



UN Global Compact Communication on Progress 2018

Successful together



Human



Labor



Environment



Compliance

Communication on Progress 2018 – Table of contents

SHAPING CHANGE – ENSURING CONTINUITY	4
KARL STORZ AT A GLANCE	6
KARL STORZ ENDOSKOPE – THE FASCINATION OF PROGRESS	8
IMPLEMENTATION OF THE TEN PRINCIPLES AT KARL STORZ	13
GLOBAL COMPACT PRINCIPLES 1-2: HUMAN RIGHTS	13
I. Democratic Republic of Congo: Support of gynecological treatment	13
II. Liberia: Buildup of urological expertise	14
III. Kenya and Senegal: Biomedical engineers for Sub-Saharan Africa	15
IV. Cambodia: Medical missionary provides specialty consultation	16
V. Indonesia and Tanzania: Continued collaboration between AGA-ENT and KARL STORZ	18
VI. China: Five-Year Minimally Invasive Surgery (MIS) Training Project	24
VII. Brazil: Supporting medical care in rural regions	26
VIII. Donation of medical technology products for sustainable development	28
IX. Employee Solidarity	29
X. Promoting the talents of children and adolescents	39
GLOBAL COMPACT PRINCIPLES 3-6: LABOR	45
I. KARL STORZ Employee Representative Committee	46
II. Support of working parents	49
III. Support of education and apprenticeship training	52
IV. University cooperation projects	63
V. Continued education at KARL STORZ	66
GLOBAL COMPACT PRINCIPLES 7-9: ENVIRONMENT	67
I. Environmental protection through innovative medical devices	67
II. Reduction of paper use	69
III. Company Fleet: Fuel consumption and CO ₂ emissions	70
IV. KARL STORZ bicycle leasing program	72
GLOBAL COMPACT PRINCIPLE 10: ANTI-CORRUPTION	74
I. Continued dedication with information and training	74

Shaping Change – Ensuring Continuity



For more than 70 years, we have been making business decisions with an eye on their effects on employees, customers, business partners, and society as a whole. As a family company that is steeped in tradition, we want to enable future generations to use their resources, creativity, experience, and knowledge in a way that allows as many people as possible to benefit from medical progress.

Making business decisions deliberately rather than at the cost of future generations is important to us to ensure our company's long-term success. The activities we are presenting in this year's Global Compact Communication on Progress show that awareness of responsibilities, health promotion, and sustainability are critical for making a difference with our continued commitment.

Promotion of ongoing advanced medical training

The targeted ongoing advanced training of physicians and medical assistants has always been important to KARL STORZ. This year, KARL STORZ once again collaborated with strong partners to support medical training and continuing education, particularly in Africa, Asia, and South America. In collaboration with dedicated physicians, in 2018, we were once again able to support projects in which medical and technical knowledge is passed on locally to promote modern, minimally invasive healthcare through sophisticated treatment methods.

Partner of the local community

As a company, we benefit from motivated employees and integrated modern technologies and infrastructures at all of our product development, production, and sales sites. In this year's Communication on Progress, we are therefore happy to present our active efforts to share our success with the local community once again in 2018. These efforts particularly focused on offering apprenticeships for young people, supporting local organizations, and fostering dialog and encounters.

Conservation of resources

We are proud to report that through our continuing efforts, we also achieved further progress in sustainability in 2018: Compared to the prior year, we were able to reduce our paper use per staff

member by 8% through targeted digitization. We also reduced the average fuel consumption of our company fleet by a considerable 5.2%.

Generational transition – change for a stable future

After introducing a supervisory board as well as a dialog-oriented employee representative committee in 2017, in October 2018, we announced another important step to take effect next year that will demonstrate to employees and partners alike our family company's long-term perspective. Effective as of January 2019, responsibilities will be allocated as follows: With Karl-Christian Storz becoming the sole Managing Director, the company management will be fully passed on to the third generation. Karl-Christian Storz has been contributing his knowledge and energy to the company for more than 20 years and has already made a mark, particularly in the global focus of our group. Sybill Storz will continue to strongly support the company as Chair of the Board. We are certain that this step will optimally prepare us for the challenges of the future and simultaneously allow us to benefit from the tradition and experience that are the basis of our company's success.

This Communication on Progress will provide a glimpse of this year's sustainability activities, which we actively promote internally and externally. We welcome the wide variety of ideas contributed by dedicated employees, partners, and physicians worldwide as well as the resulting economic, ecological, and social projects. For the year 2019, we gladly once again commit to the Ten Principles of the Global Compact and to their continuous further implementation in the coming year.

Dr. h. c. mult. Sybill Storz

Karl-Christian Storz

Managing Directors of KARL STORZ SE & Co. KG

Tuttlingen, December 30th, 2018

KARL STORZ at a glance



2,800
employees at the Tuttlingen headquarters

7,500
employees worldwide

People from over
50
nationalities working at the Tuttlingen
headquarters



– 5,2%
less fuel consumption
of company fleet compared
to 2017 (headquarters)

47 subsidiaries in
44 countries worldwide



– 8%
reduction in paper use per employee
compared to 2017 (headquarters)



€1.64 billion
sales in 2017



In 2018, KARL STORZ supported
numerous medical relief projects in
27
countries through product
donations

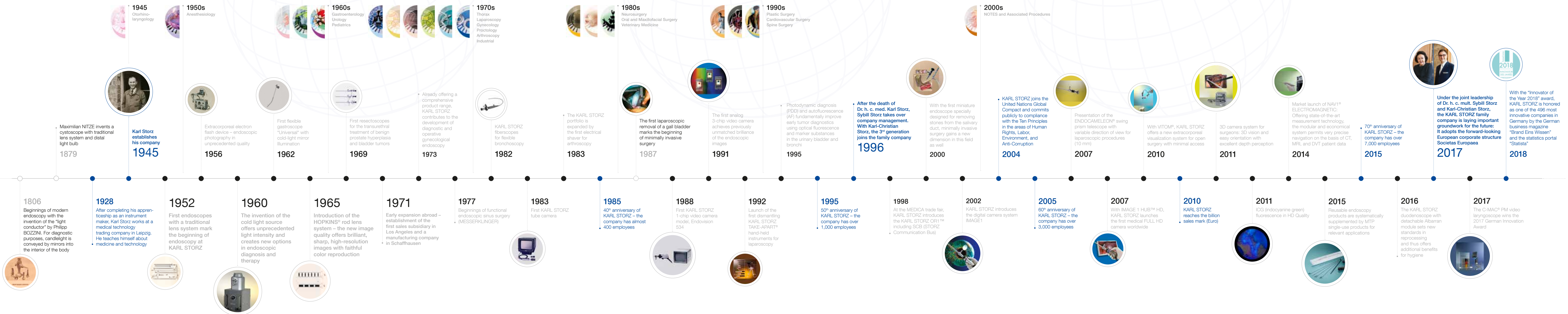


53
young people completed an apprenticeship
at KARL STORZ in 2018

more than

15,000
products





KARL STORZ – The Fascination of Progress

The KARL STORZ family company was founded as a two-person operation in Tuttlingen, Germany, in 1945. In over seven decades, it has grown into a globally active player that now stands for innovative excellence in endoscopy for human and veterinary medicine as well as for industrial applications. Throughout its history, the company has focused on supplying functional and ergonomic devices to meet medical needs as well as using technology for the benefit of patients. An intensive professional dialog with leading physicians, university medical centers, and research institutes ensures that products and services can be designed to consistently meet the needs arising in medical practice.

At EUR 1.64 billion in sales (2017), the family company is on a steady course of growth and will continue to combine quality and progress to offer customers the best solutions to medical issues. At over 50 KARL STORZ subsidiaries in Germany and abroad, 7500 employees worldwide pursue this goal, offering customer-focused consultation, sales, and service.

The future has tradition – and tradition has a future

This KARL STORZ guiding principle stands for the characteristics that are at the root of the company's success: Visionary ideas that are grounded by traditional, precise workmanship and are integrated into a concept of sustainable entrepreneurship. With this recipe for success, the company confidently faces future challenges. Long-term, sustainable development is always our primary concern. Our family-run company plans in terms of generations rather than quarters.

Since the company was established in 1945 by the instrument maker and entrepreneur Karl Storz, quality, precision, product safety, and innovation have been the cornerstones of our success and corporate action. A look at the timeline shows how many important inventions have contributed to endoscopy and minimally invasive surgery developing into the medical applications established today. Looking back, two

KARL STORZ inventions were particularly impactful: The cold light source (1960) and the HOPKINS® rod lens telescope (1965). These technological milestones enabled physicians to diagnose with previously unheard-of precision and develop surgical techniques that are today familiar under the name "minimally invasive surgery." This technology delivered previously unimaginable image quality in terms of light intensity, depth of field, contrast, and resolution.

About 20 years later, at the end of the 1980s, advancements in camera technology permitted the display of the surgical site on a monitor, so that the physician now uses a monitor rather than an eyepiece to view the inside of the patient's body. This advancement has promoted ergonomics in the operating room and has significantly improved the training of young physicians, since they can now better observe surgical procedures.

Today's minimally invasive surgery makes procedures much less physically traumatic and thereby contributes to reducing fear and worry about necessary medical procedures. The incisions, which are often only a few millimeters long, reduce wound pain and wound healing problems and permanent scars are reduced to a minimum. In addition, faster healing reduces hospital stays.

KARL STORZ has been part of every phase of this revolutionary, ongoing development. In close collaboration with physicians and experts from all specialties, we have developed products that in many cases played a pioneering role and secured the company's position as a global leader. Truly knowing the requirements of our customers is essential to achieving this kind of success. In addition to profound knowledge of medical requirements, this requires close observation of specific market developments to intuitively comprehend market needs, analyze problems, and then identify what the best feasible solution may look like.

Our continued focus on innovation and quality as the basis of our success has been recognized again in 2018. As the result of an independent survey, KARL STORZ received the “Innovator of the Year 2018” award, being honored as one of the 496 most innovative companies in Germany by the German business magazine “Brand Eins Wissen” and the statistics portal “Statista.” In January 2018, KARL STORZ received the quality certificate “World Market Leader 2018” from the German business magazine WirtschaftsWoche and was listed in the “World Market Leader Index.”

Under the motto “The fascination of progress”, the medical technology company KARL STORZ has also in 2018 presented innovative highlights and future-oriented technologies to medical customers worldwide, with the functional and ergonomic demands of the medical field as well as the use of technology for the benefit of patients taking center stage.

“This year, our particular focus is on our expertise as an endoscopy system supplier. Innovations in 4K imaging are as important to our customers as our ability to meet the demands for microsurgical or fluorescence imaging with our investment-friendly modular camera platform IMAGE1 S™. Diversity and modularity afford flexibility. The same particularly applies to the high frequency, laser, and motor systems we are presenting. With new product solutions, we are also responding to the challenge faced by our customers to select medical devices meeting the highest hygiene standards. Our considerably expanded range of single-use video endoscopes and instruments offers excellent solutions in this area”, states a KARL STORZ company spokesman.

Another trend showcased by KARL STORZ is the ever more important interplay between medical devices and intelligent software. Virtual reality solutions are increasingly used to support individualized patient treatment: With the NAV1® SINUSTRACKER™, the company presents a solution for preoperatively planning the optimal access route in paranasal sinus and skull base surgery as well as for intraoperatively enhancing the real endoscopic image with information from the preoperative virtual path planning by means of augmented endoscopy.

Through the integrated operating room OR1™, KARL STORZ improves patient safety and the planning of complex procedures: Visual Patient allows producing patient-specific 3D models from medical CT or MR images, creating something similar to a virtual patient clone, to thereby improve the reliability of preoperative planning and the safety of surgical procedures. “This service is provided by a medical partner company and can be made available to the surgeon through the OR1™ platform. As a result, our integrated solution offers safe and ergonomic working conditions in the networked operating room, and the supplied data additionally support the preoperative planning of complex procedures for each individual patient,” explains a KARL STORZ company spokesperson.

Prospects for the future

The development of minimally invasive surgery is linked inextricably with the name KARL STORZ. Today, our product portfolio contains over 15,000 products for more than 20 medical disciplines. Nevertheless, the family-run business does not rest on its laurels but is always on the lookout for innovative improvement and solution options. Our motivation can be described with a quote from Hippocrates: “Healing is a matter of time, but it is sometimes also a matter of opportunity.”

Dr. h. c. mult. Sybill Storz and Karl-Christian Storz, Managing Directors, are convinced that the potential of minimally invasive surgery has still not been exhausted by a long way. “Operating techniques that place less strain on the patient will continue to develop and give rise to new methods and areas of application.” With entrepreneurial foresight, a good instinct for future trends, highly specialized employees, and innovative ideas, KARL STORZ plans to continue to develop products that will make new treatment options possible and make endoscopy even less invasive and even safer.

Implementation of the Ten Principles at KARL STORZ

Global Compact Principles 1 – 2: Human Rights

Businesses should support and respect the protection of internationally proclaimed human rights; and make sure that they are not complicit in human rights abuses.

Every year, KARL STORZ aims to not only theoretically respect and support human rights, but to apply this idea to the specific business context.

For KARL STORZ, respecting human rights also means explicitly promoting projects focusing on human dignity within and outside of the company’s core business. On the basis of this fundamental principle, KARL STORZ again provided sustainable support this year. On the one side we supported projects dedicated to medical education and training and on the other side we focused on supporting projects that specifically assist people in less privileged situations or that help others to help themselves.

I. Democratic Republic of Congo: Support of gynecological treatment

Back in 2012, Prof. Guy-Bernard Cadière (MD, PhD, Head of Digestive Surgery Department – CHU Saint-Pierre, Brussels) contacted KARL STORZ seeking the support of the company for a mission that he was planning at Panzi Hospital in Bukavu in the Democratic Republic of Congo. Panzi Hospital was founded in 1999 by Dr. Denis Mukwege in a war-torn region to support and heal women victims of violence and suffering from severe gynecological conditions.

Since 2012, Prof. Cadière and his team of surgeons conducted a total of 18 missions to Panzi Hospital to support Dr. Mukwege and his team in introducing new surgical techniques and performing surgical cases. On several occasions, KARL STORZ and Dr. h. c. mult. Sybill Storz were happy to support these precious missions with products for endoscopy and training of local staff on their proper operation and care.

Dr. Mukwege was the laureate of the Sakharov Prize for Freedom of Thought 2014 and today he is the recipient of the 2018 Nobel Peace Prize. KARL STORZ is honored to have supported Dr. Mukwege in his humanitarian efforts.

Dr. Denis Mukwege, Nobel Peace Prize Laureate 2018, Founder and Medical Director of Panzi Hospital and Panzi Foundation in Bukavu, Democratic Republic of Congo, the Mukwege Foundation and Panzi Foundation USA

“This Prize is a challenge for our humanity to unite to put an end, once and for all, to the sexual violence from which women have suffered for too long. I look forward to counting on KARL STORZ, Dr. Cadière and his team in this fight to repair the damage caused by this scourge. The entire Panzi team is very grateful and looks forward to a good continuation of the collaboration.” (October 2018)

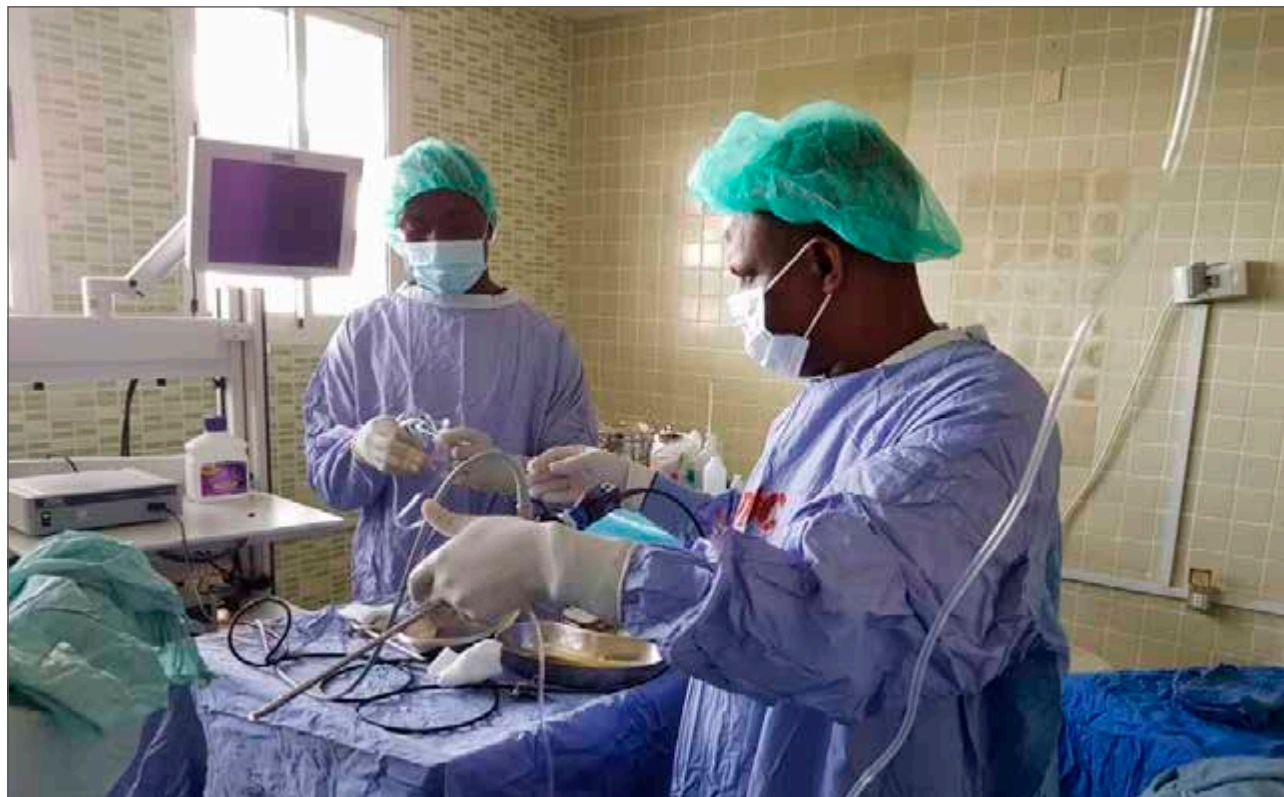
II. Liberia: Buildup of urological expertise

Background

Following the devastating 2014-2015 West African Ebola outbreak, Liberia sought to rebuild its health system and increase health professional capacity across the country. With respect to developing a sustainable medical education system Liberia was especially interested in qualified clinical faculty members to support the teaching of resident practitioners in the nation's nascent residency programmes. Amongst these was urology.

Support

However, with no urological instrumentation in the entire country of Liberia, KARL STORZ was approached by the Director of Global Surgery at Mount Sinai Hospital in New York (USA) following which a set of urological instrumentation was provided to the JF Kennedy Medical Centre in Monrovia, the only academic referral hospital in Liberia. The equipment has been in regular use under Dr. Bashir Yunusa, a urologist working at the JF Kennedy Medical Centre. Visiting urologists are now able to treat numerous patients who have been waiting to remedy their urological conditions. In addition, the equipment has allowed visiting urologists to teach the next generation of surgeons in urological technique and management.



Dr. Yunusa treating urological conditions with the donated KARL STORZ equipment

III. Kenya and Senegal: Biomedical engineers for Sub-Saharan Africa

The challenge: Lack of skilled personnel in biomedical engineering

In a world where over a billion people have insufficient access to healthcare provisions, Sub-Saharan Africa is one of the most disadvantaged regions in this respect. This is caused in significant part by a lack of skilled personnel and a lack of funding. As the population grows and life expectancy increases, new challenges are emerging, such as the greater incidence of non-communicable diseases.

National plans for healthcare development in Kenya and Senegal aim, among other objectives, to enhance infrastructure and equipment in their health sectors. Such equipment requires the services of biomedical engineers, whose job is to take care of and maintain medical products and surgical instruments, build and modify equipment for patients' use, and manage clinical equipment deployed in hospitals. There is considerable demand for biomedical engineers in public and private hospitals, in smaller health centres and among the suppliers and distributors of medical equipment. In a 2015 survey of global biomedical engineering resources, however, the World Health Organisation (WHO) found there were just 23 biomedical engineers in Senegal. Kenya, meanwhile, already has a basis for biomedical engineering as a career, with a professional association and a study program offered in one university.

However, the teaching is theoretical, technologically outdated and there is still a huge shortfall in the number of people qualified to do this important work. If medical equipment is not maintained or operated properly, it can harm patients, reduce recovery speeds and even put lives at risk. With heavy reliance on outside expertise, repair times are long.

The solution: A strategic alliance driving the increase of applied biomedical engineering capacities

As part of Germany's Federal Ministry for Economic Cooperation and Development (BMZ) developPPP.de program, the German Society for International Cooperation (GIZ) has formed a strategic alliance with five global leaders in the manufacture of healthcare products and services: B. Braun (Melsungen), Drägerwerk (Lübeck), KARL STORZ (Tuttlingen), Siemens Healthineers (Erlangen) and Sysmex (Norderstedt). The partners are working together to develop a bachelor degree course in biomedical engineering for Kenya and Senegal and to equip the involved institutions to enable practically oriented education. The strategic alliance also includes Education & Health Ministries and a number of universities as well as hospitals in the partner countries, and FH Aachen University of Applied Sciences in Germany has been asked to provide educational expertise in this field.

The approach: A three year collaboration project with academic and medical partners

The strategic alliance aims to increase the supply of qualified biomedical engineers in Kenya and Senegal by introducing a practical and market-oriented bachelor degree in applied biomedical engineering. The project has started with an analysis of the underlying conditions in both countries for the introduction of the degree course. Based on proposals for the teaching content being developed by the FH Aachen University of Applied Sciences, the strategic alliance will identify institutional needs in the partner countries, such as the affiliation of universities with teaching hospitals, and establish appropriate structures and partnerships between relevant parties to overcome any gaps that exist. In collaboration with the academic and medical partner institutions, the alliance partners will equip them with the medical devices they need, and train lecturers and other personnel to operate the equipment and to train others in its use. A range of knowhow transfer and networking activities will also take place to further build the capacities of the selected training institutions.

Once the preconditions are in place in each country, the bachelor programs can be introduced and implemented. The objectives and content of each country's course will be determined by local training and governmental institutions in cooperation with the FH Aachen University of Applied Sciences. The courses will include basic theoretical content as well as practical learning approaches such as student lessons in training labs and hospitals. Students will acquire basic academic knowledge of subjects like mathematics,

anatomy and physics, as well as management skills and specialized practical competences in areas such as hygiene and disinfection, diagnostic and therapeutic procedures, and measuring and control technologies. They will also develop the relevant technical knowhow for working with the modern high-tech equipment. On graduating, they will be qualified to work as technicians in public health facilities, as well as trainers, consultants or commercial representatives in a broad array of positions across the health sector.

The partners will ensure the sustainability of the course by assisting in accreditation processes, ensuring an integral approach and long-term financing strategy in collaboration with the local partner institutions and establishing links to the labor market for the resulting qualification.

Expected health sector impacts and results

- Capacities for practical, market-oriented biomedical engineering are improved in Kenya and Senegal.
- By the end of the project, partner institutions are in the position to offer applied biomedical engineering programs with qualified staff in Kenya and Senegal.
- Transfer of technology, technical knowhow and experiences to Kenya and Senegal.
- The project is also expected to have a number of longer-term health and development impacts, such as improving people's access to effective diagnosis and treatment in the partner countries and encouraging well qualified people to remain in their home country where they can contribute to better healthcare standards.

IV. Cambodia: Medical mission providing specialty consultations

Background

Associate Professor Aymeric Lim Yu Tang, Senior Consultant from Department of Hand & Reconstructive Microsurgery, National University Hospital of Singapore (NUHS), one of the largest teaching hospitals in Singapore, has been leading medical teams for medical missions. In July 2018, Associate Professor Aymeric initiated a medical mission via the NGO "Children of Cambodia" at Angkor Hospital for Children (AHC) located in Siem Reap, Cambodia. The intention was to provide medical professional diagnostics to patients who needed specialty consultations in Ear, Nose, Throat (ENT), Plastic Surgery, Hand & Reconstructive Surgery and Eyes.

Support

In this project, KARL STORZ Singapore supported the NUHS team with the necessary equipment for ENT, especially flexible nasoendoscopes with a portable C-MAC® monitor. The three day event was attended by AHC's local doctors, who learnt and familiarized themselves with nasoendoscopic techniques from Dr. Tay Sok Yan, ENT Consultant, NUHS. Representatives from KARL STORZ further extended support by conducting a training session on the appropriate care and maintenance of the flexible nasoendoscopes with the local nurses and ENT doctors.



Professionals of NUHS and AHC local doctors during diagnostic nasal endoscopy (July 2018)



Dr. Tay Sok Yan (NUHS) performing nasoendoscopy on one of the young patients at the AHC Clinic (July 2018)

V. Indonesia and Tanzania: Continued collaboration between AGA-ENT and KARL STORZ

Background

The Association for the Global Advancement of ENT Surgery and Head and Neck Cancer Research (AGA-ENT) is an international organization dedicated to the advancement of Ear, Nose and Throat Surgery and Head & Neck Cancer Research across the world, in particular but not exclusively by:

- Supporting the provision of equipment, awareness and screening programmes
- Supporting cancer research by the provision of grants

Currently AGA-ENT is promoting global health efforts in low and middle income countries with a specific focus on projects in Indonesia, Tanzania and India. The company KARL STORZ has supported AGA-ENT for years and donated equipment to the charity which was used to support a screening programme for nasopharyngeal cancer in Yogyakarta, Indonesia, a hands-on endoscopy simulation workshop, and the ongoing surgical training work in Moshi, Tanzania. Some of charity's recent work on raising the awareness of the carcinogenic effects on betel nut chewing was accepted for publication in The Lancet Oncology and work on the improvement of tracheostomy care in Yogyakarta, Indonesia, has been published in the journal Clinical Otolaryngology.

AGA-ENT – KARL STORZ Fellowship

The company KARL STORZ has continued its collaboration with the Association for the Global Advancement of ENT Surgery and Head and Neck Cancer Research (AGA-ENT) and awarded funding for two AGA-ENT – KARL STORZ fellowships for 2018. The main aim of these fellowships is to allow senior ENT trainees and junior consultants to train local staff in Indonesia and Tanzania for around 2 weeks, using the equipment donated by the company KARL STORZ to district general hospitals in these countries. This ensures the sustainability of the investment and nurtures the relationship between the project partners with the overall aim of improving surgical outcomes.

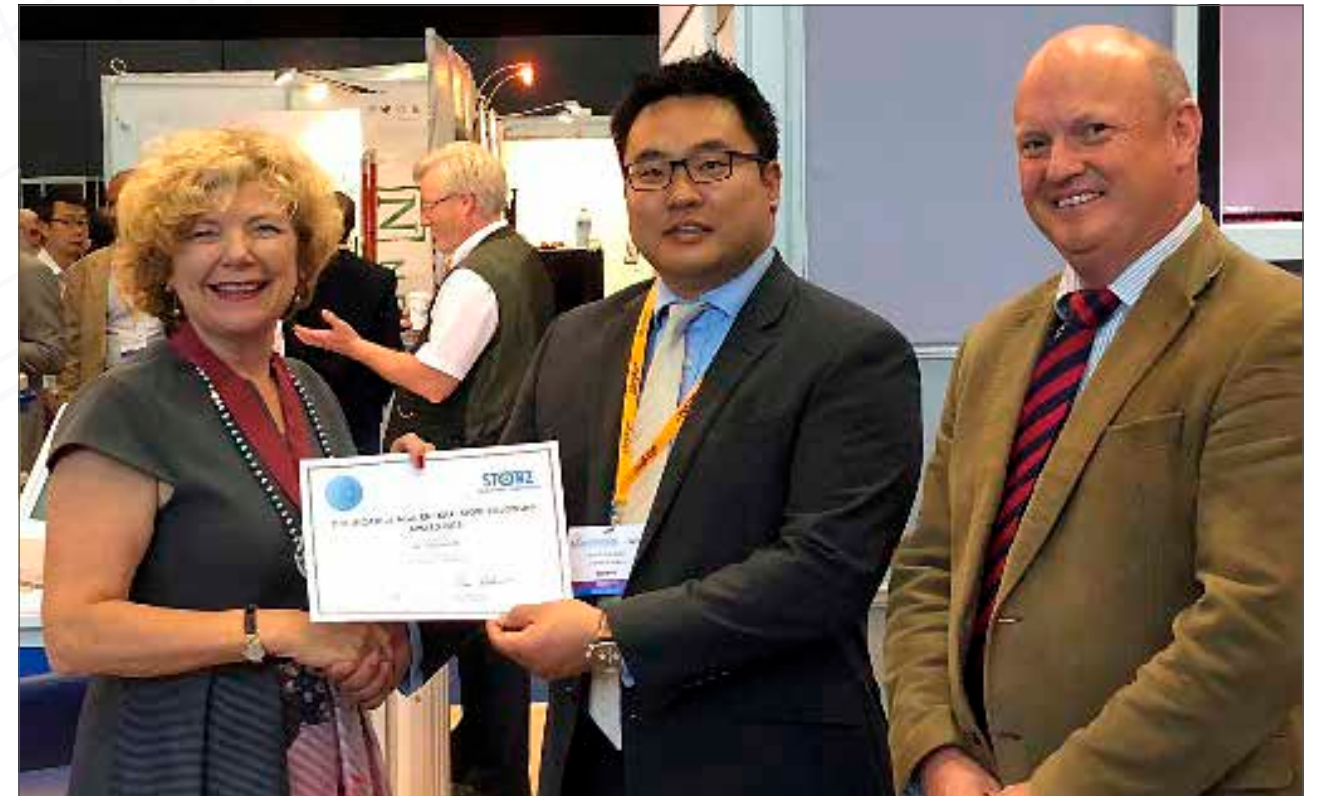
Congratulations to the 2018 AGA-ENT – KARL STORZ Fellowship Award Winners:

Mr. Andrew Lau

(NIHR Academic Clinical Fellow in ENT, Mersey sector, HEE North West; Final year PhD student in Surgery & Oncology, University of Liverpool)

Mr. Saleh Okhovat

(Year 6 Specialty Trainee, Glasgow, West of Scotland)



Award of the Fellowship to Mr. Andrew Lau by Prof. Valerie Lund, CBE (Trustee of AGA-ENT and President of BACO 2018) and Mr. Ben Pattinson (KARL STORZ UK) at the British Academic Conference in Otolaryngology (BACO2018) meeting in Manchester (July 2018)

Work in Moshi, Tanzania, in August 2018

Surgical training and the provision of surgical care in Moshi, Tanzania, was greatly enhanced through a donation of ENT equipment earlier this year. Prof. David Howard, a Founding Member of AGA-ENT, has been teaching in Moshi, Tanzania for years and greatly facilitated AGA-ENT's efforts in Tanzania. A new set of esophagoscopes and equipment for foreign body removal was brought to the Kilimanjaro Christian Medical Centre (KCMC) by Mr. Matt Lechner (Royal London Hospital/UCL Cancer Institute) and Prof. David Howard (Imperial College London) in August 2018. The KCMC is an approximately 400-bedded hospital with an estimated catchment population of 15 million people. Any global health interventions here therefore make a palpable impact on health equality in Tanzania. The ENT unit comprises three consultants, one staff registrar, half a dozen residents and some rotating interns. There has been support from Professors David Howard, Gayle Woodson and Tom Robbins who visit a few times a year, and who have been doing so for many years. The local ENT consultants are towards the early part of their consultant careers, and are among only fifteen in the entire country. They are now beginning to develop the unit's ability to deliver services such as audiology and speech and language therapy.

In this area foreign body ingestion requiring surgical removal is very common and the team did not have the appropriate equipment to deal with this before. The visit in August and the donation of the equipment greatly facilitated the training of the local surgical team and the overall surgical care in this area.



Donation of the equipment to the local ENT team and training at the Kilimanjaro Christian Medical Center, Moshi, Tanzania

Work in Moshi, Tanzania, in November 2018

Mr. Andrew Lau (NIHR Academic Clinical Fellow in ENT, Mersey sector, HEE North West; Final year PhD student in Surgery & Oncology, University of Liverpool) was awarded one of the two inaugural AGA-ENT – KARL STORZ Fellowships. Together with Prof. David Howard he travelled to Moshi, Tanzania, in November 2018, and provided further training to the local ENT team at the Kilimanjaro Christian Medical Centre (KCMC), using the previously donated equipment and further equipment (acknowledgement to Mr. Issa Beegun for his help and support). The provision of good quality esophagoscopy equipment by the company KARL STORZ, including sturdy, appropriate-sized forceps has made a significant difference to foreign body removal at KCMC, as seen in the below images. Further training has been provided, ensuring the sustainability of the donation.



Prof Howard inspecting out-of-order anesthetic equipment



Another successful foreign body retrieval: Now in <1 minute thanks to new equipment

Work in Yogyakarta, Indonesia, in October 2018

Mr. Saleh Okhovat (ST6 ENT Registrar, West of Scotland) was awarded the second of the two 2018 AGA-ENT – KARL STORZ fellowships. He travelled to Indonesia and helped to drive forward the fight against nasopharyngeal cancer by training of staff on how to use the previously donated endoscopic equipment, ensuring the sustainability and nurturing the relationship between the project partners. The visit took place in October 2018 and was centred in and around Yogyakarta with visits to the surrounding district general hospitals. This ongoing collaborative work was greatly facilitated by the YogyaHealth project and the ASEA-Uninet collaborative.

Banyumas District Hospital, ENT Department

Banyumas Regional General Hospital is a level 2 facility located in the Banyumas regency (Central Java) and has an Otolaryngology department with two ENT surgeons. KARL STORZ and AGA-ENT have already provided the department with endoscopes both in 2016 and 2017.



Mr. Saleh Okhovat's visit at the Banyumas District Hospital and training of local ENT surgeons using the donated equipment

Mr. Okhovat showed that the equipment is being used extremely effectively in diagnosis and management of ENT patients on a daily basis. Images are recorded, documented and stored securely for future follow up and surveillance. The faculty receives a resident and medical students on ENT rotation. Patients who are diagnosed with NPC, are referred to Yogyakarta for treatment and further management.

RSUD Wonosari, ENT Department

Wonosari Hospital ENT department is a level 3 unit led by Dr Ima (Head of ENT Surgery). KARL STORZ and AGA-ENT have provided the department with endoscopic equipment and a camera system which were brought there by Mr. Matt Lechner in 2016 and 2017. These have been used effectively for the early detection of nasopharyngeal cancer and other head and neck cancers. Strong efforts have been made to engage with local general practitioners in order to improve the head and neck cancer referral pathway. It is evident that the donated equipment has helped the ENT department at this busy district general hospital enormously.



Mr. Saleh Okhovat together with Dr. Ima at the Wonosari District Hospital

Dr. Sardjito Hospital ENT Department, Yogyakarta, Indonesia

The main regional ENT surgery level 1 centre is based at the Dr. Sardjito Hospital (UGM hospitals) in Yogyakarta. All regional referrals are managed here in collaboration with oncology services. The department is well staffed with around 15 ENT residents. Patients are seen in a busy outpatient clinic and referred for either oncological treatment or surgical management. Mr. Okhovat has established regular simulation training sessions and hopes to return there in 2019.



Mr. Saleh Okhovat at the Dr. Sardjito Hospital, Yogyakarta, Indonesia

Publications:

Barriers to improving tracheostomy care in low and middle income countries: our experience of a 23 patient closed loop audit cycle. L. Sutton, M. Mozaffari, A. Mintarti, A. Narula, S.R. Indrasari, M. Lechner; Clinical Otolaryngology; 2018; doi: 10.1111/coa.13151

Betel nut chewing in high income countries – lack of awareness and regulation. M. Lechner, C. Breeze, F. Vaz, V.J. Lund, B. Kotecha; Lancet Oncology; in print

VI. China: Five-Year Minimally Invasive Surgery (MIS) Training Project

KARL STORZ formed a five-year strategic collaboration agreement with Renji Hospital Shanghai Jiao Tong University School of Medicine. KARL STORZ will provide equipment and knowledge support to build the Training Center into a world-class MIS training and academic center.

KARL STORZ participated in the blueprint design and construction together with Renji Hospital at the early stage of the Training Center to make sure the facility is equipped with advanced hospital design concepts. With over 2,000 m², the Training Center is composed of MIS Training, Nursing Training and Simulation Practice sections. It also has one fully equipped and accredited dry lab that meets the criteria of conducting complex surgical operations. The Training Center will start to provide MIS training programs across multiple disciplines, covering head to toe.

Helping Chinese MIS surgeons to master minimally invasive surgical skills with standardized operation procedures and professional operation requirements, KARL STORZ China has helped to build many MIS training centers around the country in collaboration with local hospitals. The Renji Hospital Training Center is expected to provide Chinese MIS surgeons with direct access to international academic scholars and academic exchange programs, so that MIS surgical skills in China can be elevated to a higher level and more innovative surgical treatments can be developed by Chinese surgeons.

The Training Center also takes on the mission of promoting MIS clinical research and creating innovative new products and new technology applications in MIS, working together with Chinese surgeons. KARL STORZ and Renji Hospital Training Center believe that indigenous innovation in MIS is the foundation for progress in treatment and cure.

NMU Training Center is the fifth training base that KARL STORZ supported in China. Previously, KARL STORZ cooperated with Qingdao University Affiliated Hospital in Northeast China to build its first MIS training center. KARL STORZ also supported Guangzhou Zhongshan Hospital, Hong Kong University Shenzhen Hospital and Ningxia Medical University (NMU) to establish their training centers. All centers have become important pillars of regional MIS development.



Mr. WeiPing Li, President of Renji Hospital Shanghai Jiao Tong University School of Medicine and Mrs. Mei Yang-Mille, Managing Director of KARL STORZ China at the Strategic Agreement Signing Ceremony (September 2018)



Chinese surgeons attending training classes at the center (September 2018)

VII. Brazil: Supporting medical care in rural regions

Together with our Brazilian distributor H. Strattner, KARL STORZ has been supporting the project “EC FMUSP – Expedição Cirúrgica da Faculdade de Medicina da Universidade de São Paulo” (Surgical Expedition of the Medical School of the University of São Paulo) since 2013 (former project name: “Bandeira Científica”). This innovative project was designed by medical students in collaboration with physicians from HC FMUSP (Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo) and the Cleveland Clinic. The main objective is to contribute to the social, academic and professional development of the university students through actions which are designed to improve the health conditions in remote and vulnerable places in Brazil.

In a country with extreme socioeconomic inequalities like Brazil, EC FMUSP aims at objective improvements in the present, by providing clinical care, imaging and minimally invasive surgeries to deprived populations and by the development of a critical awareness and technical learning for future doctors. The project combines aspects of medical training, research and free medical care as well as the establishment of medical structures in remote regions. In the project, the medical students have contact with each stage of the process, starting from project planning over scientific assistance to medical care.

The project consists of three pillars: **Assistance, Education and Research.**

With regard to assistance, the project is designed to address part of the surgical demand in the poor areas, perform complete gynecological, digestive and ultrasound examinations and realize educational activities for the population. Furthermore, it brings minimally invasive technology to places where it has not been present so far, including local continuity plans. Finally, the project proposes management measures at the hospital, municipal and state levels to improve the situation.

In relation to education, the project brings the undergraduate student in contact with a different reality from that seen in tertiary hospitals in big cities. It integrates the student in each stage of the surgical process, so that they experience the surgical procedure in a global and longitudinal manner, from admission to hospital discharge and it provides technical learning of surgeries and diseases, in radiology and ultrasound. The student is also encouraged to develop a critical spirit and social awareness as well as forming links with local universities, in order to maintain the exchange of experiences even after the end of the project.

In the research area, the project includes the collection of detailed epidemiological data for further analysis and academic publication and it returns the results to the municipality. In addition, the project promotes the application of previously developed projects related to surgery and it is designed to motivate graduates to better understand the area of academic research.

Currently, about 50 students and physicians of the renowned Brazilian Medical School (FMUSP) and Cleveland Clinic are involved in the project.

Since 2013, the EC FMUSP activities have been carried out in various remote regions. This year, the main activity was realized between July 1 and 8, 2018 and the EC FMUSP went back to the city of the first initiative (COXIM, Mato Grosso do Sul). The objective was to observe the effects of this initiative in the long term in addition to obtaining feedback for constant improvement. In general, the advances in healthcare made by the city of Coxim since then, especially in women’s health issues, were clearly perceptive. Whereas in 2013 there were no MIS at all, the city has now become a local hub of minimally invasive surgeries. During the July 2018 observation, 63 minimally invasive surgeries (gynecological and digestive procedures) and 404 ultrasound examinations were performed. In addition, a symposium on nursing in surgery with 216 registered participants was held as well as a course on minimally invasive surgery for local staff.

The project thereby contributes to improving medical care in Brazil’s rural areas, spreading minimally invasive techniques, and providing training in the handling of endoscopic instruments and devices.

Together with the local dealer, KARL STORZ supported this activity again in 2018 by providing the following:

- Supply of endoscopic equipment and instruments
- Prior training of program participants on the handling of devices and instruments in the KARL STORZ showroom in São Paulo
- Funding of transport costs for the necessary medical devices
- Local support through dealer and KARL STORZ’s personnel



Students of the renowned Brazilian Medical School (FMUSP) (July 2018)



Dr. Abrão and Dr. Myung performing video laparoscopic hysterectomy (July 2018)

VIII. Donation of medical technology products for sustainable development

This year, KARL STORZ once again supported numerous medical aid projects in various countries worldwide. These projects focus on treating patients in need as well as on the sustainable component of training local physicians and nurses in endoscopic methods. KARL STORZ contributes by donating endoscopic products that are then used by experienced physicians on site. Afterwards the products are donated to local staff following medical training.

In 2018, we supported projects in the following countries:

- Dominican Republic
- Egypt
- Ethiopia
- Ghana
- Guatemala
- Haiti
- Jamaica
- Jordan
- Kenya
- Liberia
- Madagascar
- Malawi
- Mongolia
- Myanmar
- Nepal
- Niger
- Nigeria
- Peru
- Ruanda
- Russia
- Senegal
- Somalia
- Swaziland
- Tanzania
- Uganda
- Ukraine
- Zambia



IX. Employee Solidarity

KARL STORZ employees support charitable organizations

Under the motto “Playing sports for a good cause”, the KARL STORZ company sports group held two sports events again this year to promote cooperation between colleagues and combine that with a charitable cause. At the 25th International KARL STORZ Volleyball and Soccer Event in March 2018 and the 31st KARL STORZ Soccer Tournament in July 2018, playing sports and having fun with colleagues was as much of a highlight as the support of the Tuttlingen association “Frauenhaus Tuttlingen e. V.”. Already since 2004, KARL STORZ Aktiv has upheld this tradition of donating the net proceeds of these sports events to a social aid facility located in the region.

The donation amount was further increased by the kilometers run by nearly 100 KARL STORZ employees who participated in the Tuttlingen “run & fun” race in June 2018 and the Berlin Company Race in May 2018. Each kilometer ran generated a donation amount of €1, and Dr. h. c. mult. Sybill Storz topped up the total with a generous donation of €1,500. Including the proceeds from medal engraving offered at the run & fun event in October 2018, a total of €6,000 was donated to Frauenhaus Tuttlingen.

Frauenhaus Tuttlingen was delighted with the substantial donation, which will benefit the population they serve, women who have suffered violence and their children. At Frauenhaus Tuttlingen, women and children can find shelter from domestic violence and receive comprehensive support in personal, social, financial, and medical matters as well.



Presentation of the donation (October 2018)



KARL STORZ runner and volunteer teams at the 2018 run & fun (June 2018)



KARL STORZ had 15 runners take part in the Berlin company run (June 2018)

KARL STORZ honors employees for their exemplary commitment

At this year's 25th anniversary of the International KARL STORZ Sports Event, 17 employees who have actively organized the KARL STORZ Sports Events for many years received a small token of appreciation of their longstanding service.

Dr. h. c. mult. Sybill Storz personally congratulated the organization team on the anniversary of the company sports group and presented them with a small gift on behalf of KARL STORZ as a way of thanking them for their hard work and exemplary commitment to the organization, realization, tournament management, and catering of company sports events.

From its inception in 1993, the company sports group aimed to bring KARL STORZ employees closer together and to strengthen their team spirit through sports activities. Since 2008, the former company sports group has been a registered association, and on this occasion, it was renamed KARL STORZ Aktiv. From 2004 through 2018, a total of almost € 50,000 has been collected through sports events and donated to a variety of social organizations in the Tuttlingen region.

Dr. h. c. mult. Sybill Storz Managing Director of KARL STORZ SE & Co. KG

"When organizing the annual Sports Event, employees volunteer for the benefit of the community and regularly provide their creative ideas for the common good. I want to personally thank all the volunteers and supporters who have contributed for many years or even decades, usually behind the scenes, to KARL STORZ sports and the continuation of this tradition. With dedication and passion, they spend their free time to make the Sports Event special year after year." (April 2018).



Dr. h. c. mult. Sybill Storz honors the organization team of KARL STORZ Aktiv (April 2018)

KARL STORZ Group – Subsidiaries' Initiatives

China: Bringing Science and Sports to the Left-Behind Students in Rural China

KARL STORZ China employees celebrated the 9th anniversary of charitable donation drives to improve school conditions of Huaiyuan County in Anhui province. Over €73,140 worth of school supplies, desks and computers, books and sports equipment were donated and delivered to various local schools over the 9 years.

This year KARL STORZ staff volunteers made two trips in April and September to Xuwei town in Huaiyuan County and visited the Whitelake Elementary School. Prior to the visits, KARL STORZ China employees produced 50 educational short videos covering various school subjects. Each video demonstrated a science or literature concept using real-life examples, so that students can easily understand and be inspired by the beauty of knowledge. Using video as the educational visual aid, KARL STORZ staff then went into classrooms and provided extra-curriculum courses to local students.

Building on the momentum of retaining local teachers to stay at local schools, KARL STORZ provided teaching excellence prizes and scholarship support to 66 teachers this year in recognition of their excellent work in helping students achieving higher academic performance.

To encourage students to dream big and think far, KARL STORZ staff organized the “paint the hat, unleash the dream” school event. Students were excited to paint their dreams in color on the magic hat, and proudly envision that their dreams will someday come true.

In addition to helping students with science and literature, KARL STORZ is helping the school to revamp the sports field, where a 3,000 m² soccer pitch will be completed in 6 months. Whitelake Elementary School is known locally for their enthusiasm for soccer, especially their female soccer team, which ranks ahead in the country competitions. Upon completion, the sports field will be the sports center for over 3,000 students in Xuwei township. It is estimated that over 40 soccer teams will have the chance to use the facility for training and organizing soccer matches.



Mrs. Mei Yang-Mille, Managing Director of KARL STORZ China with local teachers receiving teaching excellence prizes



Students of Whitelake Elementary School with their colorful dream hats

KARL STORZ Group – Subsidiaries’ Initiatives

USA: Community Services

At our subsidiaries in the U.S. employees volunteered to join forces and commit to the following projects:

Hood-to-Coast Relay Fundraising

KARL STORZ employees from all over the U. S. participated in a 200-mile relay in Portland, Oregon, to raise money for the American Lung Association. Each participant raised funds independently as well as through matching donations made by KARL STORZ. The teams collectively raised a total of more than \$32,589.



First Annual KARL STORZ Beach Clean-up Day

KARL STORZ Endoscopy America (El Segundo) employees took part in its first-ever Beach Clean-up Day! Employees were able to bring their families and enjoy a pleasant day near the Redondo Beach Pier for the event. Hosted by The South Bay Surfrider Foundation, the clean-up activities included collecting litter and trash left on the sand and then sorting the collected material. Trash was sorted by categories, such as plastics, styrofoam, smoking-related items, etc. The sorting helps to identify which items are the most common pollutants, enabling informed decisions to be made for reducing them.

KIDSAVE

KIDSAVE and the Los Angeles County Department of Children and Family Services (DCFS) work together to find permanent homes for older children in the County foster care system. KARL STORZ Endoscopy America (El Segundo) employees took part in this year’s KIDSAVE Hike for Foster Youth, raising funds to support programs intended to assist older foster youths in finding much-needed adoptive families. During the hike, participants have the opportunity to meet the kids and help raise funds by enlisting sponsors who contribute donations in support of the hiker.

Sponsorship of the MEEI Boston Marathon Team

In April 2018, 60 dedicated runners from the Massachusetts Eye & Ear Infirmary (MEEI) Team Eye and Ear joined more than 30,000 runners as they embarked on the 26.2-mile run of a lifetime – the 2018 Boston Marathon. Team Eye and Ear ran in honor of their slain colleagues, Drs. Lina Bolanos and Richard Field. KARL STORZ Endoscopy America (El Segundo) donated \$5,000 to support Team Eye and Ear’s efforts to raise funds earmarked for an Operation Airway mission to Colombia, Dr. Bolanos’ home country. Operation Airway funds airway surgeries for children whose families cannot afford them. For many families, the surgery will enable their children to breathe, speak and swallow on their own for the first time.



Community Impact – LA Regional Food Bank

A number of KARL STORZ Endoscopy America employees in Southern California volunteered at the Los Angeles Regional Food Bank where they assembled food packages for distribution to thousands of low-income seniors, women with infants, and children in need in Los Angeles County.

Helping Co-workers

KARL STORZ Endoscopy America (El Segundo) employees continued to hold fundraising activities to support the Adopt-A-Family program, which uses the donation for confidential distribution to colleagues who have been adversely affected by difficult economic times or family troubles. The company’s fundraising activities this year included a Dodger Dog day and a Chili Cook-off that allowed employees to sample and compare various chili recipes prepared by co-workers.

Cancer Awareness Week

Employees of KARL STORZ Endoscopy America also took part in the annual Cancer Awareness Week. In addition to a number of fundraising events throughout the week, activities included discussions intended to provide information on an array of cancer-related issues. Topics ranged from breast cancer to oral health and cancer prevention, as well as a discussion on bladder cancer.

National Autism Awareness Month

In April 2018, KARL STORZ Endoscopy America (El Segundo) employees took part in National Autism Awareness Month Speaks. Donations were collected to support the Autism Speaks organization, which supports many autism research efforts and provides grants for various scientific and service programs. Employees were also invited to share personal experiences involving loved ones living with autism.

USA: Educational Support

KARL STORZ Imaging (Goleta) supports the education and development of local youth in engineering and computer science with the following projects:

Dos Pueblos High School Engineering Academy

The Dos Pueblos Engineering Academy is a four-year Career Technical Education (CTE) program based at Dos Pueblos High School in Goleta, California. It applies project-based learning to teach students critical, analytical, design and problem solving skills, and is a CTE Pathway in the Engineering and Design Industry Sector.

In 2018 KARL STORZ has continued its financial contribution to the continuation of this public school program as an Innovator Sponsor. The Product Development department in KARL STORZ Imaging, Goleta also provides the academy with a paid summer internship to promote interest and experience in the field of medical device design and development for these future engineers.

Local University Engineering Programs

KARL STORZ Imaging representatives attend technology fairs at the local universities to provide insight into the expanding opportunities available in the Medical Device Industry. In 2018 the KARL STORZ Product Development group provided to these students twelve, paid internships in many engineering and computer science disciplines providing training and experience and promoting further education in product design and development.

KARL STORZ Group – Subsidiaries' Initiatives

South Africa: Community Services

In 2009, the UN General Assembly declared the Nelson Mandela International Day. Nelson Mandela once said, "It is in your hands to make of the world a better place"; with this idea in mind, the South African KARL STORZ subsidiary annually provides help to people needing support in its vicinity.

At our subsidiaries in South Africa (Cape Town, Durban, Johannesburg), employees volunteered to again join forces and support the following institutions with the collection and donation of books, toys, clothes and non-perishable goods.

Jabulani Day-Care (Cape Town)

Jabulani Day-Care (meaning JOY) started in 2004 with one baby. Cynthia Isaacs, the principal, started the day-care center in her own home, without any financial support. Now, 6 years later, with 45 children between the ages of 3 months to 5 years, the day-care center is still run from her own home, where she lives with her husband and 2 children. They now rely on donations of any kind from all over the world. Cynthia and her family live and sleep in two rooms, while the rest of the house is used as a fully functional and equipped day-care center. Jabulani Day Care is officially registered as a day-care center in the community of Westlake, one of Cape Town's poorest communities. In 2018, KARL STORZ South Africa embarked on a transformation drive for the day care center and decided to provide the children with a more colorful place for them to enjoy. With the generous donations received from employees, KARL STORZ South Africa was able to provide them with a play area equipped with a media player; carpet for them to relax on and a beautifully decorated area covered with a fresh coat of paint with pictures of flowers & animals.



St Thomas (Durban)


St Thomas is a registered non-governmental organization that takes care of around 60 children of Indian, mixed race and black race groups between the ages of 2 and 10 years old. There are emergency situations where the organization takes children that are younger than 2 years and where they have to accommodate more than 60 children. The children come from disadvantaged backgrounds, i.e. abandoned, sexually, mentally and physically abused, neglected and orphaned. 50% of the children at St Thomas are HIV positive and need specialized care and nutrition and psychosocial care in order to accomplish normal activities of day-to-day living.



The aim at St Thomas is to provide their children with the closest to a loving home environment as possible. The childcare workers that work with the children are the only mothers that some of them will ever know. They have to be able to effectively provide, nurture and care together with love and compassion. KARL STORZ employees at the Durban and Johannesburg offices worked tirelessly to provide the facility with a fresh environment by spring cleaning and doing general maintenance work. They also ensured that the children and care givers received a lovely meal to enjoy.

Mother of Peace (Johannesburg)

KARL STORZ employees of the Johannesburg office once again visited Mother of Peace, which currently provides a home to 25 children. With the help of generous contributions, they hope to take many more children into their family. They offer abandoned and orphaned children an opportunity to live within a structured family environment, to be cared for, nurtured and loved. Children are fostered by full-time and committed volunteers who dedicate their lives to looking after these amazing children. All the children attend local primary, secondary and nursery schools. They also provide care for the children that are HIV positive and disabled.



**MOTHER OF PEACE
GAUTENG**
Registered as a public organisation
Registration No.
18/11/13/2549
NPO 028-694
457A Valley Road, Northriding, 2188
Pat - 0762797963
Val - 0825627438
mopjhb@gmail.com
www.motherofpeace.co.za

**TO EVERYONE FROM KARL
STORZ WHO CAME TO US ON
MANDELA DAY 2018**

**God bless you and thank you
so much for the groceries and
for all the hard work your
team put into cleaning our
house, vegetable garden,
washing cars, etc. We were
deeply touched by the
response from everyone out
there for Mandela Day.
We love you
From everyone at
MOTHER OF PEACE.**

X. Promoting the talents of children and adolescents

Sponsor of the regional “Jugend forscht” [youth research] competition



“Jugend forscht” is Germany’s best-known competition for young scientists. It aims to raise adolescents’ interest in mathematics, IT, natural sciences, and technology as well as to discover and nurture young talent. Nationwide, more than 100 regional competitions are held each year. Participants range in age from 4th grade through age 21. (Source: <http://www.jugend-forscht.de/>)

“Looking for the researchers of tomorrow” was the motto of the first Jugend forscht event in 1965, initiated by the publisher Henri Nannen.

This year’s Jugend forscht competition (2018) was held under the motto “Spring!” (Jump!). This was the 53rd round of Germany’s most successful youth competition. Regional competitions were held throughout Germany and the winners qualified for the next round in state and federal competitions. After the regional premiere in 2014, the fifth competition for the “Donau-Hegau” region was held in Tuttlingen in 2018.

The sponsors of the competition, KARL STORZ SE & Co. KG and the City of Tuttlingen, have been very satisfied with the rising interest of young people to participate in the competition. In February 2018, 119 participants presented their abilities and knowledge in 61 projects in the fields of technology, work environment, physics, chemistry, biology, mathematics and computer science. In addition to benefit from the experience of having participated in Jugend forscht, young researchers gain skills that will be great assets for their future.

The competition’s sponsors are already looking forward to the next Donau-Hegau regional competition, which will be held in late February 2019: “Frag nicht mich. Frag Dich!” (“Don’t ask me. Ask yourself!”) is the motto of the 2019 “Jugend forscht” youth research competition. The next regional competition will again be organized by the sponsors KARL STORZ and City of Tuttlingen and held at the KARL STORZ Visitor Center. For 2018, we expect a total of 149 participants and around 75 projects in seven disciplines (as of December 2018).



Dr. h. c. mult. Sybill Storz
Managing Director of KARL STORZ SE & Co. KG

"The young participants of "Jugend forscht" venture on their projects with impressive and exemplary enthusiasm. Therefore, it is a great pleasure for us, and for me personally, to support young researchers in making the leap into the world of research. We are very happy to experience the talents of students and apprentices, to see how they implemented their ideas, and to learn about their research results."
 (February 2018)

Michael Beck
Mayor of Tuttlingen

"Young people who shape their own future, whose heads are full of ideas, define and are essential for our society. The people of Tuttlingen have for many years benefited from the inventive spirit of the many founders of medical technology companies in our region, and we are therefore more than happy to be able to host youth science competitions such as "Jugend forscht" and "Schüler experimentieren." (February 2018)

School meets medical technology

As part of the "School meets medical technology" event in July 2018, some 80 students of the Otto-Hahn-Gymnasium secondary school in Tuttlingen met at the KARL STORZ Training Centre to learn about the world of medicine and the great variety of apprenticeships and degree programs offered at the family company.

After a brief welcome and two presentations from New Applications and Research & Technology on varied application options of fluorescent imaging and current endoscopy trends, the students had the opportunity to find out about the wide range of career options available at KARL STORZ.

Following the presentations, all 11th graders rotated through the four stations awaiting them: A company tour through the KARL STORZ Visitor Centre was followed by a hands-on workshop with medical virtual reality simulators. After a brief orientation, the students were able to try out the training systems and practice their hand-eye coordination in a highly realistic simulation environment. At other hands-on stations of various medical specialty areas, the students could actively try out original surgical instruments.



At the hands-on stations, students could get an idea of how physicians use the endoscopic instruments for diagnosis and treatment (June 2018)



Students learned about the advantages of virtual training for the reliable identification and elimination of foreign bodies (June 2018)

Supporting the MINTec Camp Medical Technology

As part of its membership of the national excellence cluster of MINT schools (MINTec), the Gymnasium Spaichingen secondary school held the first “MINTec Camp” in southern Baden-Württemberg in September 2018; these camps offer students the opportunity to discover a specific MINT topic.

The 4-day “Medical Technology” camp allowed 20 interested senior secondary school students from throughout Germany to gain a variety of insights into specialty areas as well as qualification, training, and career options in this area.

As a member of the industrial sponsor club of Gymnasium Spaichingen, KARL STORZ supported the project with a financial donation and organized a one-day event to help students gain a variety of practice-oriented insights into medical technology. The students were divided into two groups and learned about the company portfolio and career perspectives at KARL STORZ; after that, they had the opportunity to try out physician endoscopy training on medical virtual reality simulators.



A motivational trailer was used to contact the schools of the counties Rottweil, Schwarzwald-Baar-Kreis, and Tuttlingen, and invite them to participate in the competition. Classes may still apply with their project ideas through January 2019.

Motivational trailer

Film teaser [only available in German] at: <http://go.karlstorz.com/gc-2018-de-1>

Available via QR code (please scan):



School project with the Wild Wings team

For the fifth year in a row, KARL STORZ has implemented school partnership projects “Strong Together” in collaboration with the local ice hockey club Schwenninger Wild Wings.

Whereas in the past, school classes and groups of students were invited to apply with social projects, this year’s focus was on “Exercise & Sports.” As part of this year’s competition, students were asked to think about how they could create opportunities for themselves or others to get more exercise or play more sports in everyday life.

Participating is very easy and well worth it: KARL STORZ provides the three student teams that present the three best project ideas with up to €1,500 in funding for implementing these ideas. To end up in the top three, it is a good idea to combine a creative application with a strong project idea and a clearly defined goal, that is, to state how the project manages to integrate exercise and sports into daily life. In addition, KARL STORZ and the Schwenninger Wild Wings support the three winning projects in the organizational implementation of their projects. As part of the closing event after project implementation, the three top projects have an additional chance to win between €500 and €1,000 for their project implementation, achieved results, and student dedication.

KARL STORZ & Wild Wings: Final event for the cooperative project “Gemeinsam stark” (Strong together)



Closing event at the KARL STORZ Meeting Centre (June 2018)

In late 2017, we started a new round of the school partnership project “Gemeinsam stark!” (Strong together!), which was initiated by KARL STORZ and the Schwenninger Wild Wings: For the 4th time, school classes and individual groups of students were invited to apply with a social project. The goal of the project competition is to foster young people’s interest in social issues and to encourage them to contribute creative ideas for helping others in different situations in life.

The applications of the students of Otto-Hahn-Gymnasium Tuttlingen, Realschule am Salinensee Bad Dürkheim, and Merian-Schule Freiburg were found to be particularly compelling in the selection process. KARL STORZ donated up to €1000 to each of the three projects to help the students implement their social project. As a thank-you for their social involvement, participating students each received a free ticket for an ice-hockey game of the Schwenninger Wild Wings as well as a signed team jersey.

At the closing event held at the KARL STORZ Meeting Center, KARL STORZ and the Schwenninger Wild Wings took the opportunity to thank the students from the region who participated in the partnership project by implementing excellent social projects.

The project implemented by 26 students in grade 7c of Otto-Hahn-Gymnasium Tuttlingen benefited two social organizations: The students added to the funding they received from KARL STORZ by holding a cake sale and charity run. A flea market organized in late June further increased the funds. Through this variety of events, the students were able to collect a total of €4,500, which will be donated to the “Mutpol” youth welfare service in Tuttlingen and the West African “Orphelinat Nouvelle Destinée” orphanage in Douala in Cameroon.

The 5th grade students of Realschule am Salinensee developed a creative project for the KWA “Wohnen im Alter” (“Living in old age”) residential care and nursing home, which is also located in

Bad Dürkheim. Once a week, they spend an afternoon with the seniors at the KWA. This cooperation has already been in place for over four years and is now to be expanded by the donation of a mobile bowling alley: The rolling, chair-height bowling alley offers an ideal leisure activity for seniors, who can bowl while sitting down.

Two students of Merian-Schule Freiburg who are currently training to be preschool teachers developed a social project to benefit the Via Luce hospice in Villingen-Schwenningen. In a few years, the facility will be expanded by the child and adolescent hospice “Sternschnuppe”. The two students donated a body tambura to this future hospice. The stringed instrument has a relaxing effect and offers the children and adolescents various opportunities for vibration and massage treatment.

Global Compact Principles 3 – 6: Labor

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced and compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.

As a family business, KARL STORZ consistently strives to design the workplace such that employees can optimally contribute to the company while allowing for personal creativity and creation of meaning. KARL STORZ offers the following volunteer programs to meet our employees’ needs:

- Flexible work time models, **15,1 %** (2017: 14,2%) of workforce has a part-time contract
- Flexible job reintegration for working mothers
- Financial participation in the company’s success
- Voluntary extended benefits
- Support of continued education and professional development

According to a recent statistic of the Federal Employment Agency (Bundesagentur für Arbeit) published in September 2018, women still only hold about 15% of German technical jobs (MINT = mathematics, informatics, natural sciences, and technology). At KARL STORZ, women represent **38,4%** (2017: 37,7 %) of workers in manufacturing and **32,1%** (2017: 27 %) of those in Research & Development. The company is happy about this stable result, which is far above the state average. This is considered the result of a consistent human resources policies that focus on abilities rather than gender roles.

I. KARL STORZ Employee Representative Committee



Background

To promote and intensify direct communication between staff and company management, a new body – the Employee Representative Committee – was established in August 2017. The goal of this Employee Representative Committee is to offer employees direct contact persons within the staff to whom they can voice their concerns, wishes, and criticisms regarding their work at KARL STORZ. The Employee Representative Committee collects these concerns and discusses them with the company management during periodic meetings. Through this body, KARL STORZ aims to engage in an open, honest, and transparent dialog with employees – regardless of hierarchies. The body currently includes a total of 20 participants across all areas and functions. Employees can confidentially contact the employee representatives either personally or via email and submit any topics for discussion.

Results

In 2018, the Employee Representative Committee addressed the following topics to company management and contributed to a solution to benefit the staff:

- Installation of an air humidification system to improve the indoor climate in the headquarters' building
- Introduction of a day off in lieu for work performed on Sundays or public holidays
- Promotion of eco-friendly commuting by bicycle by installing additional bike racks
- Addition of outside seating to be used during breaks in the summer months
- Recalculation of the anniversary bonus for years of service – equal treatment for full-time and part-time employees
- Introduction of a home office policy (effective January 2019)

KARL STORZ Family Festival

In September 2018, KARL STORZ celebrated an unusual company party to which employees and their families were invited, and a total of 4,900 attended. At this Family Festival, KARL STORZ created an opportunity for employees, family, and friends to meet in an extraordinary setting.

Dr. h. c. mult. Sybill Storz
Managing Director of KARL STORZ SE & Co. KG

"With this festival, we want to thank our employees for their excellent, motivated work and simultaneously focus on the fact that we are a big team. It was a joy to see how happy employees, former employees, and families were to talk with one another and spend a nice afternoon and evening together."

On the premises at Dr.-Karl-Storz-Straße 34, event grounds were set up under the motto "360° – KARL STORZ around the globe". In reference to the worldwide activities of KARL STORZ, attendees were invited to walk across the grounds to discover attractions, music, and culinary specialties from five continents. At the KARL STORZ Training Centre, the "Tradition, People, Future" expo exhibited the past and present values of the family company. The expo presented a find from the past – an interview with the company founder Dr. Karl Storz from 1992 – as well as a wide variety of multimedia shows on the growth and social responsibility of the family company as well as its commitment to apprenticeship training.

At additional stations, attendees were invited to familiarize themselves with the latest KARL STORZ products and perform various exercises to gain insights into the work done by surgeons and the way in which KARL STORZ technology supports physicians in patient treatment. In addition to a short interview with Dr. h. c. mult. Sybill Storz and Karl-Christian Storz, the evening program included an employee dance performance as well as "Manfred Mann's Earth Band" as the crowning finish of an unforgettable day.

Karl-Christian Storz
Managing Director of KARL STORZ SE & Co. KG

"Giving our staff members the opportunity to share a nice experience was important to us. If you work hard together, it is good to have the opportunity to celebrate together as well. The wide range of attractions provided a well-rounded program for all ages."



4,900 employees celebrate together and enjoy the day with their family and colleagues (September 2018)

KARL STORZ Family Festival 2018 – Highlights

Film teaser [only available in German] at: <http://go.karlstorz.com/gc-2018-de-2>

Available via QR code (please scan):



II. Support of working parents

In 2018 KARL STORZ again increased its long-term commitment to supporting working parents. For the **ninth consecutive year**, KARL STORZ has expanded its cooperation with the local child care facility “Haus der Familie” [House of Family] and the childcare facility Denk mit! [Thinking together] in Neuhausen ob Eck (Tuttlingen county).

The KARL STORZ family company has now reserved a total of **39 child care spots** for use by employees with young children. The cost of care are sponsored by the company.

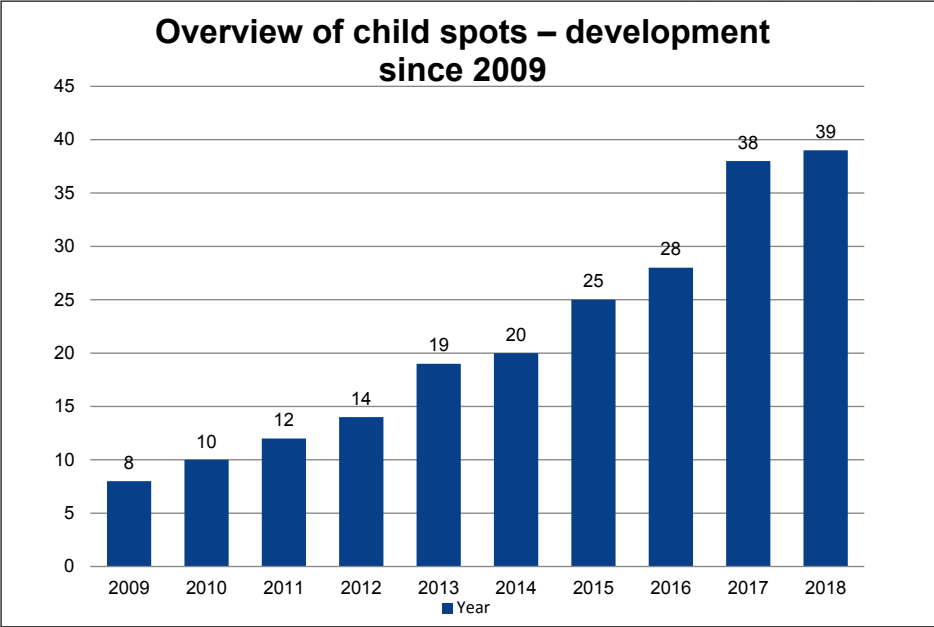
Within this engagement KARL STORZ cooperated in January 2016 to create 15 additional childcare places in a mixed-age group (0-6 years of age) at Neuhausen industrial park, where the KARL STORZ logistics center – that opened in 2013 – is located. The cost of these places will be fully covered by KARL STORZ, and therefore the places are reserved for the children of our employees, but children of employees of other companies located in the industrial park may benefit from the places as well if capacities are available.



Dr. h. c. mult. Sybill Storz
Managing Director of KARL STORZ SE & Co. KG

“With regard to the compatibility of family and career, high-quality, reliable childcare is an important factor. Therefore, we consider the expansion of available childcare facilities an important step to benefit working mothers and fathers. With such initiatives, we can also retain employees with their important knowledge and expertise and simultaneously ensure that parents know that their children receive the best possible care. We wish to particularly thank the City of Tuttlingen, the Community of Neuhausen, and the Take Off Industrial Park Association for their continued support and cooperation.”

Overview of child spots – development since 2009



	Total number	Full-day places	Half-day places
2009	8		
2010	10		
2011	12	10	2
2012	14	13	1
2013	19	16	3
2014	20	15	5
2015	25	20	5
2016	28	18	10
2017	38	21	17
2018	39	20	19

KARL STORZ Group – Subsidiaries’ Initiatives

China: “Better work, better life” Employee Appreciation Campaign

Since 2013, KARL STORZ China started the “better work, better life” employee appreciation campaign in all offices in China (including the Hong Kong office). The campaign is designed to help employees build and maintain a healthy work-life balance by creating fun and outdoor activities that bring teams and their families together. KARL STORZ China continued the “better work, better life” employee appreciation campaign and expanded outdoor activities to more offices and employee family members. 9 offices from across China participated in the campaign this year. The campaign assisted KARL STORZ employees to maintain an active lifestyle through organized office sports, sight-seeing outings, group hiking and running, and nature exploration trips. Continuing on the family tradition of treating employees and their families as our own, KARL STORZ is proud to support the healthy progress of each employee’s family as they grow and expand.



Beijing Office Family Day Outing



Chengdu Office Mountain Climbing



Fuzhou Office Employee Appreciation Day



Guangzhou Office Staff Basketball Match

III. Support of education and apprenticeship training

Following up on our previous Progress Reports, we want to highlight our efforts in the area of education and apprenticeship training. The preservation of proven structures and concepts and the initiation of new projects demonstrates the great commitment of KARL STORZ to the field of apprenticeship training.

Training and university studies at KARL STORZ

Employees are a company's most important resource. Therefore, KARL STORZ places great value on young people receiving a solid education today, as they are tomorrow's qualified employees. In 2018, we hired 43 trainees and 17 university students who are enrolled in a practice-oriented program at the Baden-Württemberg Cooperative State University (DHBW). In addition, 53 trainees and students successfully completed their training or university degree and we offered more than 90 % of them an unlimited employment. Currently, there are a total of 188 young people who are in training or enrolled in university studies.

Since 2006, KARL STORZ has also been inviting interested parents of first-year apprentices. At an afternoon event, the parents receive a company tour and the opportunity to talk with representatives of the Human Resources department. This year, 55 participants attended the parent afternoon and learned about how KARL STORZ medical devices are manufactured at various workplaces. In the trainee workshop, they were familiarized with the work environment and tasks of industrial apprentices and could admire the first items made by the job entrants. While touring the Visitor Centre, parents additionally gained an impression of the wide range and variety of medical device and system innovations and were invited to try out the virtual reality simulators used by trainee surgeons to practice their hand-eye coordination.



Virtual reality simulators: Parents viewed the demonstration of how surgeons practice their hand-eye coordination with great interest (November 2018)



The apprentices proudly showed their parents the various workplaces in the trainee workshop (November 2018)

KARL STORZ apprentice wins national competition of surgical instrument makers

Michelle Burger, who completed her apprenticeship as surgical instrument maker at KARL STORZ this year, was selected the chamber winner and then state winner in September 2018. With her awardwinning journeyman's piece, she is now also the national winner in the Germany-wide 2018 Performance Competition of German Crafts.

Michelle Burger is the 10th state and 9th national winner trained by KARL STORZ in recent years, and she became the first female KARL STORZ apprentice to win the national competition. In recognition of her outstanding apprenticeship performance, she was now personally received and honored by Dr. h. c. mult. Sybill Storz and Karl-Christian Storz.

Karl-Christian Storz
Managing Director of KARL STORZ SE & Co. KG

"We sincerely congratulate our former apprentice and now employee on her outstanding success at the national level, where she proved both her outstanding craftsmanship and creativity. We are happy to provide the best possible professional development support to talented apprentices who practice their profession with passion and commitment."

Dr. h. c. mult. Sybill Storz
Managing Director of KARL STORZ SE & Co. KG

"We are proud that our various apprenticeship initiatives that are designed to raise the interest of both boys and girls in technical professions are effective. In view of the demographic development and foreseeable shortage of skilled professionals, it is particularly important for KARL STORZ to acquire and retain highly qualified employees."



Joy about the national win: Dr. h. c. mult. Sybill Storz, national winner Michelle Burger, Rainer Ulmschneider (Training manager) and Karl-Christian Storz (from left to right)

"Women in MINT professions": What does an instrument maker do?

Despite excellent career perspectives and development opportunities, the percentage of women in MINT professions is still comparatively low. To interest girls and young women in the wide range of careers related to mathematics, IT, science, and technology, the state initiative "Women in MINT professions" of the Baden-Württemberg Ministry of Economic Affairs, Labor and Housing Construction started a special report series in small, medium-sized, and large companies in the state of Baden-Württemberg. Since KARL STORZ always strives to inspire young women to choose MINT professions and to foster their interest in technology, KARL STORZ was happy to support this campaign by presenting the occupation of instrument maker. The video produced by the Ministry introduced Simone Stamm, 4th-year apprentice at KARL STORZ, and revealed the wide range of tasks of trainee surgical instrument mechanics in their apprenticeships at KARL STORZ as well as the multitude of work steps that go into producing endoscopes and surgical instruments. What does Simone like best about her job? Performing diverse work steps to manufacture products that are used in the human body and truly help patients.

For instrument makers, KARL STORZ is proud to report a particularly positive development of apprenticeship figures: Currently, 51 young people are training to be instrument makers, and 21 (41%) of them are female.



Film teaser [only available in German] at: <http://go.karlstorz.com/gc-2018-de-3>

Available via QR code (please scan):





Diverse and exciting: Apprenticeship as an instrument maker at KARL STORZ

Trainee exchange with supplier

To promote the professional qualification and the exchange of experience of our trainees, we established an exchange program with a local supplier since 2009. The industrial apprentices in both companies spend 2 months at the other company on an exchange basis to learn new processes and skills. The exchange especially expands the apprentices' understanding of processes involving cooperation between companies.

Cooperation without handicaps – one-week internship for trainees at a facility for people with disabilities

In collaboration with an association for people with disabilities, “Lebenshilfe für Menschen mit Behinderungen” [Life Aid for human beings with disabilities], Tuttlingen District Association, KARL STORZ has been offering a one-week internship at Lebenshilfe for trainees in their first year of training through the project “Cooperation without handicaps” since 2003. Beyond professional qualification and the social interaction with coworkers, this project enables trainees and students to learn to interact with other people in our society. In Tuttlingen, Lebenshilfe runs a workshop for people with disabilities, an assisted living facility, and a facility that provides support and care for people with severe disabilities.

Initially, KARL STORZ apprentices and university students attend a local information event followed by a visit of the various departments of Lebenshilfe Tuttlingen. In the subsequent weeks, the apprentices and students have the opportunity to complete a voluntary, one-week internship at Lebenshilfe. Internships can be completed at the workshop, the assisted living facility, or at the care facility. At a final event, the interns then reflect on their experiences and impressions together with the Lebenshilfe employees, and more detailed information about the causes and types of disabilities is discussed. This project benefits both interns and people with disabilities because the personal collaboration and exchange reduces prejudice and makes integration a reality in everyday life. This year, 18 KARL STORZ apprentices and students completed an internship at Lebenshilfe.

The KARL STORZ management is particularly committed to support people with disabilities and their integration into society. Therefore, we not only support the “Cooperation without handicaps” project but have been placing production orders with the Lebenshilfe workshop for years. The workshop employs people aged 18 to 65 with mental and multiple disabilities. The employees are supported occupationally and also receive personal development opportunities in the form of numerous accompanying programs, such as on numbers and money, cooking and baking as well as through music therapy, etc.



In various areas of the Lebenshilfe association, KARL STORZ apprentices gain insights into the work and life of people with disabilities.

Internship year with technical focus

In cooperation with the local Steinbeis vocational school, we support adolescents who have not found an apprenticeship position to help them get ready to enter the professional world. During the one-year program, participants attend the vocational school three days per week. On the remaining two days of the week, participants work at the KARL STORZ trainee workshop. The project's practice orientation is intended to improve the readiness of participants to enter an apprenticeship program. KARL STORZ actively contributes to the support and development of these students. We aim to offer program participants a regular apprenticeship position. Between 2008 and 2018, we have already been able to provide apprenticeship positions to 20 program participants.

Educational partnership with local schools

Since 2009, KARL STORZ has been in a cooperation agreement with the Hermann-Hesse-Realschule (intermediate-level secondary school). In 2010, we added an agreement with the Wilhelmschule. Throughout the school year 2017/2018, we conduct joint events such as

- Job internships & tours
- Technology classes at the KARL STORZ trainee workshop
- Applicant training, including a “real” job interview with staff from KARL STORZ Human Resources
- In-house exhibition, where KARL STORZ trainees present their occupations to the students
- Support of Girl's Day and the Technolino project to offer girls and elementary students playful and age-appropriate insights into technical occupations

Exchange program with vocational school in the Netherlands

In cooperation with the vocational school Leidse Instrumentmakers School (LIS) in the Netherlands, which specializes in precision mechanics and medical technology, KARL STORZ again conducted an exchange program for third-year apprentices in surgical instrument making this year.

Unlike the dual education system in Germany, where vocational schools and companies collaboratively offer vocational training, separated into theory and practice, at LIS, both theory and practice are taught at the vocational school.

Three KARL STORZ apprentices traveled to the Netherlands for two weeks, and in return, three LIS students visited KARL STORZ and the Tuttlingen vocational school Ferdinand-von-Steinbeis for one week. All costs for the exchange were covered by KARL STORZ and LIS.

The exchange program allows apprentices to familiarize themselves with the work environment of another culture that has a different vocational training system. Thanks to the cooperation with LIS, KARL STORZ can now for the first time offer a stay abroad for apprentices in the mechanical field.



KARL STORZ trainees with two students and the director of the Leidse Instrumentmakers School (November 2018)

Support of Franco-German partnership projects

Franco-German Discovery Day of the Franco-German Youth Office (FGYO)



Upon the initiative of the Franco-German Youth Office (FGYO), German and French companies and institutions once again this year opened their doors to numerous students to give them an impression of everyday working life in France and Germany and an opportunity to learn about the language and culture of the neighboring country. As part of the project carried out under the auspices of the German Foreign Office and French Foreign Ministry, students are invited to visit institutions and companies in their region that work closely with the other country. One declared objective is to particularly involve young people with special needs. The project makes an important contribution to the students' vocational

and intercultural orientation and is intended to sensitize them to the economic importance of Franco-German relations. As part of the Discovery Day, two classes from two local schools visited KARL STORZ in March and May 2018. During an extensive company tour, which focused on the close collaboration between KARL STORZ and the IRCAD training center in Strasbourg (France), students learned about the differences and similarities of the German and French work environments. In a live video linkup, they were connected to the French training center and invited to ask questions. The adolescents discovered what it means to work in an intercultural professional environment and how important language and intercultural skills are in today's professional world. The Discovery Day is intended to motivate them to choose a profession in the international environment.

Franco-German Youth Meeting of the Rotary Clubs of Tuttlingen and Thann-Cernay

In June 2018, the Rotary Club Tuttlingen welcomed 17 French teenagers from Thann in the region of Alsace, France, as part of the Franco-German Youth Meeting. The initiative aims to foster Franco-German friendship as a core element of the European Union. In April 2017, the German teenagers had already traveled to Thann for three days to get to know young French people and discover their country. During the 3-day return visit, the young people from Alsace had the opportunity to learn about the country, people, and culture on the other side of the border. The program aimed to encourage teenagers to learn foreign languages, gain experience abroad, and build long-term, international relationships. The teenagers were invited to the KARL STORZ Visitor Centre and gained interesting insights in the HOSPITAL1® model hospital as well as the world of endoscopy, which offers applications in over 15 medical specialties. After the tour, the teenagers formed Franco-German teams to participate in a skills competition.



German and French teenagers on a tour through the KARL STORZ Visitor Centre (June 2018)

Support of the Tuttlingen Team Trail

In October 2018, following 9 months of construction, the City of Tuttlingen opened a Team Trail designed to help student groups and apprentices learn about teamwork on Honberg Mountain in Tuttlingen. The trail consists of eleven stations, ranging from a giant seesaw to a large wall to be ascended as a team. The Team Trail is an adventure-based learning tool to promote holistic learning. It aims to foster personality development and social skills as well as cooperation, conflict resolution, and communication skills within the group. The Team Trail is available to schools as well as cooperating partners of Tuttlingen youth work. The grand opening on Honberg Mountain was attended by Stefan Ahlhaus, Head of Human Resources at KARL STORZ, Tuttlingen Mayor Michael Beck, KARL STORZ apprentices as well as the apprentices of the City of Tuttlingen. KARL STORZ actively supported the project with a financial contribution and plans to integrate the Team Trail in the new apprentice induction week.

Stefan Ahlhaus Head of Human Resources of KARL STORZ SE & Co. KG

"The adventure-based learning elements of the Tuttlingen Team Trail present an excellent opportunity for students and apprentices to prove their communication and team skills and to recognize the key advantages of working in a team. Since the challenges of the individual stations can only be mastered as a team, proper communication is the key to success, as it is in the professional environment."
(October 2018)



KARL STORZ Head of Human Resources, Stefan Ahlhaus, Tuttlingen Mayor Michael Beck, and apprentices on the giant seesaw (October 2018)

IV. University cooperation projects

Collaboration with the Tuttlingen university campus – KARL STORZ Premium-Semester



In 2009, the Tuttlingen university campus was established; it is a model institution of higher education that differs from existing universities in terms of trusteeship, organization, and teaching. This idea was developed and implemented with joint commitment of the industry, Tuttlingen city and county, the Furtwangen University of Applied Sciences, and the state of Baden-Württemberg. Tuttlingen now offers a cutting-edge international university based on the public-private partnership model. With its innovative approach, the Tuttlingen university campus aims to recruit additional engineering students.

Offering the five Bachelor programs Automation & Mechatronics, Manufacturing, Materials Engineering, MedTec, and Engineering Psychology and the Master programs Material Sciences, Mechatronic Systems and Medical Devices & Healthcare Management, the Tuttlingen university campus perfectly responds to the needs of the economy of the region and beyond. During their studies, students already familiarize themselves with the companies, use their laboratories, and develop social networks. The public-private partnership between the regional industry, the city of Tuttlingen, Tuttlingen county, and Furtwangen University of Applied Sciences makes the Tuttlingen campus a novelty in the German university landscape. The Förderverein Hochschulcampus Tuttlingen e.V. [University Campus Tuttlingen Association], whose membership includes more than 100 regional companies, has a voice and decision-making rights regarding the university's teaching: This model concretely implements the companies' demand for practice-oriented university education.

Because we strongly believe in this idea, the company KARL STORZ has been a founding member of the sponsoring association founded in 2009. KARL STORZ and 100 other partners from the association have agreed to support this unique university concept with 2.5 million euros annually for 10 years. In February 2016 the cooperation partners of this Private Public Partnership – the state of Baden-Württemberg, Furtwangen University and the University Campus Tuttlingen Association – have renewed their agreement for continuing ten years. Therefore the financing of this outstanding university project will be assured up to 2029.

KARL STORZ additionally supports the Tuttlingen university campus as follows:



Premium semester: In 2014, KARL STORZ introduced the "USA Premium Semester." In the context of a competition, university students receive a technical task. The solved task and complete application documents are submitted to and evaluated by KARL STORZ. Two students with excellent results and documents are awarded a six-month work experience semester at a KARL STORZ development site in the US (Massachusetts or California). KARL STORZ pays for the

travel cost, lodging, and internship pay. This attractive program is intended to particularly promote the professional and personal qualifications of participants through the experience abroad.

In 2018, Alexandra Manstetten was awarded the Premium Semester, which allowed her to gain insights in the development and production site KARL STORZ Endovision in Charlton, Massachusetts, for six months. After her return in September 2018, she summarized her experience as follows:

Alexandra Manstetten
Student at Tuttlingen university campus – field of study Industrial MedTec

“Getting the chance to complete my internship in a foreign country with KARL STORZ had many benefits for me. I was able to learn a lot about the company itself, endoscopes, the product development process and all it includes. First of all, I had my own development project which allowed me to create my own solution to a task and to execute all the necessary development steps. Besides, I was also involved in other development projects the company is currently working on. All those experiences will assist me in my working life later on especially in an internationally active company. But not only related to work I had a great experience, also regarding the personal relationships it was an amazing time. I met many great people who I became friends with, I travelled with colleagues to different places in the US and had a lot of other unique experiences. Overall, it was a great opportunity for me and I will always look back on these 6 months with a big smile on my face.”

- **Freshman meeting:** Introductory event for first-semester students to get to know the company through a presentation and factory tour.
- **Mentoring program:** KARL STORZ employees from R & D, Production, and Product Management serve as mentors to students in their 2nd and 3rd semesters.
- **Internship positions for 4th semester students**

Award of the Germany Scholarship [DeutschlandSTIPENDIUM]

Through the Germany Scholarship initiative, the federal government and private sponsors support tomorrow’s leaders. Together, sponsors want to ensure that top university students reach their full potential and thereby invest in Germany’s future.

The project aims to support up to 1.5 % of students at each German university. Germany’s wealth, positive economic development, and innovative strength are primarily the result of the many excellently trained professionals working here. Their extensive knowledge, ideas, and motivation ensure our country’s global competitiveness. But we must not rest on our laurels. In view of the demographic changes in Germany and the growing global competition, it is increasingly important to specifically support top talents. (Source: <http://www.deutschland-stipendium.de/de/1748.php>)

KARL STORZ has been supporting this initiative since 2011. In the year 2018, the company grants a total of 10 scholarships to students at the following universities:

- Since 2011: Charité Berlin (1 scholarship), University of Ulm (1 scholarship)
- Since 2012: Pforzheim University (1 scholarship)
- Since 2013: Reutlingen University (1 scholarship)

- Since 2016: TU Berlin (1 scholarship), KIT Karlsruhe (1 scholarship)
- Since 2017: Freiburg University (1 scholarship), Heidelberg University (1 scholarship), Stuttgart University (1 scholarship), Tübingen University (1 scholarship)

“Endoscopy” lecture series – elective at Furtwangen university

In October 2018, KARL STORZ offered for the fifth time an elective at Furtwangen university that was open to Medical Engineering students in the 3rd semester or above. In 14 teaching units (1.5 hours each), KARL STORZ product and marketing managers teach the essentials of endoscopy. The lecture series particularly covers the fundamentals of anatomy, indications, methods, and technical instruments. Further teaching units deal with devices, cameras, molecular imaging, integrated operating rooms / OR management, and hygiene. To enhance their new knowledge, students receive hands-on training using endoscopy training stations. At the end of the lecture series, presenters and students discuss professional opportunities in medical technology.

V. Continued education at KARL STORZ

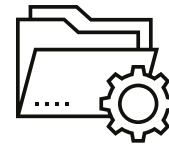
Alongside external further training options, KARL STORZ provides internal opportunities for employees to engage in continued education in career-relevant topics.

Product-related training



To supply employees and sales partners with the latest product knowledge, 140 training events attended by 2,235 participants were held in 2018.

Project and change management training



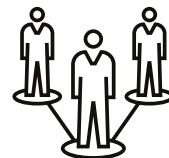
Since 2014, KARL STORZ has been developing programs on project management to enhance employee expertise in this area. In 2018, 39 trainings on this topic were held with nearly 290 participants in Tuttlingen and in the US.

Communications program & intercultural seminars



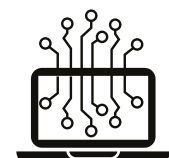
After the pilot phase was completed in 2016 and 2017, communications seminars and intercultural seminars are now offered to employees of the Tuttlingen and Swiss locations starting in 2018. The aim of the communications program and intercultural seminars is to increase the soft skills of all employees in order to improve their communication skills and cultural behavior. The program is offered to all employees of the German and Swiss locations. In 2018, 34 training sessions were held with almost 300 participants.

Leadership development



The PULS leadership development program fosters the management and leadership skills of managers. It aims to further professionalize leadership on the one hand and to visibly and sustainably further advance their individual areas of responsibility on the other.

Internal IT training & language courses



In collaboration with Tuttlingen Volkshochschule (adult education center), KARL STORZ offers interested employees IT training on commonly used Microsoft Office programs as well as language classes in English, French, and Spanish. The training and instructional materials are paid for by KARL STORZ.

Global Compact Principles 7-9: Environment

Businesses should support a precautionary approach to environmental challenges; undertake initiatives to promote greater environmental responsibility; and encourage the development and diffusion of environmentally friendly technologies.

The sustainable and responsible use of resources is particularly important to KARL STORZ, a globally active company with a long history, and its Managing Director Dr. h. c. mult. Sybill Storz. As a family company with regional roots, KARL STORZ has been committed to the environmental protection for decades, and the company strives to protect the environment for subsequent generations as well. We believe that environmental protection and economic success are not mutually exclusive. At KARL STORZ, environmental protection and resource conservation are important criteria in business decisions. Manufacturing high-quality, multi-use products and using durable materials achieves long product lifetimes and thereby conserves resources. When developing new products, we place particular value on durability.

I. Environmental protection through innovative medical devices

Virtual Reality (VR) in medical training and continued education

The medical training and continued medical education of surgeons is an important part of the KARL STORZ company philosophy. Our goal is to optimally prepare surgeons for real conditions and situations through realistic training via the VR simulators – for the safety of surgeons as well as their patients.

KARL STORZ VR simulators are constantly available training solutions in a completely risk-free environment and offer highly realistic conditions thanks to original instruments and realistic patient cases. In conventional methods, such as training on so-called box trainers or cadaver training, metabolic processes, for instance, cannot be taken into account. Perfused organs (with artificial circulation) are expensive, and as soon as it is perforated, the organ can no longer be used for training. Training and continued education on anesthetized animals can be minimized as well.

Unlike conventional training methods, training on VR simulators does not require consumables or instrument reprocessing. It is a clean training system since it does not require the cleaning of box trainers or the purchase of expensive organs or cadavers.

Training on VR simulators therefore has the following advantages:

- No single-use consumables, thereby reducing hazardous waste
- No chemical reprocessing of the employed instruments
- No anesthetics required
- No special disposal of organic waste

With this in mind, KARL STORZ added a new training modules to the VR training options in 2018: In addition to knee, hip and shoulder arthroscopy, surgeons can now also practice the minimally invasive examination and surgical treatment of ankle joint disorders. The KARL STORZ ArthroTrainer for the ankle joint offers numerous patient cases and pathologies as well as customizable aptitude tests for a broad learning experience. Its ability to display, identify, and document numerous different pathologies sets the KARL STORZ Virtual Reality Simulator apart from conventional training on models as well as from training in the operating room or on cadavers, none of which offer the same versatility. This makes the KARL STORZ Virtual Reality Simulator an unmatched training tool.

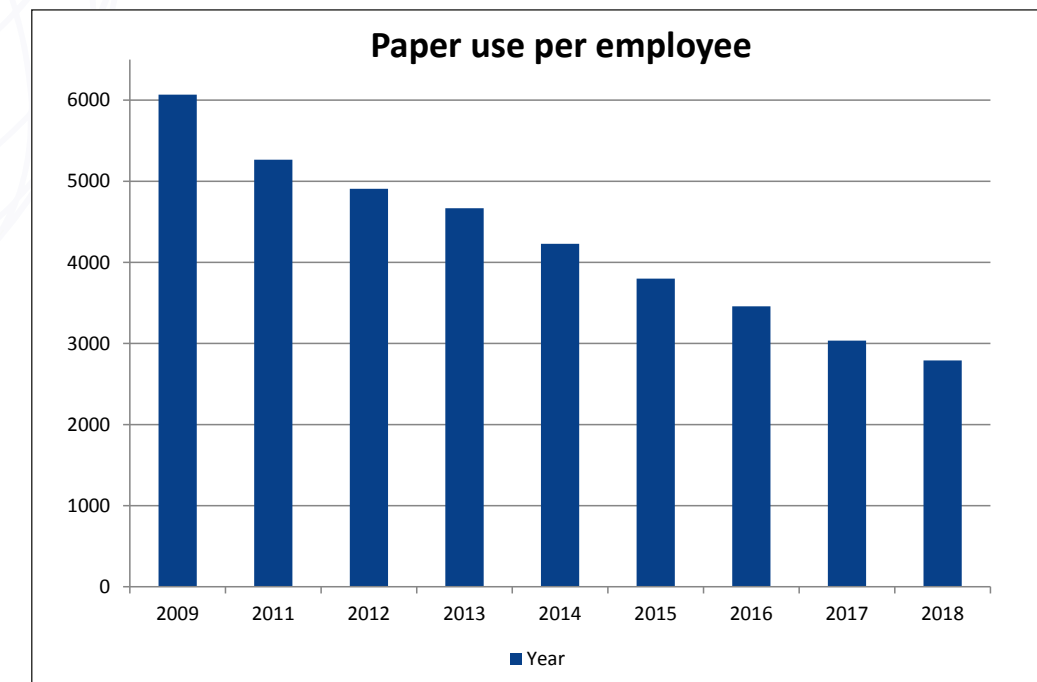
The ArthroTrainer is part of the KARL STORZ MultiTrainer platform. The MultiTrainer platform permits easy and fast switching between all KARL STORZ VR products (models) such as the knee, shoulder, hip, ankle, as well as the models for urology and gynecology training. One platform for 6 training options to enhance surgeon experience for the benefit of patients.

Through the continuous further development of virtual reality simulators, KARL STORZ not only contributes to surgeon training and further medical education but also protects the environment with this fascinating new technology.



The high-end platform for safe training of diagnostic and surgical skills in arthroscopy, gynecology and urology

II. Reduction of paper use



KARL STORZ pursues the long-term goal of continuously reducing paper use by improving processes and thereby sustainably contributing to resource conservation. Since 2009, our average paper use has dropped from initially 6,100 sheets per employee to 2,791 sheets (-54%) in 2018. Compared to last year (3,035 sheets), this corresponds to a reduction of 8% per employee.

Reuse of corporate documentation after change in the company's legal title

During the process of the company registration name change from KARL STORZ GmbH & Co. KG to that of KARL STORZ SE & Co. KG, the challenge of reusing current official corporate documentation such as marketing material without the unnecessary disposal of a substantial amount of paper was resolved through the production of 74,000 address labels for various applications.

The distribution throughout the organization of these labels saved resources through not having to reprint existing material and redistributing vast quantities of printed material, which alone would have increased the CO₂ footprint due to the logistical process of shipment. KARL STORZ managed to reuse over 59,000 marketing brochures and 14,800 hardback folders.

III. Company Fleet: Fuel consumption and CO₂ emissions

Company Fleet	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total kilometers driven	6,494,594	6,256,525	7,051,607	7,127,941	7,085,096	7,057,877	6,744,900	6,660,749	5,438,713
Kilometers driven per vehicle	35,684	30,519	31,340	33,622	30,671	30,554	30,659	28,960	25,654
Average fuel consumption (liters / 100 kilometers)	7.63	7.67	7.45	7.51	7.46	7.26	7.26	6.94	6.58
Total CO ₂ emissions (2,62 kg/l*)	1,298,955	1,257,333	1,376,070	1,403,128	1,383,900	1,342,415	1,283,434	1,210,597	936,945

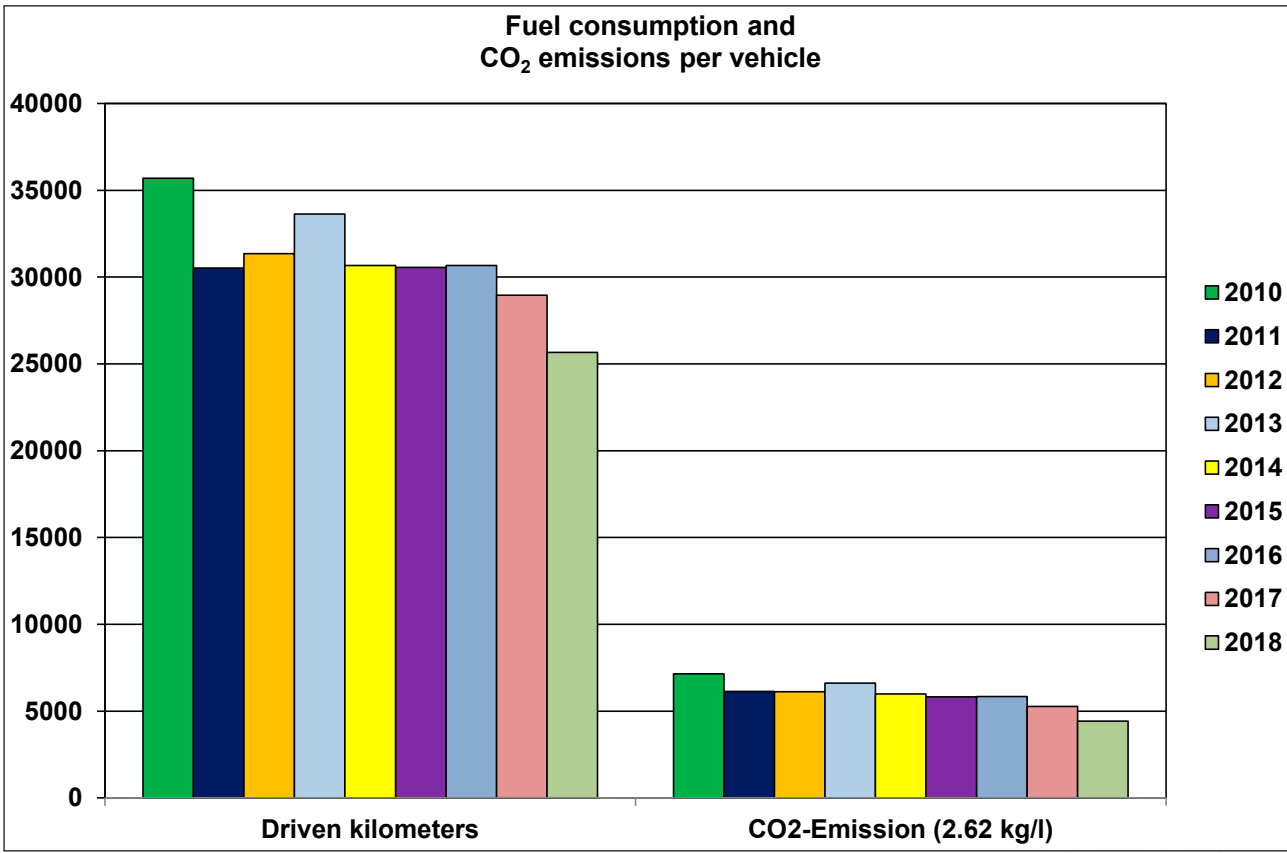
*Ministry of the Interior of the state of Baden-Württemberg: Average CO₂ emission per liter of diesel: 2.62 kg.

In late 2008, we introduced a fuel card system at our Tuttlingen headquarters that allows us to analyze the fuel consumption of company cars. Thanks to its consistent use since 2012, many more cars could be analyzed than in 2011 – which is the primary reason for the significant increase in driven kilometers.

Since 2013, the average fuel consumption per car has dropped, and in 2018, it reached the lowest average so far, at 6.58 liters per 100 kilometers. This equals a reduction of 5.2% compared to the previous year.

Installation of a car wash with a water treatment system

In January 2018, the KARL STORZ fleet received a car wash with a water treatment system that can save some 50 liters of fresh water in each wash. The new car wash uses 120 liters of water for each cleaned vehicle. Of the total required volume, only 30 liters is fresh water, while the rest is supplied by the water treatment system. Given a total of 2,100 washing processes with eco-friendly detergents since the start of the year, about 105,000 liters of fresh water has been saved.



IV. KARL STORZ bicycle leasing program



Riding bikes is popular and a good way to offset the typically sedentary office work. With the introduction of a company bicycle leasing program in June 2017, KARL STORZ offers employees an attractive mobility option that actively contributes to health, to reducing traffic, and to protecting the environment.

For this purpose, KARL STORZ cooperates with a bicycle leasing company and thereby enables KARL STORZ employees to conveniently finance their favorite bicycle (regular or e-bike up to 25 km/h) through lease payments. Instead of paying directly at the store, for a term of 36 months, part of the monthly gross salary is withheld as a so-called salary conversion to pay the leasing rate to the bicycle leasing company. The salary conversion reduces taxable income and social security contributions. Only the monetary advantage (1% of the gross list price of the bicycle) remains tax relevant. In total, employees can save up to 30% compared to purchasing the bicycle in cash.

Since the introduction of the program, 278 individual leasing contracts have been entered into, and for another 19 contracts, the bicycle transfer is pending.

KARL STORZ employees for climate-friendly mobility

As part of the nationwide CITY CYCLING event, in which the City of Tuttlingen participated for the first time on September 10-30, 2018, both the city and the team of the company sports group KARL STORZ Aktiv achieved excellent results: A total of 73 KARL STORZ employees competed on their bikes during the event and biked a total of 15,000 kilometers to take 3rd place overall in the Tuttlingen competition. In the Company category, they even took 1st place.

The objective of the Climate Alliance campaign is to have as many climate-friendly kilometers traveled by bike as possible, whether for professional or private purposes, and to thereby promote climate protection and bike-friendlier cities. The best teams, most active schools, and most committed individual cyclists were personally recognized by Tuttlingen Mayor Michael Beck as part of an official awards ceremony held on the Tuttlingen market square.

“By participating in the Tuttlingen CITY CYCLING, we are very happy to have made a small contribution to climate-friendly mobility and reducing CO₂ emissions, as we tallied many kilometers. It is nice to see that more and more people are realizing that events like these are not only good for your health but also benefit the environment – and are simply fun to do,” stated Nader Hassanzadeh, president of the KARL STORZ Aktiv company sports group.

The Tuttlingen cyclists can be proud of themselves: In the category of cities under 49,999 inhabitants, the first-time participant Tuttlingen tallied a total of 242,011 kilometers to take first place in Baden-Württemberg and third place nationally.



Biking for a good climate: The KARL STORZ Aktiv team traveled many kilometers by bike (September 2018)

Global Compact Principle 10: Anti-corruption

Businesses should work against corruption in all its forms, including extortion and bribery.

I. Continued dedication with information and training

Transparent Statement on the KARL STORZ website

To KARL STORZ and our employees, observing anti-corruption guidelines as well as compliance requirements is not a project with a start and end date but an integral component of all business activities. Under “Compliance”, visitors to the KARL STORZ website can find out anytime about the basic principles we practice, with references to the Global Compact, the KARL STORZ anti-corruption guideline, and environmental and resource conservation.

KARL STORZ Website – Compliance Statement

“The KARL STORZ family company is committed to legal compliance, honesty, loyalty, transparency, sustainability, and fairness in everyday business operations. These values are not abstract requirements but essential guidelines for our corporate activity. Our company founder, Dr. med. h. c. Karl Storz, already practiced these values and recognized them as the key to long-term, sustainable success. Following laws and company-specific rules and principles of conduct is referred to as “compliance”. To KARL STORZ, this means that each and every employee, all supervisors, and the management board continuously ensure that our business activities are always conducted respecting the law and ethical rules. For this purpose, the company management in Tuttlingen puts in place global compliance standards in the form of a code of conduct and associated guidelines. At our worldwide sites, these standards are bindingly implemented through local instructions or expanded if national law requires.

Throughout recent decades, our company has worked hard to gain an excellent reputation for quality and innovation in endoscopy. Therefore, each and every employee is responsible for maintaining this excellent reputation and for further promoting it through positive action, for strengthening our customers’ confidence placed in us time and again and for safeguarding the company from any illegal or unethical actions. The compliance guidelines created for this purpose offer employees clear orientation, and to our customers and suppliers, they promise partnership in a fair and transparent business process.”

KARL STORZ operates in the global markets and we therefore have to follow a variety of binding rules and regulations of many different countries in our day to day business. Wrongdoing can be a matter of concern of multiple jurisdictions leading to penalties and even criminal convictions that involve major fines or governmental sanctions.

It is a clear mission statement of our Executive Management that KARL STORZ also stands for lawful and ethical business practices and zero tolerance for unethical or even illegal conduct.

To support all of us in “doing things right” and in following our conviction in an ethical conduct a Compliance Management System is established. This system is built on three pillars: Prevent, Detect, Respond. Each pillar handles a detailed and thorough system of activities by which it is intended to ensure that KARL STORZ acts completely in accordance with applicable laws and regulations as well as own policies.

Prevent

For preventing breaches a clear understanding of binding rules is mandatory. Regular trainings and support for employees exposed to high-risk fields are therefore preventive compliance tools to raise understanding and awareness. In 2018, KARL STORZ implemented a Risk Management program that allows KARL STORZ to take preventive actions in any area where Compliance risks might occur. This global approach raises awareness among all employees and provides guidance in strategic decision processes.

Detect

Compliance infringements have to be fully clarified in order to prevent reoccurrence and in case of an illegal conduct to rigorously pursue such a violation. This is a substantial part of our Zero Tolerance Strategy.

Compliance regulations require a systematic neutral handling and filing of compliance cases. Therefore, Compliance is responsible for handling every case that someone gets aware of and that could represent a potential contravention of the Law, Code of Conduct or KARL STORZ Policies.

In order to become aware of Compliance breaches, KARL STORZ implemented in 2018 a Compliance hotline globally. This hotline is available 24/7. It is possible to submit concerns online, by phone or via a Manager Incident Response Template. Not only KARL STORZ employees but also KARL STORZ business partners or other third parties can share any concerns via this tool.

Respond

KARL STORZ follows a Zero Tolerance Strategy when severe compliance violations occur. Following this mission statement Compliance suggests suitable and appropriate sanction measures if compliance violations are clearly identified, examined and evaluated.

If compliance violations reveal systematic deficiencies or structural failures, Compliance supports the business units to improve their processes.

Applying lessons from past compliance cases improve our compliance system. Therefore our policies and training sessions will be regularly reviewed under a compliance perspective and adapted and communicated where necessary.



WE SUPPORT

STORZ
KARL STORZ — ENDOSKOPE