers, Fundamentals in Cargo Insurance, Customs Clearance in Singapore. Therefore, the pilot course helped close the gaps in operative skills.

POLAND

Initiated and supported by the Kühne Foundation, the graduation ceremony of the first postgraduate course in logistics took place at the Business University of Wroclaw in July 2015. The lecturers in 2015 included staff from the Copenhagen Business School, TU Darmstadt and lawyers from a German practice specialised in logistics. The third course with 26 students commenced in September 2015 and will again feature international professors and speakers.

NETLOP SEMINAR – NETWORK MANAGEMENT FOR LOGISTICS PROCESSES

Organised by Kühne Foundation, the NetloP seminar series took place for the 15th time in 2015. The seminar has become firmly established as part of the logistics management training in logistics in German-speaking countries, and demand remains strong. Over 450 participants have attended the further education programme since the launch of the seminar series. The integral concept includes cross-industry processes, which rely on the development of stable networks for their optimisation. The following organisations and educational institutions contributed: ETH Zurich; Vienna University of Economics and Business; Kühne Logistics University, Hamburg; TU Berlin; Kühne Institute for Logistics Management at WHU – Otto Beisheim School of Management, Vallendar; and DAV, Bremen.

ENLOP – EUROPEAN NETWORK MANAGEMENT FOR LOGISTICS PROCESSES

Following the success of the NetloP seminars, a new education programme in logistics, held on a European level in cooperation with seven partner universities was launched 2015. The Kühne Foundation took charge of the concept and organisation. This further training programme addressed the needs of advanced, English-speaking logistics managers from the sectors of industry, trade and services. The 20 participants from five countries completed 100 course units spread over 12 days, receiving instruction on the latest developments
within logistics from a variety of perspectives; they were also able to catch a glimpse of how students are taught at the various partner universities. The participating universities were: Kühne Logistics University, Hamburg; Heriot Watt University, Edinburgh; Copenhagen Business School; University of Economics, Wroclaw; KEDGE Business School, Bordeaux; ETH Zurich and the Polytechnic University of Milan. Klaus-Michael Kühne welcomed the participants at the closing event in Schindellegi.

LOGISTICS DAY 2015 AT THE KÜHNE FOUNDATION

The 14th Kühne Foundation Logistics Day was held under the motto “Top Priority – A Competitive Edge through Professional Supply Chain Management”. Featuring over 250 attendees under the auspices of Prof. Stephan Wagner, it took place on 17 November 2015 at ETH Zurich, one of the world’s most prestigious universities. The speakers and participants in the discussions included CEOs and Supply Chain Officers who explained why supply chains must be a top priority of senior management in order to realise the full potential of the competitive advantage.

Their talks plainly demonstrated a gradual shift in the strategic, competitive context within supply chain management. Time is increasingly becoming a critical success factor. For instance, a member of the executive board responsible for logistics at a large retail company in Switzerland illustrated how the ability to deliver within 30 minutes can tap into new market potential as a value added service in the B2C segment. This applies just as much to B2B and on a strategic level. The CEO at another Swiss company proposed that the traditional triad of the success factor of quality, costs and delivery will be increasingly replaced with the speed, flexibility and robustness of supply chains. Moreover, the Logistics Day confirmed that professional supply chain management requires an extremely high level of staff qualification. In this respect, the Chair for Logistics Management at ETH focuses on more than just undergraduate programmes, and instead also teaches an executive MBA in Supply Chain Management.
OTHER LOGISTICS FUNDING

DOCTORATE WORKSHOP THROUGH ELA

The Kühne Foundation has supported the annual ELA Doctorate Workshop for years now. This time, 20 doctoral candidates from 13 countries met with five professors at the Kühne Foundation in Schindellegi to present the results of their research projects, discuss their insight with other participants and put their proposals to the test in workshops. The event is used to foster international networking between scientists and promote new ideas within logistics.

BEST DISSERTATION IN LOGISTICS

For years now, Kühne Foundation has rewarded the most practical and innovative dissertations at the BVL German Logistics Congress in Berlin. Support is provided within the category: “Outstanding research”. In this category the finalists present their work and answer questions put by the jury and members of the audience. The jury then decides which paper to award the “Science Prize for Logistics”. The winner in 2015 is Dr.-Ing. Tobias Krühn. Chaired by Prof. Wolfgang Kersten, the jury was convinced by his dissertation entitled: “Non-central, remote control of major transport systems for material flow within companies”.

AMERICAN UNIVERSITY OF CENTRAL ASIA (AUCA), BISHKEK, KYRGYZSTAN

The AUCA in Bishkek, Kyrgyzstan, launched a four-semester logistics course in 2015 with the support of the Kühne Foundation. It also organised a “train-the-trainer” course in order to improve the supply of qualified teachers on the ground. There is substantial demand for logistics education and training in this region as China is currently building a new motorway and rail network through the mountainous country to reinvigorate the old Silk Road and enable distribution of the products in China via fast and reliable land transport routes.
HELP Logistics was founded in response to the growing challenges in the field of humanitarian supply chain and logistics. It provides supply chain knowledge to enhance capacity of humanitarian actors and contribute to more effective and efficient emergency relief operations. It does this through operational training and higher education programmes as well as supply chain optimisation.
2. HELP – Humanitarian Logistics

IMPROVING EFFECTIVENESS AND EFFICIENCY OF HUMANITARIAN LOGISTICS

The aim of HELP Logistics is to work with humanitarian partners to make their response more efficient (to save costs) and effective (to save time). The main goals are:

• Provide advice on clearly identified humanitarian supply chain issues in particular process analysis and optimisation
• Support the growth and professionalisation of the humanitarian supply chain workforce

By working on real problems in the humanitarian environment and inside aid organisations, HELP Logistics can directly and immediately affect the performance of humanitarian operations. By closely aligning its consulting approach and its training and education programmes, HELP Logistics ensures that knowledge is transferred in the best possible way and solutions are successfully implemented. This will improve the capacity of the practioners and ensure a sustainable impact.

In 2015, HELP Logistics was active across three regions; Asia, Middle East and East and Southern Africa. In June, the first regional office was established in Singapore under the name Kuehne Education Center.

HELP Logistics supported 15 humanitarian partners including UN Agencies, Red Cross / Red Crescent, international and local Non-Governmental Organisations (NGO’s), and local Governments. It collaborated on training, education and applied research programmes with many academic institutes, such as Kühne Logistics University (Germany), ETH Zurich (Switzerland), Ger-
INCREASING COMPLEXITY AND NEEDS IN THE FIELD OF HUMANITARIAN LOGISTICS

The world continues to face increasing and complex humanitarian challenges year after year. The more than four-year-old war in Syria has caused 4.4 million people to flee the country as refugees. A magnitude-7.8 earthquake struck Nepal on April 25, toppling buildings and triggering avalanches in the Himalayas. Some 8 million people were affected by the quake and the aftermath. More than 8,000 lives were lost. The 2014 Ebola outbreak that hit West Africa lasted for 18 months, sickening 28,000 people and killing 11,300 in the three countries.

Emergencies continue to severely affect Africa, Asia and the Middle East but also do not spare Europe and the Americas. As well as the social impact, the economic costs of humanitarian action are stretching the capacity of Governments and humanitarian organisations to the limits. Many organisations lack the funding, and often the adequate structures and processes, to create a more competitive and effective organisation to meet the demands upon them. In addition, the number of adequately trained responders is not keeping pace with the increasing frequency and scale of emergencies. Logistics is also one of the most expensive elements of a humanitarian response and so there is enormous potential for improvements.

BROAD SPECTRUM OF PRODUCTS AND SERVICES

In the context of its capacity building programmes, HELP Logistics was able to deliver operational courses, technical certificates and dynamic desktop simulations in all regions. Experts from various humanitarian organisations and Government agencies from ASEAN...
In response to a growing demand from the humanitarian sector HELP Logistics focused more on consulting services such as supply chain assessments, analysis and optimisation. This included looking at the internal operational requirements (e.g. organisation team structure, personnel capacity, procurement procedures, transportation and warehouse management) and external environment factors (e.g. infrastructure, markets and national emergency preparedness).

Furthermore, HELP Logistics continued to facilitate the transfer of knowledge and experience between academic theory, commercial solutions and humanitarian operational needs. HELP Logistics has actively participated at global events and conferences such as the Global Humanitarian Logistics Cluster and Dubai International Humanitarian Aid & Development Conference & Exhibition (DIHAD).

EAST AND SOUTHERN AFRICA REGION

FOOD AND HEALTH, THE CONSUMABLE SUPPLY CHAIN CHALLENGE

The chronic humanitarian problems of drought and hunger keep on occurring in a background of civil conflicts and unrest. In South Sudan, 1.66 million people have fled their homes because of fighting since December 2013. In 2015, thousands of farming families missed the planting season or lost their livestock. 6.4 million people needed humanitarian assistance and
3.9 million were facing severe food shortages. In Somalia, more than 1 million people still needed emergency food assistance and late in 2015, about 90,000 people were displaced by flooding attributed to effects of El Nino.

An efficient food supply chain is clearly an important humanitarian need in East Africa. Another major challenge is public health systems, for example the Ebola disease, which requires specific medical supply chain infrastructure and management.

IMPROVING COLLABORATION AND COORDINATION AMONG AID AGENCIES

In the context of reduced public and donor funding, aid agencies must become more efficient. In Africa, they have typically evolved cumbersome department structures and over-engineered policies and procedures that choke movement of information and stocks. Through consultation and customised training programmes, especially dynamic simulations, HELP Logistics facilitated the break-down of these internal barriers leading to improved performance and competitiveness.

HELP Logistics worked with International Organisation for Migration (IOM), Food and Agriculture Organisation (FAO), Plan International and Save the Children (SCI) who all requested consulting support on organisation operations management. HELP Logistics assessed their department structures and processes and provided solutions to make their operation more effective and efficient.

In some of the projects the re-designed processes were documented in Standard Operating Procedures (SOP). Customised trainings ensured these procedures were understood by the practitioners. To embed the procedures in a structure of enhanced collaboration and communication across all supply chain actors, HELP Logistics and ETH Zurich provided a dynamic simulation training. The simulation illustrates an end-to-end supply chain in the humanitarian context starting at the factory up to the final distribution of relief items to the affected population. Participants of the simulation experienced the value and importance of coordination and information sharing.

TRAINING PROGRAMMES WITH PARTNERS TO ACHIEVE SCALE

The need to increase the logistic workforce while improving their professional capacity, led HELP Logistics to partner with other training providers in the region, namely World Food Programme (WFP) and RedR UK. The Food Management Improvement Project (FMIP) aims to assist the Ethiopian Government make the management of the food-assistance supply-chain more visible, efficient, effective and accountable. A unique pilot collaboration with HELP Logistics, WFP and International Trade Center (ITC) provided a supply chain management course to 30 Government employees in Addis Abeba.

Improving collaboration across humanitarian organisations is essential for effective emergency responses. HELP Logistics ran two such courses, training 60 staff from small, medium and large organisations. In partnership with RedR UK it was able to train an additional 16 staff, including also other essential functions in logistics such as fleet and security management. An essential component of the training is analysing real-world case studies and organised trips to warehouses or ports.

EDUCATING THE FUTURE GENERATION

The “Future Generation” concept is key to providing a sustainable and competent logistics workforce in the Africa region. HELP Logistics again offered two certificate programmes at the University of Dar es Salaam (Tanzania). 120 students applied for 60 places. The intense five day certificate programme is designed specifically at understanding humanitarian supply chain management. As well as theoretical modules, such as strategic...
planning in supply chain management, students engage energetically in case studies, exercises, group discussions and trips to facilities.

In Ethiopia, HELP Logistics developed the capacity of lecturers through its “train-the-trainer” course. 28 lecturers from the six best universities completed the course.

A key academic partner is the world-renowned Stellenbosch University, South Africa. HELP Logistics designed and delivered a humanitarian logistics module (150 hours) as part of the existing Master’s and Honours’ degree programmes.

INNOVATION AND NETWORKS
For the fourth time HELP Logistics organised the African Logistic Conference in Dar es Salaam (Tanzania). Linked to the common consulting issues HELP Logistics supports, the conference theme was communication and coordination in humanitarian supply chains and included panel discussions on partnerships, innovative technologies and cash transfer programmes. More than 100 experts from ten different countries attended. The conference has a practical and pragmatic focus; aiming to transfer knowledge and proven solutions between humanitarian organisations, academia and the private sector.

ASIA REGION
FOCUSING ON PREPAREDNESS AND RESPONSE
The Asia-Pacific region is one of the most vulnerable zones globally and has a growing number of natural disasters which cause death, environmental and economic destruction, and severe setbacks for social development. Many countries lie along the earthquake-prone “Ring of Fire” in the basin of the Pacific Ocean, along major storm tracks or in other high seismic and flood risk regions. Over 40 per cent of the 4,000 disasters that occurred globally between 2005 and 2014 occurred in the Asia-Pacific region. More than 1.4 billion people were affected constituting 80 per cent of those affected globally. In this volatile environment, the effectiveness of aid agencies and Governments to respond to disaster events is largely determined by investment in “Preparedness”. When disasters occur and the “Response” phase begins, a workforce with honed skills and competencies need to act fast. Since 2012, HELP Logistics has played a key role in contributing to both phases of relief operations. The HELP Logistics team consists of international and national experts and operates from Singapore alongside other humanitarian organisations. They are able to put staff directly on the ground in emergency responses and provide technical logistics training to
prepare for future disaster events. A professional con-
sulting approach has resulted in successful and sustain-
able changes in organisations.

The regional office has established an operational plat-
form and an extensive partner network that will un-
doubtedly grow from strength to strength and become
a major player in humanitarian dialogue and operations
in the Asia-Pacific region.

LOGISTICS CAPACITY ASSESSMENTS
BRING IMMEDIATE IMPACT

The humanitarian community had foreseen a natural
disaster in Nepal. On 25 April a magnitude-7.8 earth-
quake struck. Just months before, HELP Logistics
carried out a joint mission with Save the Children in
Northern India to assess the local logistics capacity and
determine the feasibility of a humanitarian corridor
from India to Nepal. The report from this timely and
essential assessment was distributed to aid agencies and
ensured that affected populations had the best chance of
receiving aid quickly.

The importance of HELP consulting activities was under-
scored by the highly successful first phase of the Supply
Chain Optimisation project for the World Health Organ-
isation (WHO) in Kuala Lumpur, Malaysia. This large
scale project launched in April 2015 aims at streamlin-
ing WHO’s business processes to enhance supply chain
visibility and reduce lead times and costs. Detailed data
collection and analysis allowed key performance indica-
tors to be measured (e.g. delivery lead times, procure-
ment process times) and significant bottlenecks identi-
fied. The second project phase started in October and
focuses on implementing the improvement oppor-
tunities identified.
APPROPRIATE AND TIMELY TRAINING
HELP Logistics co-facilitated an Emergency Logistics Training at the UN Humanitarian Response Depot (UNHRD) in Kuala Lumpur with World Vision. 33 World Vision International (WV) employees came from the Asia region. On March 13, at the end of the training, the South Pacific Ocean Nation Vanuatu got hit and devastated by Cyclone Pam. Preparedness training became an operational response and two aircrafts were fully loaded with prepositioned cargo and two well-trained World Vision staff were soon “en route” to Vanuatu.

In March, HELP Logistics hosted a four-day Logistics Training for World Vision in Chennai, India. Months later in November, heavy rains led to the worst flooding in a century of Chennai City and surrounding districts. The majority of the 37 trained participants were involved in the relief operation and were able to apply their newly acquired logistics knowledge when providing assistance to the affected population in West Bengal and South India. In total, ten Supply Chain Management and Logistic trainings were completed and more than 250 staff of humanitarian and governmental partners from six different countries (Indonesia, Philippines, Malaysia, Thailand, Myanmar and India) benefitted from HELP Logistics commitment to deliver humanitarian assistance more effectively and efficiently.

RAISING AWARENESS AND INTEREST IN HUMANITARIAN LOGISTICS
Continuing the theme of “Future Generation”, the regional office delivers many lectures and seminars. In 2015, seven presentations were made to key educational institutions in the region, such as National University of Singapore, Thammasat Business School (Thailand) and the Vietnamese-German University.
MIDDLE EAST REGION

LOGISTICS, “THE HEART” OF THE SOLUTION TO THE MIGRATION CRISIS
Two of the biggest global disasters have dominated the work of humanitarian organisations in the Middle East; Iraq and Syria.

The United Nations appealed for USD 7.4 billion to meet humanitarian needs for the Syria crisis. Fighting has spilled over from Syria and flared up in Iraq. The U.N. Office for the Coordination of Humanitarian Affairs (OCHA) estimates more than 10 million people need humanitarian assistance, including 3.2 million displaced by conflict, and nearly 250,000 Syrian refugees. Many are dependent on aid for adequate food, shelter, clean water, sanitation services, and education support. People seeking refuge in mountainous areas of northern Iraq need help to weather the cold, snowy winter months.

The unprecedented number of people in need of humanitarian assistance means the financial and human resources of relief agencies have reached their limits. Also, one significant new challenge for humanitarian logistics is delivering assistance to numerous displaced people constantly moving, often across borders.

LARGE SCALE, LONG-TERM LOGISTICS TRAINING THE KEY INGREDIENT TO SUSTAINABLE IMPACT
In the aftermath of the “Arab Spring”, the Gaza conflict and the massive influx of Syrian refugees into Egypt, the country’s capacity to adapt and meet the challenges has been overwhelmed. The Egyptian Red Crescent (ERC) launched a logistics capacity building initiative that would be able to meet the new levels of organisation requirements. Together with the Swiss Red Cross, HELP Logistics designed and delivered a programme with the intention to both, establish the infrastructure needed as well as guarantee the availability of competent skills for emergencies.

In total, ten training sessions of three days each ensured that over 300 ERC staff from 27 branches across Egypt received new logistics knowledge. The large scale systematic approach brought almost immediate impact. The transparency of stocks in the supply chain ensured the location of the commodities got to the right warehouses, at the right time.

DEVELOPING THE FUTURE GENERATION
In joint efforts, the German-Jordanian University (GJU) and HELP Logistics have created elective modules for Bachelor and Master Courses in logistics.

Furthermore, together with GJU, HELP Logistics offered a 90 hours post-graduate certificate course called the Humanitarian Logistics Diploma Programme. The course includes 40 hours general logistics, 50 hours humanitarian logistics including a desktop learning simulation tool, called the Humanitarian Supply Chain Simulation (HSCS). 15 participants from different organisations graduated the first course with great success.

COLLABORATION WITH THE KÜHNE LOGISTICS UNIVERSITY (KLU)
To increase the numbers of professional logisticians in the humanitarian sector in the future, HELP Logistics is not only supporting students at universities in its regions but also at Kühne Logistics University (KLU) in Hamburg, Germany. From the head office in Schindellegi, HELP Logistics supported the KLU internship programme which gave seven MSc students the opportunity to work with humanitarian organisations on specific problems. These students had successful results with FAO, IOM, Save the Children, World Vision and WFP.
Society is confronted with the widespread problem of allergies in epidemic proportions. In some industrialised countries over one third of the population suffers from an allergy. This requires allergy research on top level as well as the efficient distribution and implementation of its findings.
3. Medical Project

**CK-CARE, CHRISTINE KÜHNE-CENTER FOR ALLERGY RESEARCH AND EDUCATION**

**ALLERGIES: AN AREA PREDESTINED FOR A FOUNDATION TO LEAVE ITS MARK**

Around 30 per cent of the population in industrialised countries – or approximately one billion people worldwide – suffer from allergies. It is fair to say, therefore, that allergies represent the most widespread of all civilisation diseases. The true drama underlying this development becomes immediately apparent if one compares the frequency of allergic illnesses just a few decades ago: in 1926, for instance, sufferers accounted for less than one per cent of the Swiss population. There are various reasons for this persistent rise in allergic illnesses, but ultimately the reasons are found in modern lifestyle, including diets, hygiene standards, climate change and the burden on our environment, especially due to atmospheric pollutants. It is reasonable to assume that ongoing socio-economic and ecological developments will merely aggravate this problem unless suitable countermeasures are developed and implemented on the various levels. Furthermore, it is becoming increasingly apparent that countries such as China, which for years now have experienced dramatic economic and social changes, are now experiencing the downside of these developments, expressed as a spiraling rise in the number of persons suffering from allergies.

The range of allergic symptoms is broad and extends from pollen allergies and neurodermatitis to food allergies, contact allergies and allergic asthma. A disproportionately high number of those afflicted are children and adolescents. The reason for this is that as errant and excessive reactions of our bodies’ defence mechanisms, allergies are most present in extremely vital immune systems. The consequences of allergic diseases may be dramatic, primarily on an individual level. The allergies will frequently place a significant burden on the health of the person afflicted, and in most cases will lead to a severe curtailment in the quality of life. In extreme cases
they may even prove life-threatening. In typical cases an allergy will also have severe negative repercussions on the family, social and professional lives of those affected. The treatment of allergic diseases in industrialised countries costs billions. This is not even counting the drain on resources due to sickness-related absence from work, a factor that is difficult to quantify. A mere glance at these facts is sufficient to indicate how crucial it is to develop effective strategies and measures to improve this situation.

Nevertheless, despite the clear need for action in the area of researching causes, mechanisms, means of prevention and also treatment, the large pharmaceutical companies have little interest in allergy research, and the resources earmarked for allergy research are far smaller in relation to those that carry a larger public-health significance such as cancer research. Relevant surveys have also shown that there is much that needs to be done in the qualification of primary care physicians, also.

CK-CARE – CHRISTINE KÜHNE-CENTER FOR RESEARCH AND EDUCATION
The Kühne Foundation has recognised this urgent need for action. The CK-CARE (Christine Kühne-Center for Allergy Research and Education) project was launched in Davos in 2009. The declared intention of this unique initiative was and remains to promote research into the field of allergies and support the qualification of suitable experts by means of close cooperation between outstanding research groups, coordinated centrally in Davos. As the organisation behind CK-CARE, the Kühne Foundation has therefore created an initiative in a field that for the important reasons given above is almost ideally suited to a charitable commitment. It is reasonable to assume that the funds provided by CK-CARE will enable substantial leverage in this area. CK-CARE introduced an innovative concept, critically examined and confirmed by external international experts, to restructure its work after five years of successful operations.

Besides continuing its promising activities in the field of education, CK-CARE further strengthened its already close cooperation with the individual excellence centers in Davos, Zurich, St. Gallen, Bonn and Augsburg. However, work groups operating across a number of locations and focusing on coordinated core issues were brought in to replace the previous focus on fixed teams in the individual centers. This procedure permits even more dovetailing of competencies and technological facilities and therefore far greater efficiency in the exploitation of synergy.

In addition, enlargement of the campus for allergy research, education and treatment continued throughout the reporting year. The close collaboration between SIAF (Swiss Institute of Allergy and Asthma Research), Hochgebirgsklinik and CK-CARE is creating a unique framework within which to conduct joint, patient-centric research and education. On a strategic level the three partners are entirely committed to transnational research: The concept ensures that patients in the clinic benefit directly from the research results, also due to

CK-CARE offices in the Hochgebirgsklinik Davos
Performing series of tests

spatial and organisational proximity. The CK-CARE study center at the Hochgebirgsklinik was established as an operational control center to provide perfectly streamlined coordination of the research conducted by CK-CARE and SIAF, as well as to provide patient support in the Hochgebirgsklinik. From its inception, the concept specified that cooperation between the partners should extend beyond the online world and that instead they should find joint premises in which to collaborate directly. Work on the preliminary project design for a training and laboratory building was completed in the reporting year.

ONE CORE ISSUE DEFINES THE ACTIONS OF CK-CARE’S RESEARCH

CK-CARE has set itself the task of initiating a hitherto unprecedented study. In the reporting year CK-CARE took the overarching issue “What can we learn from the course of allergies in general and neurodermatitis in particular?” to create a bio-bank that, in future, will contain biological material (blood samples, smears and tissue) from thousands of patients with neurodermatitis and allergies and will be available to CK-CARE in order to address future scientific issues in a more purposeful manner. The partners also created a central database containing suitably meaningful data and information. The database and the bio-bank commenced operations in September 2015 after a record-breaking preparatory period of just nine months. This material and the information will become the actual assets produced within the CK-CARE research, and they will be of immeasurable value to future studies, also due to their ability to speed up processes. They will allow researchers to map the course of allergies and neurodermatitis and hence to acquire insight needed for the prevention and treatment of these conditions.

RESULTS AND INSIGHT WITHIN CK-CARE RESEARCH AND THEIR IMPLICATIONS FOR ALLERGY PATIENTS

CK-CARE completed successful work and produced important results that have directly impacted the lives of allergy sufferers in 2015 as well. For instance there has been notable progress in the area of measuring allergy triggers and environmental influences. The work has produced a greater understanding of the skin’s barrier function, which is the key to protection against allergy triggers. Tests were then conducted to improve the effectiveness of treatments. CK-CARE was able to determine factors that enable the identification of at-risk children to ensure that they receive timely protection against the development of allergies. Moreover, the results have indicated that certain dietary constituents possess properties that will be of use to help prevent allergies. The following section will present certain selected aspects of the work conducted so far, of course, without any claim to completeness.

Environmental aspects as causative factors in the emergence and persistence of allergic diseases

The scientific purpose described in “work package 1” is to further the understanding of the role that environ-
mental factors play in the emergence and persistence of allergic diseases. Europe’s first fully automatic pollen measurement station is currently delivering pollen concentration values. This will provide allergy patients with the timely information they need to ensure their medication and activities suit current concentration levels. This will help improve treatment and reduce symptoms. Moreover, tests conducted in climate chambers have shown that an elevated level of nitrogen dioxide is directly linked to the allergic potency of common ragweed and that it therefore poses an increased health risk. The interaction between pollen (substances) and immune cells was also the subject of ongoing research. Allergic reactions of the respiratory tract involve direct contact between pollen and leucocytes. A number of substances are released during contact with pollen. Laboratory tests were conducted in order to determine which of these substances is activated by the immune system. This led to the identification of a fatty acid that causes an increased secretion of IgE.

**Barrier disorders in the mucous membranes and the skin**

The research conducted within “work package 2” demonstrated how a barrier disorder in the mucous membranes and the skin influences the development of allergic diseases and neurodermatitis. Environmental substances may be able to penetrate deeper-lying tissue or the lungs if impairments to the skin or mucous membranes reduce their important barrier functions. The studies demonstrated how the stimulation of various factors that promote inflammation may place the lung’s epithelial barrier the risk of attack by cytokines, dust mites or pollen. Barrier disorders appear to be key factors in the emergence of asthma and its development as a chronic condition. Repairing the barrier disorder in allergic diseases and contact dermatitis is one of the most important aspects that needs to be tackled in preventing the emergence of allergic diseases. An innovative method to repair damaged epithelial barriers in the skin and the lings was demonstrated during the
report period. This insight will enable a new approach in the development of treatment.

**Preventing atopic eczema**

The progress achieved in “work package 3” demonstrated that immune defence cells in the blood of the umbilical chord can help predict the emergence of neurodermatitis. In this way it is possible to identify at-risk children early on and hence to initiate preventative measures. Additional studies have confirmed the preventative effects on regular immune activity by indigestible oligosaccharides that exhibit a similar structure to comparable substances in mother’s milk. The results show that short and long-chain oligosaccharides positively influence the suppression of messenger substances that trigger allergies. This knowledge can now be taken to engineer dietary supplements with protective effects against allergies.

**Protection against allergies by fatty acids**

The results of “work package 4” show that administering short-chain fatty acids (e.g. constituents of butter) prevent the emergence of allergies in mice. Even treating the mother during pregnancy and lactation can protect new-born mice against the emergence of allergies. Work will now proceed to investigating the molecular mechanisms underlying this effect. The purpose here will be to develop suitable applications for use within a preventative framework.

**Training**

The acquired and expected results of current and future training activities were measured and critically assessed during “work package 5” in order to then develop measures to purposefully improve their impact. The syllabi were also updated continuously to enable direct incorporation of the scientific insight acquired in the other work packages.

**CK-CARE EDUCATION**

Besides research, educating primary care physicians is seen as the second mainstay in the CK-CARE activities. It has also seen ongoing progress and optimisation through consistent evaluation in the reporting year. The following section will describe some of these activities too. The second Allergy Education Week took place in Davos from 7 to 13 September 2015. A variety of courses were held, some of them concomitantly, to address the needs of GPs, paediatricians, allergists, dermatologists and all other specialists involved in the treatment of persons afflicted by allergies. Surgery teams, individual GPs and doctor’s assistants all benefited from the highly practical course in “Fundamentals of anaphylaxis” and from the integrated training in what to do in emergen-
cies. Experts in neurophysiology and psychology attending the summer school conducted in cooperation with EAACI, the European Academy of Allergy and Clinical Immunology, presented new insight into how allergic diseases interact. Designed to help nursing staff instruct patients suffering from neurodermatitis in treatment and skincare measures, the training course focused on helping attendees translate their newly acquired knowledge and skills directly into practice and clinic routines, i.e. on providing instruction to patients. Besides acquiring knowledge within the specific illness modules on neurodermatitis and anaphylaxis, the specialists from medical, nursing, psychology, pedagogical professions attending the “train-the-trainer” seminars were invited to acquire basic skills in how to teach patients.

Standard lectures, symposia, workshops and CK-CARE webinars were also organised to train future consultants, in particular certified dermatologists, allergists and paediatricians. Designed to address the needs of physicians treating children, the well-established block seminars “Allergies in everyday paediatric practice” were particularly popular.

**THIRD CK-CARE GLOBAL ALLERGY FORUM IN DAVOS**

Research in the field of allergic diseases is in a state of constant flux. In general, the best ideas, thoughts and visions for the future emerge when experts from a broad variety of disciplines come together. Reflecting the practices of the World Economic Forum, which meets regularly in Davos, CK-CARE convened a kind of think tank just a few years ago: the Global Allergy Forum (GAF). Attended by the founders Kühne, the third international conference on neurodermatitis was held in Davos in July 2015. As in the past, the results of the in-depth discussions will be summarised in what is known as the Davos Declaration and then published in the leading journal “Allergy”. This has proven an effective measure in the past: indeed, the results of the first Davos Declarations set new standards in medical and social policies.
In the field of culture, the Kühne Foundation offers support principally in the areas of music and literature. It has once again provided support to numerous concerts, operas and festivals in Switzerland, Germany, Austria and Italy. The Foundation is also involved in the preservation of churches and chapels.
4. Cultural Projects

MUSIC AND FESTIVAL FUNDING

LUCERNE FESTIVAL
Featuring around 130 events from 14 August to 13 September, the programme of this year’s Lucerne Festival on the eponymous lake was defined by the motto of “humour”. The events were attended by 80,000 visitors from 46 countries. In 2015, the Kühne Foundation sponsored Giuseppe Verdi’s final opera, the comedy “Falstaff”, as a concert performance with the baritone Ambrogio Maestri in the title role.

This “lyrical comedy” is almost inevitably on the programme of a festival exploring the topic of “humour”. “Falstaff” was once described as “the avant garde of later years”, as it was in this work that Giuseppe Verdi re-invented his art at the grand old age of over 80.

The Lucerne Festival featured an outstanding production of this humorous, yet profound, late work. As entertaining as it was highly complex, Verdi’s “Falstaff” ticked all the boxes. The conductor Jonathan Nott and the baritone Ambrogio Maestri, who was perfectly cast in the title role, were the highlights of a truly outstanding interpretation.

MECKLENBURG-VORPOMMERN FESTIVAL
25 years of festival in the north-east of Germany: The Mecklenburg-Vorpommern Festival celebrated its 25th anniversary with a 2015 summer season punctuated with big names and a flourish of major themes. 124 concerts at 78 venues spread across the entire region were held from 20 June to 19 September 2015. Festival prize-winners like Daniel Hope, Daniel Müller-Schott, Gabor Boldoczki and Matthias Schorn attended the anniversary gala, performing as an ensemble of soloists under Christoph Eschenbach. Concerts with Anne-Sophie
Mutter, Joshua Bell, Klaus Maria Brandauer, Mitsuko Uchida, András Schiff, Kent Nagano and Murray Perahia were the highlights of the anniversary season. The events were attended by over 70,000 concert-goers, ensuring the Mecklenburg-Vorpommern Festival's place in the pantheon of Germany’s classical music events.

The concerts given by the “elite young artists” have become firmly established on the programme of the Mecklenburg-Vorpommern Festival. For 20 years now, the Mecklenburg-Vorpommern Festival has invited young international musicians to present their art to a wider audience. The Klaus-Michael Kühne Foundation supported a concert in this series on 6 August 2015. Olena Tokar, a young singer from Ukraine, winner of various international competitions and ensemble member of Leipzig Opera since 2009, presented songs by Schumann and Tchaikovsky, as well as arias by Jules Massenet, Antonín Dvořák and Charles Gounod.

MUSIC SUMMER ON LAKE ZURICH
The Kühne Foundation has supported the Music Summer on Lake Zurich for many years. Tracing a narrative arc from songs and opera to the singing instrumental music by the clarinetist David Orlowsky, a special concert evening was held in 2015 in the Feusisberg Catholic Church in the Canton of Schwyz in cooperation with the Mecklenburg-Vorpommern Festival. The mezzosoprano Sonja Leutwyler performed arias from Bizet’s “Carmen” and Lehár’s “Giuditta”. Rewarded with tumultuous applause in the sold-out church, the concert evening ended with klezmer and world music for chamber orchestra by the clarinetist David Orlowsky.

SALZBURG FESTIVAL
In 2008, the Salzburg Festival created Young Singers, a high-class platform to promote emerging artists. The musicians selected as Young Singers are awarded scholarships to work with the festival artists. The classes not only focus on the musical and repertoire aspects of development but also on rehearsing scenes, voice coaching and musical interpretation. Bringing together artists and providing a forum to acquire practical experience, the Kühne Foundation’s involvement in this programme can be seen as truly ground-breaking.

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13 promising young singers from eight nations were selected from over 400 applicants at the international auditions to the 2015 festival. The purpose of the Young Singers is to enable talented artists to develop in the setting of the Salzburg Festival and provide them with
OPERA FUNDING

HAMBURG STATE OPERA

New beginnings dominated Hamburg’s world of opera in September 2015. Georges Delnon was appointed Artistic Director Opera at the State Opera, while Kent Nagano was named General Music Director and Chief Conductor. There were a number of performances sponsored by the Klaus-Michael Kühne Foundation at the start of the new era, which centered on the production of “Les Troyens”, an opera by Hector Berlioz. This cultural event was warmly greeted well beyond the limits of Hamburg itself, and was broadcast as a pre-recorded “public viewing” performance on the Jungfernstieg on 19 September and on the ARTE Concert television channel.

Director Michael Thalheimer and stage designer Olaf Altmann succeeded in creating a visually stunning theatrical event. Elena Zhidkova and Catherine Naglestad took the roles of the female leads next to male lead Torsten Kerl, performing magnificently in this Greek tale recounting the fall of Troy. Parallel to the premiere in the “Großes Haus”, a light sculpture shone from the

an ideal preparation for their subsequent careers as singers. Therefore the participants attended masterclasses, vocal coaching and body work sessions. Along the way they acquired valuable experience by visiting the rehearsals, working with the festival artists and by “soaking up” the very special atmosphere in Salzburg.

The Young Singers 2015 performed Rossini’s “Barber of Seville” in a children’s showing as part of the festival programme. In addition, they contributed to the opera productions of “Le nozze di Figaro”, “Il trovatore” and “Der Rosenkavalier”, and also performed in Mozart’s Mass in C-minor as well as other projects. The exquisite closing concert given by the Mozarteum Orchestra Salzburg under the musical director Christoph Altstaedt in the International Mozarteum Foundation on 27 August was a resounding success.

The Salzburg Festival organised an additional guest concert in the “Castell Son Claret” hotel in Mallorca for the third time, at which six of the best young singers performed works from the world of opera and operetta to showcase their talents.
sian soprano Olga Peretyatko celebrated her debut in the role of Violetta. Like in the Festspielhaus production of Donizetti’s “L’Elisir d’Amore”, Rolando Villazón put together a particularly individual choir. Olga Peretyatko performed magnificently in the role of heroine, vacillating between youthful abandon, mature introspection and mortal agony.

ZURICH OPERA HOUSE
At the start of March 2015, the Kühne Foundation celebrated the reintroduction of Gaetano Donizetti’s work “Anna Bolena” at Zurich Opera House. Premiered in 1830, Donizetti’s opera drew on historical sources to interpret the tragic marriage between Henry VIII of England and Anne Boleyn. In 1533, Henry divorced his wife in order to marry Anne Boleyn, neglecting to seek permission from the Pope. But just three years later Henry had become tired of Anne as well.

Anna Bolena has always been regarded as a litmus test for great sopranos, as the role demands extraordinarily high standards of musical virtuosity from the singer. The opera is performed rarely. Anna Netrebko put in a truly convincing, superb performance, interpreting the leading role beautifully in this technically and artistically demanding piece. The orchestra showed a deft and sensitive musical touch under the skilled hand of the Ukrainian conductor Andriy Yurkevych.

MILAN SCALA
The Teatro alla Scala di Milano (also known as the Milan Scala) is one of the world’s best-known and most prestigious opera houses. It was opened on 3 August 1778 to replace the Teatro Regio Ducale which burned down in 1776. Alexander Pereira replaced Stéphane Lissner as musical director on 1 October 2014. The Kühne Foundation sponsored the opening concert of the Milan Expo in 2015. It featured a guest performance of Anton Bruckner’s Symphony No. 7 by the Berlin Philharmonic Orchestra under Sir Simon Rattle.
LITERATURE FUNDING

HARBOUR FRONT LITERATURE FESTIVAL
Creativeness and diversity are integral elements of logistics and of literature as well. It was this parallel that motivated the Klaus-Michael Kühne Foundation to join with the Hamburg Senate in 2009 to create the Harbour Front Literature Festival, which is now entering its seventh year of sponsorship. Featuring Ilja Trojanow, the opening event at this popular festival thrilled the audience and was held once again at the Kühne Logistics University. The diversity and balance between all literary genres are the factors that make this festival so special.

Like in the years before, the festival prizes were awarded at a ceremony attended by the benefactor Prof. Dr. h.c. Klaus-Michael Kühne and his wife Christine Kühne: The Klaus-Michael Kühne Award 2015 went to the Hamburg-based author Christine Bilkau for her novel “Die Glücklichen”. A prize for the best children’s and youth book author was also awarded for the third time: the “Hamburger Tüddelband”. The 2015 award went to Cornelia Funke, who received it from patroness Mrs Christine Kühne during a ceremony held in St. Catherine’s Church in Hamburg.

SUPPORT OF OTHER CULTURAL PROJECTS

ST. CATHERINE’S CHURCH
The Klaus-Michael Kühne Foundation has sponsored the restoration of St. Catherine’s Church since 2010. Hamburg’s main church was constructed in 1250 as parish church at Hamburg’s harbour and was expanded several times over the centuries. Severely damaged in 1943, the lack of resources after the war made any permanent building work impossible, which meant that extensive renovation work was necessary in order to preserve this landmark by the harbour.

The renovation of the heating system was made possible thanks to the support of the Klaus-Michael Kühne Foundation after completion of the new choir gallery in 2015.
Organisation