

SUSTAINABILITY REPORT

- 61 SUSTAINABILITY APPROACH AND MATERIALITY
- 62 CUSTOMERS
- 67 EMPLOYEES
- 72 COMMUNITIES
- 75 GLOBAL PRODUCTION AND LOGISTICS
- 78 ENVIRONMENT

Sustainability approach and materiality

MATERIALITY ASSESSMENT AND REVIEW

In a strategic materiality assessment, Straumann identified the most relevant topics for business success as well as stakeholder interests. By addressing these material topics, we ensure long-term performance, monitor high-level risks and opportunities, and strengthen stakeholder relationships. To review our materiality assessment, we conduct interviews with senior managers across the company every year. The interviews align with the principles of the Global Reporting Initiative (GRI) for defining report content.

The materiality map on the right provides an overview of topics determined to be most material for our business success (horizontal axis) and interests expressed by our stakeholders (vertical axis). In 2018, we made slight adjustments to our materiality map. Due to continued growth and extension of our supplier base, as well as the growing importance of dental service organizations which place a high value on a responsible supply chain, the relevance of ‘Supplier Human Rights and Environmental Assessment’ increased. In addition, due to the General Data Protection Regulation (GDPR) adapted by the EU in 2018, ‘Customer Privacy’ gained relevance. Finally, the level of interest concerning ‘Charitable Programs’ decreased slightly.

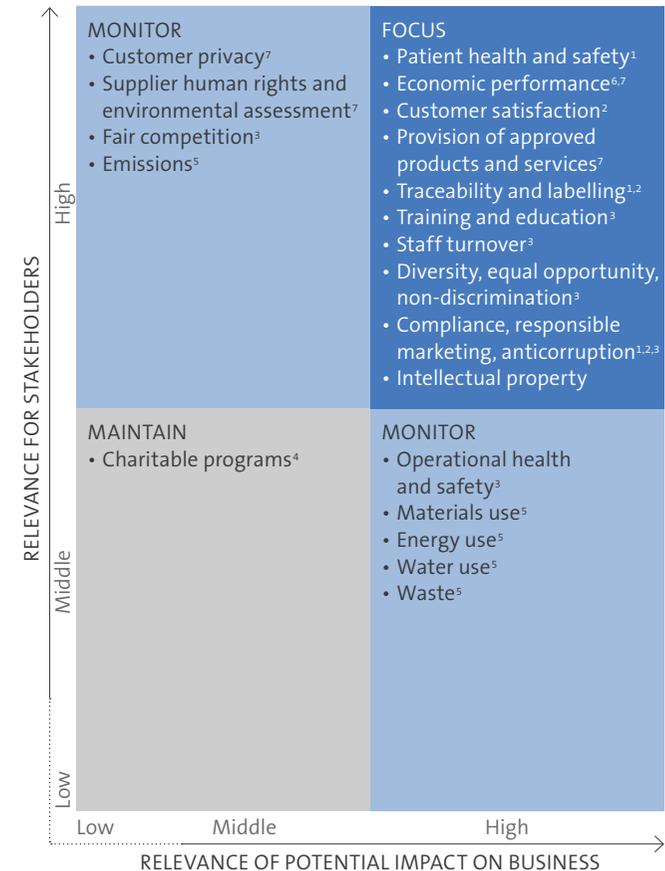
STAKEHOLDER ENGAGEMENT

At Straumann, open communication and interactive dialogue with stakeholders is an important part of corporate responsibility. Stakeholders include investors, customers, employees, community members, and the environment. Our varying stakeholders place greater value on different aspects of our performance. Shareholders are interested in share-price development and good governance, while responsible investment professionals are also keen on performance in sustainability aspects. Interests expressed by customers include assistance from Straumann in growing their business and establishing specialist reputations, while dental service organizations focus on affordability and an ethical supply chain. Employee feedback highlights professional development and a healthy work-life balance. Charitable partner organizations are interested in continuing sponsorship relations and agreed goals. Finally, moral obligations demand conservation of our environment.

In this report, we discuss processes and results of performance-relevant dialogues with our most important stakeholders. Our material sustainability topics are addressed in the following sections on customers, employees, communities, and environment.

This page addresses GRI disclosures 102–43, 102–44, 102–46, 102–47.

Sustainability materiality map



Information on material sustainability topics is provided in the following places:

- 1 Risk Management, pp. 52 ff.
- 2 Customers, pp. 62 ff.
- 3 Employees, pp. 67 ff.
- 4 Communities, pp. 72 ff.
- 5 Environment, pp. 78 ff.
- 6 Operational performance, pp. 36 ff.
- 7 Appendix, Global Reporting Initiative, pp. 185 ff.

Customers

Further gains thanks to our total solutions and price options

FURTHER CUSTOMER GAINS

We succeeded in further expanding our customer base in 2018 through:

- starter training and education courses
- innovation, value-added services, total solutions
- attractively priced, high quality alternatives to competitors' products
- geographic expansion (e.g. in Chile, Iran, Peru and Taiwan)
- acquisitions (e.g. Createch and T-Plus)
- forward integration (distribution companies acquired in Canada, Portugal, South Africa and Turkey).

There was no significant shift in the geographic distribution of our customers. The general dentist segment grew the most, while the specialist segment remained stable, reflecting a continuation of the trend we have observed in recent years.

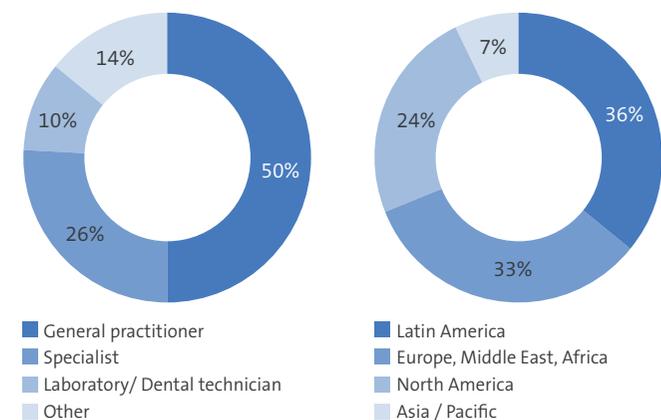
MORE CORPORATIONS IN OUR CUSTOMER LANDSCAPE

The rise in corporate customers and the consolidation of small practices is another significant trend, particularly in North America and Europe. Dental chains and networks range from groups of local practices to international networks of fully integrated clinics with significant purchasing power and influence – a single dental service organization (DSO) can comprise more than 200 clinics employing teams of dentists and technicians and serving many thousands of patients each year.

As consolidation continues, a larger portion of our business is determined by a smaller number of corporations with special needs, including premium and non-premium implant ranges, orthodontic solutions, private-label lines, logistics services, support for international expansion, increased efficiency, digital workflows, guided surgery, simpler, faster treatments, and support through education to ensure quality and to train young dentists.

The Straumann Group is well positioned to address the needs of corporate customers and to capture the significant business opportunity they offer. In 2018, we doubled the size of our dedicated global

Straumann's customers by segment (left) and by region (right)



The Straumann Group's customers are spread over more than 100 countries and include general dentists, specialists (oral surgeons, periodontists, prosthodontists, orthodontists), dental technicians and laboratories, as well as corporate customers such as dental service organizations (DSOs), distributors, hospitals, and universities (labelled 'others' in this chart). A single DSO can represent hundreds of clinics and dentists.

DSO unit and the business grew dynamically as we won a number of preferred supplier contracts with large DSOs in various regions, endorsing the quality, range and attractiveness of our products and services.

SERVING CUSTOMERS DIRECTLY

We serve customers directly through our teams of sales and marketing professionals, most of whom are highly trained sales representatives or service staff. This adds value for customers and helps us to identify, manage and learn from their needs. In 2018, we continued our global training program to enhance the effectiveness of our sales representatives and to help our customers improve their businesses.

CUSTOMER EDUCATION – A KEY TO SUSTAINABILITY

Long-term success and patient satisfaction depend on product performance and the education and experience of the treatment provider. Straumann offers a broad educational program around the world, covering all proficiency levels and relevant specialties. Teaching is provided mainly by ITI specialists in collaboration with leading universities. Neodent also offers a broad educational program covering all levels and relevant specialties with its partner, the ILAPEO.

We advanced the pilot introductions of our SMART education concept. Together with the ITI's Online Academy, which now comprises more than 100 modules, it offers blended learning opportunities, including online modules and hands-on tuition. This makes it a useful tool for starters, DSOs, and universities as well as specialist customers who need to train their referring partners to use Straumann products. SMART is sold together with products or as part of a training course package.

We also continued the Straumann Peer-to-Peer Program, which extends from personal coaching to clinical events where highly experienced surgeons share techniques and experience with their peers. The success of this program prompted the creation of independent centers of excellence in all our regions, which we evaluate and certify.

EDUCATION SYMPOSIA EXEMPLIFY OUR TRAINING OUTREACH TO CUSTOMERS.

Navigating the rapidly changing landscape of dentistry can be complex. To help guide customers in optimizing their implant practices and digital workflows, Straumann hosted three education symposia across North America in 2018. Nearly 3000 dental professionals attended these events, which

We won a number of preferred supplier contracts with large dental service organizations in various regions.

Straumann offers a broad educational program around the world, covering all proficiency levels and relevant specialties.

were also an opportunity to showcase Straumann's industry expertise and leadership. The initiative drew on synergies with education partners like the ITI and proved to be a good source of revenue.

BUILDING THE NEXT GENERATION OF CUSTOMERS

The ability to attract young professionals to implant dentistry also has significant bearing on the sustainability of our success. Perception-pulse studies in the past revealed that their most common expectation from companies like ours is help in building a reputation and a business. The prestigious Straumann-botiss Young Pro Award is one of several initiatives that do this. The first prize is 10 000 euros and the top three applicants are invited to participate and present at the botiss bone and tissue days in Berlin (see picture on the right).

ADDRESSING THE SHIFT IN GENDER

As more women are graduating from dental school than men^{1,2}, we have intensified our [Women's Implantology Network](#) initiative (WIN) to bring female practitioners and academics together in order to network, encourage, support, mentor and gain deeper insights into their needs. WIN membership rose to almost 500 in 2018 and we began preparations for the first international WIN conference in Malta in 2019.

CUSTOMER DIALOGUE

Large-scale perception-pulse studies are costly and have limited value for us – compared with our primary sources of customer feedback, which include:

- direct contact through our sales force
- scrupulous complaint management, evaluation and reporting
- market acceptance tests and limited market releases (LMRs), to gain feedback from customers prior to product launch – for example the LMR of Straumann BLX (see p. 47), which featured an online tracker for doctors to post perceptions, experience and feedback, providing us with useful insights into product use and service
- post-launch tests (e.g. to check the effectiveness of our marketing messages) and expert meetings including customers who have been involved during development.

The feedback gained through these channels is processed and used to refine products and their use.



Proud recipients of the 2018 Straumann-botiss Young Pro Award. The first prize went to Dr Piero Papi, a Research Fellow from Italy, for his research on the use of tissue-graft products in gum regeneration, while Dr Amruta Joshi, a private practitioner from India, received the second prize for her work on recombinant platelet-derived growth factor-BB in periodontal regeneration.

Towards the end of the year, we commissioned a study in ten countries to assess Straumann's brand image and loyalty. The study included 1550 participants and yielded a wealth of insights. The result was excellent, although brand differentiation from competitors is an area for improvement.

THE DIGITAL APPROACH TO CUSTOMERS

E-COMMERCE AND DIGITAL MARKETING

In 2018, we invested further in e-commerce platforms and launched a single Straumann Group e-shop for all our brands, adding convenience for customers. More than a third of our business comes through the e-shop, which increases efficiency and efficacy. E-commerce and digital platforms tell us about customer purchasing patterns and enable us to address their needs proactively. In 2018, we developed a new platform with automated marketing capabilities that provides tailored information to customers depending on their online interest and behaviour. It also automates customer mailings and promotional campaigns, etc.

Digital marketing campaigns are increasingly important for reaching customers, addressing their information needs and collecting feedback. We use social media channels to target hundreds of thousands of users with customized marketing campaigns. The reach and cost-effectiveness make these channels particularly attractive, and in 2018 we began broadcasting our scientific forums and symposia via social media channels, significantly widening our addressable audience, which was previously limited to on-site congress participants.

We are also investing significantly in software tools and new capabilities like mobile 'apps' for customer education, which are likely to change the patient's role in care and treatment. Our investment in and partnership with Dental Monitoring in 2018 is the latest example (see p. 13).

SAFEGUARDING COMPLIANCE IN THE INTEREST OF PATIENTS

Our Global Sales Compliance Program has been in place since 2009 and is one of several safeguards to ensure compliance with regulations relating to the sale of our products and services. Further supporting our commitment to the patients' interests, much of the scientific information used to endorse our products is peer-reviewed.

We invested further in e-commerce platforms and launched a single Straumann Group e-shop for all our brands.

Footnotes

- 1 Distribution of dentists in the US, by region and state, 2009. America Dental Association. 2011 Apr.
- 2 FDI Oral Health Atlas p. 61.

PUSHING BOUNDARIES: Charitable care

Since the outbreak of civil war in Syria in 2011, an estimated 1.5 million Syrians fled carnage and devastation in their home country and took refuge in neighboring Jordan. Living without resources in make-shift conditions, they don't have the luxury of a balanced diet and neglect oral hygiene. The prevalence of tooth decay is high and, even if they had access to dental treatment, most people could not afford it.

Andi Herzog, a Swiss airline pilot, saw this urgent need while working voluntarily with the NOIVA foundation. He approached Straumann with a visionary idea of buying a transport container and equipping it as a mobile dental clinic that would be staffed by local dentists and would provide treatment for refugees on the Syrian border. Straumann agreed to support the project which became a reality some months later. A decommissioned military field hospital was acquired, refurbished by volunteers and fitted with dental chairs and equipment. On arrival in the Middle East it was saddled onto a truck and went into operation in northern Jordan with a sponsored team of local dentists shortly before Christmas. It is our privilege to support them, NOIVA and all our charitable partners in pushing the boundaries of human kindness.



This young Syrian refugee was helped by the NOIVA foundation; his portrait adorns the mobile clinic alongside the Straumann Group logo (see p. 72).

Employees

Stretching boundaries of diversity and personal development

MORE THAN A THOUSAND NEW COLLEAGUES TO DRIVE FUTURE GROWTH

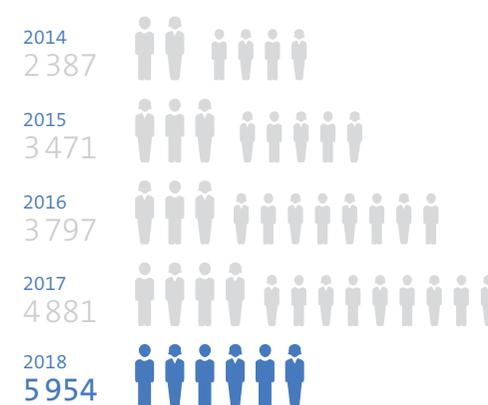
People and culture are the Group's greatest assets and we continued to invest significantly in both during 2018. With our business expanding strongly, we created approximately 700 new jobs world-wide, which – together with acquisitions – increased our global workforce by more than a thousand. The majority of new positions were in production (in Brazil, Switzerland and the US) and in sales (e.g. in China, Germany, and the US). We created 115 jobs in Switzerland, underlining our commitment to Straumann's roots and the value of our Swiss brand. Most of these positions are in production and R&D. Acquisitions added more than 350 employees in Turkey, Iberia, Taiwan, South Africa and North America. As a result, the strength, diversity and spread of our global team increased further, and at year end it was about to cross the 6000 threshold.

DIVERSITY AND CULTURE

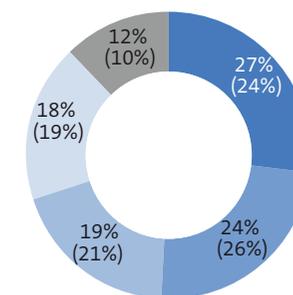
Apart from the creation of new jobs, our largest investment in people was in our Cultural Journey to promote the player-learner mindset and culture that foster constructive behavior, collaborative leadership and high performance. Over the past five years the Cultural Journey has shaped our company and helped us to achieve excellent results, sustainable market outperformance, and significant market share gains. Including all our staff in the current global training program is increasingly challenging because of the speed at which the organization is growing. To address this and the risk of cultural dilution, we expanded our onboarding program and invested in new modules and on-line tools to accelerate training by offering blended learning on the job, in the classroom and individually.

These are features of Cultural Journey 2.0, which began in September 2018. It also includes a new program for leaders, called 'Leading from above the line', which builds on the player-learner mindset at the foundation of our cultural journey. The new program will start in 2019 and will be taught in the first year by the EMB, who will act as role models. The program and Journey will put greater emphasis on behaviors that are related to emotions (rather than logic) – where, according to feedback, we have a deficit which prevents us from fully leveraging our potential.

Employees

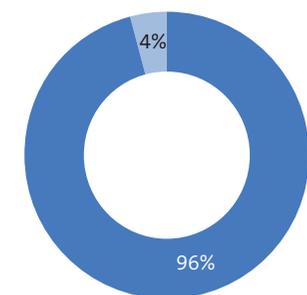


Employees by region



- Rest of EMEA
- Latin America
- Switzerland
- North America
- Asia/Pacific

Employment



- Full time
- Part time

Numbers in brackets refer to 2017.

KEEPING A FINGER ON THE ORGANIZATION'S PULSE

These insights were gained from workshops and various other sources including our global staff survey (see below). Regular meetings between the Executive Management and various focus groups provide open, constructive dialogue as well as direct feedback on staff engagement. During the year, numerous general staff meetings were held with the CEO in various countries, in addition to a series of informal small group sessions at our headquarters in Basel. In addition, we began to globalize our quarterly HQ staff information meetings by broadcasting them to the whole organization.

Our annual staff survey is an important indicator of cultural progress and staff engagement. In 2018, the response rate increased to 77% and ratings were more or less in line with the high levels in 2017. More than 90% of respondents said they are proud to work for the Straumann Group, love what they do and feel their work contributes to the overall success of the company.

However, there was no improvement in lower rated areas like feedback, collaboration and personal development. Departmental meetings have been held throughout the organization to follow up on these and qualitative issues raised. Several actions have been initiated including investments in tools to foster knowledge-sharing and communication.

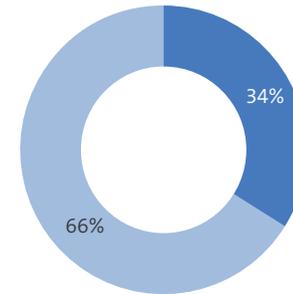
PERSONAL DEVELOPMENT

The increase in size and complexity make it difficult to know individuals, to understand their aspirations and to see opportunities for internal development. To bridge this gap, we have digitalized talent and succession management using a platform on which employees manage their own profile/CV including skillsets, mobility, interests and experience etc. This gives everyone the opportunity to present her/himself and enables HR and top management to know their aspirations and to discuss/develop internal career paths. The platform also allows employees to give recognition to colleagues and to nominate them for outstanding behavior.

DEVELOPING SKILLS AND ENSURING SUCCESSION

Training and development are essential to meet the requirements for an international company in the medical device industry and are keys to attracting and retaining top performers. In addition to introductory product and technical training, we continued to offer updates and refreshers to staff who have been with the company for some time. Aside from staff training and education, we maintained our apprenticeship, internship and Corporate Graduate Programs in 2018, with the aim of offering jobs to as many participants as possible.

Employees added by business and geography



Organic expansion

Approximately 700 employees were added, of which around 250 work in production in Brazil, Switzerland and the US. Other notable job additions were in Switzerland and in the sales organizations in China, Germany, and the US.

Acquired businesses

More than 350 employees joined the Group as a result of acquisitions in Turkey, Iberia, Taiwan, South Africa and North America.

>90% of survey respondents are proud to work at Straumann, and love what they do.

Our 18-month Global Development Program identifies and develops future leaders with a view to filling our succession pipeline. It is for members of junior to middle management who have leadership talent and aspirations. It currently includes eight participants and involves real-life business assignments, assessments and mentoring by top management.

Our Strategic Management Development (SMD) process involves senior management, staff members in key positions, and future leaders. It reviews leadership, performance, behavior, and career potential as a basis for development, deployment, and succession planning. In addition, fifteen of our senior managers participated in a new Global Talent Development program which we have started in collaboration with an external consultant.

As in previous years, our goal is to fill the majority of business-critical and key management positions with internal candidates. One example of this is the nomination of an internal successor to the CEO.

ATTRACTING NEW TALENT

To attract and engage the brightest talent, we developed a new employer branding concept in 2018 tagged '#ChangeMakers', which combines Straumann's tradition of innovation with our player-learner mindset and culture of agility, informality, openness and other distinctive attributes. It advertises our interest in people who embrace change and are passionate about progress. At the same time, we developed state-of-the-art recruiting tools and enhanced our presence on social media platforms, attracting a growing number of followers.

DIVERSITY AND EMPLOYEE PROTECTION

A diverse team adds value and supports our ability to serve an increasingly diverse customer base. We monitor diversity with regard to age, gender, origin and educational background. Gender diversity is generally strong, with 44% female employees. Our policy is not to discriminate between genders with regard to compensation.

'#Power-up: Women@Straumann' is a new initiative that evolved in 2018 to help our female colleagues grow in their careers and to navigate successfully in male-dominated environments. It includes workshops, mentoring, networking, learning and skill-building. This internal initiative reflects the Group's successful external program to support women dentists.



Gender diversity is generally strong with 44% female employees. These four colleagues work at our production site in Sweden.

Human resources key figures

Parameter	Unit	2018	2017	2016	
Staff size	Employees	Total headcount	5 954	4 881	3 797
		Full-time equivalents	5 874	4 811	3 729
Employment type	Part-time employees	% of headcount	4	4	6
Gender diversity	Women in general staff (excl. Mgmt)	%	46	47	50
	Women in management ¹	%	32	31	25
	Women in SMD pool ²	%	31	26	31
Training and education	Investment in staff learning ³	CHF million	2.9	3.9	3.1
	Average annual training & learning	Days/employee	4	4	4
Turnover and absence	Staff turnover ⁴	%	13	12	12
	Absence rate due to sickness ⁵	%	4	4	3
	Absence rate due to workplace accidents ⁵	%	0	0	0
	Work-related fatalities	Number	0	0	0
Employee protection	Reported cases of discrimination/harassment	Number	2	3	0

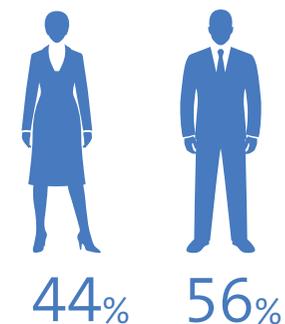
- 1 Job position "Manager" and all levels above.
- 2 Strategic Management Development group.
- 3 Only direct expenses for internal and external training activities are counted here. Salaries paid to employees while in training are additional and are not included.
- 4 Includes resignations and terminations.
- 5 Switzerland only. Proportion of absence time compared to target working hours.

Staff structure by category and age group

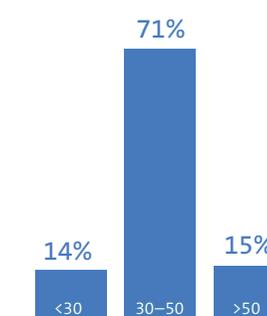
Age	<30	30–50	>50	Unit	(in %)
					2018
General staff (excl. Management)	14	59	11	% of headcount	84
Management ¹	0	12	4	% of headcount	16
TOTAL	14	71	15		100

- 1 Job position "Manager" and levels above.

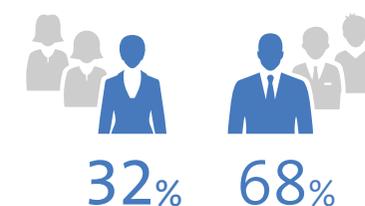
Gender



Age



Leadership by gender



Freedom of association is allowed throughout the company in compliance with laws and regulations. There is a general preference for informal employee dialogue, and labor contracts are negotiated individually rather than by collective bargaining.

Health and safety training and awareness are given due importance throughout the Group, and no workplace fatalities or serious accidents were reported in 2018.

RESPONSIBILITY AND ETHICS

At the end of 2018, we revised our Group [Code of Conduct](#), which is an integral part of our employment contracts and is designed to ensure that all our people conduct business in a legal, ethical and responsible manner. It is mandatory for every Straumann Group employee and includes requirements for good corporate citizenship, including respect for people, property and the environment. With the publication of the new revision, clear responsibility for local implementation was assigned to each Country Head. In 2018 nine Code of Conduct violations were reported including two cases of discrimination. Appropriate disciplinary actions were taken including seven dismissals.

[This page addresses GRI disclosure 102–41.](#)

Communities

Bringing smiles to those in need

MAKING A MEANINGFUL DIFFERENCE

The provision of safe, effective, lasting solutions that enhance well-being and quality of life is our biggest contribution to the community, and over the years, Straumann Group solutions have helped dental professionals to create smiles and restore confidence in millions of people around the world. Nevertheless, we know that millions of others lack access to even the most basic dental care. This is the motivation behind our charitable activities, which focus on dentistry, where we can make a meaningful difference.

CLEAR PRINCIPLES AND GOALS

Our Corporate Sponsoring Committee evaluates requests and initiatives according to clearly defined principles and policies. We set clear goals and look for continuity as well as sustainability in the projects we support, which is reflected in our long-standing relationships and commitments. In 2018, we evaluated 67 requests and supported 14 projects in as many countries (see table on p. 74).

CONTINUITY AND SUSTAINABILITY

Most of our projects have been running for several years and two that we entered in 2018 are also long-term commitments. Our charitable projects include:

- Straumann AID (Access to Implant Dentistry), our global initiative to help underprivileged patients who are in need of treatment but cannot afford it. This program has been running since 2007 and relies on collaboration with dentists who provide treatment without charge, while we donate the relevant products.
- The National Foundation for Ectodermal Dysplasia (NFED), a US-based non-profit organization that helps ED patients and their families. In addition to other symptoms, ED patients typically have severely malformed or missing teeth from infancy. We provide free implants and prosthetics in addition to financial support for the NFED, which has been our partner since 2004.
- Neo Sorissos (New Smiles), Neodent's mobile dental clinic in Brazil, has now been on the road for two years. Staffed by 200 volunteer dental professionals it has travelled 13 000 kilometers to 25 cities and served over 5 000 patients free of charge.



Syrian refugees in Jordan are about to receive much-needed dental care from the mobile NOIVA Dental Clinic, supported by Straumann (see p. 66).



The Hautpierre Sans Frontières project offering treatment, consulting and training in Labé, Guinea.

- The NOIVA project to build and operate a mobile dental clinic to offer dental treatment to Syrian refugees along the Jordan border (see p. 66). This is a new project that we plan to sponsor for several years.

BIG HEARTS FOR YOUNG TEETH

The Sonrisa project provides free dental treatment to orphaned children in Nicaragua and has received our support since 2006. We continued to support a team of surgeons to treat children with cleft palates in Indonesia and, through two Swiss-based charities, we began projects to provide dental treatment and education to children in poor regions of Myanmar and Vietnam. The Rebuilding Smiles initiative in Australia provides free dental work to children and women who have suffered dental injury in domestic violence.

HELPING NEEDY PATIENTS

We continued to support basic dental care initiatives in Uganda, Cambodia and Guinea. Nearer to home, we donated the implants and related components to the 2018 One Day a Smile event run by the Afopi Clinic in France. Over a period of 3 days, this offered complete tooth replacement to 15 needy patients. In Switzerland, we created the 'Stiftung schönes Lächeln' ('Beautiful smile foundation') in collaboration with the main Swiss University clinics to help seniors on limited income who need implant treatment.

SUPPORT FOR YOUNG DENTISTS

We continued to fund scholarships to young dental students who are connected with charitable projects that we support in Cambodia and Nicaragua. These students are already serving their communities in small local clinics. In addition, we regularly underwrite dental school students from North America and Europe who spend part of their vacations to offer free dental care to patients in underprivileged areas, many of whom have never seen a dentist.

All of these projects focus on dentistry and promote the Group's reputation among its stakeholders as a caring, responsible corporate citizen. This supports our business and thus adds value for our shareholders. We are grateful to our dental partners – many of whom are volunteers – for their devotion and for ensuring that the funds are used efficiently.



The 'One-day-a-smile' event at the Afopi clinic in France gave 15 patients total teeth replacements. The Straumann Group donated all the implants and related components.



In 2018, Straumann created the 'Stiftung schönes Lächeln' ('Beautiful smile foundation') in Switzerland to make implant treatment affordable for patients with limited financial means.

Main initiatives and projects sponsored by Straumann in 2018

Region	Lead partner	Objective ¹	Status/results
Global	Straumann AID	Free implants and materials for needy individuals, supporting volunteer dentist	Ongoing since 2007
Australia	Australian Dental Association Rebuilding Smiles	Free dental treatment to women and children affected by domestic violence.	Ongoing since 2017
Brazil	Neodent	Neo Sorrisos mobile clinic, dental care for underprivileged individuals	Ongoing since 2016, ≈3000 patients treated in 2018
Cambodia	Hope for All Clinic	Dental student scholarships and clinic support	Ongoing since 2007, 3 students fully supported
France	AFOPI One Day a Smile	Complete tooth replacement for needy edentulous patients	More than 350 implants donated, 15 patients treated
Guinea	Hautpierre Sans Frontières	Free dental treatment for adults and children suffering from traumas and deformities.	Ongoing
Indonesia	Dharma Wulan Foundation	Treatment for children suffering from dento-facial (cleft) deformities	150 children treated in 2018. Ongoing
Jordan	NOIVA Foundation	Mobile dental clinic treating Syrian refugees	Ongoing
Myanmar	600 Kids, Switzerland	Dental treatment for children in the delta region	Five-year project started in 2016, preventive care for 3200 school children. Ongoing
Nicaragua	Sonrisa Foundation, Switzerland	Free dental care for orphaned children; support dental student scholarship	Ongoing since 2006
South Korea	The Smile Charity Foundation	Dental care for handicapped people	
Switzerland	Stiftung schönes Lächeln	Affordable implant treatment for seniors with limited means	Started in 2018
Uganda	Dental Volunteers	University of Bonn dental students service project	Completed 2018
USA	National Foundation for Ectodermal Dysplasia	Financial, treatment and PR	Support ongoing since 2004
Vietnam	Dariu Foundation	Building kindergarden incl. preventive dental program	Construction started in 2017

1 In each case clear prerequisites and goals were set.

Global production & logistics

High quality, service and efficiency maintained as we push boundaries to cater for full launch program and strong growth

In 2018, we introduced no fewer than three new implant systems: a two-piece ceramic implant, a mini-implant and a fully-tapered implant. All three are made from hi-tech materials, feature special surface technology and call for highly specialized manufacturing capabilities – for example every Straumann ceramic implant undergoes a 360-degree stress test to ensure reliability, while our Mini Implant features a built-in connection with a special coating and inserts to minimize wear and maintenance. Our BLX has a highly innovative intricate design and is one of the most advanced fully tapered implants.

In addition to establishing manufacturing lines for these implants as well as their prosthetic and auxiliary components, we had to ramp up production and logistics of our existing ranges to cope with our double-digit growth. Our digital business also introduced new equipment, materials and software. We succeeded in meeting increased demand without compromising our high quality standards and service levels. At the same time, we achieved impressive cost reductions and significant productivity gains.

CAPACITY EXPANSION

While the construction of our new building in Villeret got underway, we addressed the urgent need for space by moving machinery to a rented facility nearby. This freed up space for additional turning machines and allowed us to set up an independent Global Process & Technology Center that will support our strategy and accelerate the planned introduction of new implant systems in the coming years.

We also increased production space and equipment in Andover (USA) and added turning machines in Curitiba (Brazil), where we are also constructing a new building to house production for a new lower value implant brand.

We succeeded in meeting increased demand without compromising our high quality standards and service levels.



Straumann's implant production in Andover (US), where we added space and equipment.

Our new CAD/CAM milling center in Shenzhen (China) went into operation and we integrated Creat-ech's plant in Mendaro, Spain. This offers additional capacity for manufacturing highly sophisticated screw-retained bars and bridges and provides a full design service to lab customers. Apart from this, we installed 3D printing equipment at all our CAD/CAM centers for producing models and drill guides.

NEW TECHNOLOGIES

New technologies enable us to produce increasingly sophisticated designs and to increase cost efficiency. Our project to produce ceramic implants by injection molding advanced: we made substantial progress towards large scale production and developed a process to increase the material density and strength. These are significant steps towards our goal of producing an esthetic, high strength implant with excellent osseointegration characteristics and a versatile prosthetic system at a very competitive cost.

To reduce production costs in the future, we identified and evaluated a new generation of turning machines and a combined turning-milling machine that can produce both implants and prosthetic parts. We also made significant improvements to our glass ceramic production line, adding new shades to the portfolio, increasing yield, and reducing costs.

UPGRADING INFRASTRUCTURE

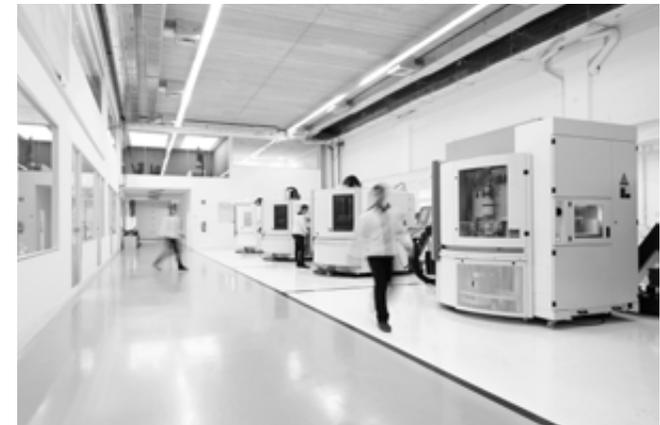
We continued our standardization strategy, implementing various management systems to support manufacturing execution, product verification and validation, design sharing, technology transfer, project management, process standardization and inter-departmental collaboration.

SUPPLY CHAIN MANAGEMENT

In addition to managing volume growth and the large number of new products, the main challenges for Logistics and Planning were coping with the significant growth, supplying new distributors and supporting new subsidiaries. Further process improvements and capacity expansion enabled us to maintain high service levels, while an efficient drop-shipment process prevented bottlenecks.



Neodent's manufacturing site in Curitiba, Brazil, where a new building and turning machines were added.



Creattech's high tech prosthetic production facility in Mendaro, Spain.

Straumann Group production sites in 2018

Location	Products	Markets	Certification
Villeret, Switzerland (Straumann)	Implant systems	Global	ISO, FDA, Anvisa, MHLW
Andover, USA (Straumann)	Implant systems	Global	ISO, FDA, Anvisa, MHLW
Curitiba, Brazil (Neodent)	Implant systems	Global	ISO, FDA, Anvisa
Renningen, Germany (Medentika)	Implant systems	Global	ISO, FDA, MHLW
New Taipei City, Taiwan (T-Plus)	Implant systems	Taiwan, China, US	TFDA, GMP, CE, CFDA, FDA, Korean FDA, ISO 13485
Mumbai, India (Equinox)	Implant systems	India, neighboring countries	ISO
Markkleeberg, Germany (Straumann)	CADCAM prosthetics	Europe	ISO
Arlington, USA (Straumann)	CADCAM prosthetics	US	FDA
Createch, Spain (Straumann)	CADCAM prosthetics	Spain (Europe>)	ISO, FDA
Narita, Japan (Straumann)	CADCAM prosthetics	Japan (Asia)	ISO
Shenzhen, China (Straumann, Dental Wings)	CADCAM prosthetics, Digital equipment	China, Global	CFDA
Montreal, Canada (Dental Wings)	Digital equipment	Global	ISO, FDA, Anvisa, MHLW, HC, MFDS, TGA
Round Rock, USA (ClearCorrect)	Clear aligners	Global	ISO, FDA
Malmö, Sweden (Straumann)	Biomaterials	Global	ISO, FDA, Anvisa, MHLW

To reduce production costs in the future, we identified and evaluated a new generation of turning and milling machines.

Environment

Growing with care

High performance cultures use energy and materials efficiently, avoiding waste wherever possible. Beyond this, we believe that environmental stewardship is an essential part of sustainable development that has to be tackled globally. With the rapid expansion of our operations in recent years, we have pushed the boundaries of our environmental reporting to include recently-acquired production facilities. We review our environmental performance regularly to understand the impact of our operations and to identify opportunities for reduction. We are committed to operating in an environmentally responsible manner and focus on the areas where we have the greatest leverage. Our key priorities are currently materials efficiency, energy and water consumption, and waste management.

GOING BEYOND COMPLIANCE

As a supplier of medical devices, the Straumann Group complies with stringent regulations, including the analysis of raw materials and rigorous protocols for quality control to ensure the safety and effectiveness of the products we make. All manufacturing processes are fully documented to provide traceability.

In addition to complying with regulations, we track our energy consumption and resulting greenhouse gas emissions, certify our environmental management systems to ISO 14001, and communicate our progress over time. To provide further transparency, we participate in the Climate Change program of the Carbon Disclosure Project (CDP). In 2018, we again reached the “Awareness” level of disclosure, which is awarded to companies for transparent reporting and emission reduction efforts. Care for the environment is included in our Code of Conduct for all employees and our Supplier Code of Conduct promotes the same goals.

UNDERSTANDING OUR IMPACT

Our business scope has broadened significantly in recent years and our product portfolio has expanded considerably. Today we produce titanium and ceramic dental implants; ceramic, metal, and polymer prosthetic elements; polymer orthodontic aligners; and biomaterials for tissue regeneration. In addition, we distribute scanning equipment, milling machines, 3-D printers and related materials. Some of these are manufactured by third parties.

Our business scope has broadened significantly and so too, has our product portfolio.

Our key priorities are materials efficiency, energy and water consumption, and waste management.

Our principal products are dental implants, which are produced on CNC turning machines from titanium rods or titanium-zirconium alloys. In the manufacturing process, we use cutting oil as a coolant, followed by sand-blasting, acid etching, cleaning, packaging, and sterilization. Our production processes make up our most significant internal environmental impact, followed to a much lesser extent by activities in research and development.

As we do not produce dental filling materials or surgical equipment, our impact is relatively minor compared with a number of companies in the dental field. We do not use significant amounts of heavy metals such as mercury, lead, or manganese, which are usually present in the production processes of manufacturers serving the dental industry.

EXPANDING THE PRODUCTION NETWORK

This report is based on data for our Group headquarters in Basel, Switzerland, and our production sites currently in operation: Villeret in Switzerland; Markkleeberg and Renningen in Germany; Malmö in Sweden; Andover, Arlington, and Round Rock in the United States; Curitiba in Brazil; Narita in Japan; Montreal in Canada; and Shenzhen in China. It also includes data from Createch's production facility in Mendaro, Spain, which we fully acquired during the year. As part of the Group's growth strategy in 2018, we hired additional staff at almost all production sites.

In 2018, we made the following additions to our implant system production:

- In Villeret, 10 new production lines became operative.
- In Curitiba, 12 additional production lines were installed in the existing facility, and more will be added in 2019.
- In Andover, we expanded our production facility with 9 new machines, with more to follow in 2019.

Additions to our digital and CAD/CAM business included:

- In Markkleeberg, 3D-printing and selective laser melting processes were implemented.
- In Arlington, production capacity was expanded by about 20% with new machines.
- In Round Rock, we rented additional floor space to satisfy increased demand.
- In Narita, we purchased additional equipment and expanded milling capacity.

**We added more than 30
manufacturing lines to our implant
system production.**

MATERIALS, WASTE, AND WATER

Consumption of titanium remained fairly stable overall. While implant volumes increased, the use of titanium for CAD/CAM prosthetics at our existing sites went down, reflecting the trend towards local milling by customers, a shift towards modern materials like zirconia and improvements in raw material yield by increasing nesting density, i.e. arranging items to obtain the largest number of prosthetics from each disc of raw material. The increase in photopolymer consumption was due to the strong growth in our clear-aligner business.

Acid consumption rose due to the growth in implant volumes, while additional machinery led to a marked rise in the consumption of oils and cleaning solvents. We were able to counter this by reducing oil consumption and recycling significantly in Markkleeberg, thanks to a new, more efficient lubricant. We countered the increase in solvent consumption by implementing an environmentally friendly tumbling process for washing models and aligners in Round Rock.

Waste increased strongly in 2018, due to our continued production expansion and revenue growth. In addition, the installation and run-in of new equipment and machines resulted in additional waste. On the other hand, we were able to reduce our water consumption significantly, even though we increased production and added more people. This was mainly achieved by upgrading the water supply system in Curitiba, which increased the efficiency of treatment and dosing.

ENERGY USE AND GREENHOUSE GAS EMISSIONS

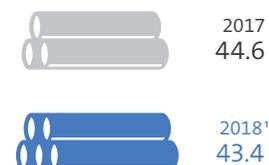
Our energy consumption rose as our production activities and revenue increased. The increase in personnel in existing facilities, together with environmental awareness, reduced electricity as well as heating energy consumption per capita. In Villeret, we also replaced conventional lighting with LEDs and implemented a serialization of the cooling system, which led to further energy savings. Our greenhouse gas emission rates mirrored the increase in energy consumption.

Even though we increased production and added more people, we reduced our water consumption.

Environmental key performance indicators

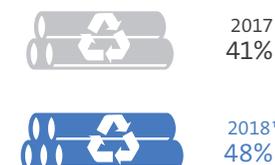
		Performance indicator	Unit	2018 (incl. new sites)	2018 (excl. new sites)	2017 (excl. new sites)
Product raw materials	Titanium	Consumption	tons	44.6	43.4	44.6
		Recycling (consumption minus product)	tons	21.4	20.9	18.3
	Cobalt chrome	Consumption	tons	8.7	5.9	6.6
		Recycling	tons	4.6	3.5	2.2
	Zirconia	Consumption	tons	4.6	4.5	4.7
Photopolymers	Consumption	tons	42.6	42.6	27.4	
Operating materials	Various oils	Consumption	tons	122.6	120.8	120.1
		Recycling	tons	52.5	51.5	77.7
	Cleaning solvents	Consumption	tons	60.8	60.7	49.7
		Recycling	tons	33.1	33.1	30.1
	Acids	Consumption	tons	84.3	84.3	67.6
	Paper	Consumption	million sheet	6.6	6.6	6.8
Per capita ¹		sheet/employee	2273	2305	2885	

Titanium consumption
(tons)



-2.8%

Titanium recycling
(%)



+17%

Oils and solvents consumption
(tons)



+6.9%

Oils and solvents recycling
(%)



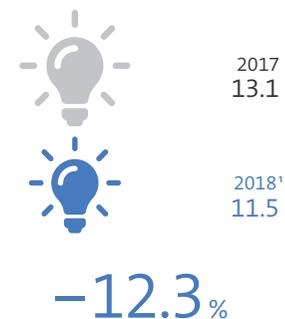
-25%

¹ Figures exclude new sites.

		Performance indicator	Unit	2018 (incl. new sites)	2018 (excl. new sites)	2017
Energy	Electricity	Consumption ²	MWh	33 681	32 933	30 864
		Per capita ¹	MWh/employee	11.5	11.5	13.1
	Heating	Total heating energy	MWh	5 456	5 456	5 008
		– Fossil fuels	MWh	4 209	4 209	3 731
		– District heat	MWh	1 246	1 246	1 277
		Total heating energy per capita ¹	MWh/employee	1.9	1.9	2.1
Emissions	GHG emissions	Total emissions	tons CO ₂ e	8 455	8 275	7 650
		– Direct (Scope 1) ³	tons CO ₂ e	1 204	1 204	1 102
		– Indirect (Scope 2) ^{4,5}	tons CO ₂ e	7 251	7 071	6 548
		Total emissions per capita ¹	tons CO ₂ e/ employee	2.9	2.9	3.2
Water	Water	Consumption	m ³	57 162	56 759	69 735
		Per capita ¹	m ³ /employee	19.6	19.8	29.6
	Untreated waste water	Disposal	m ³	165	165	145
Waste	Diverse waste	Hydroxide sludge	tons	15.9	15.9	18.9
		Contaminated material	tons	276	276	263
		Solvents	tons	7.6	7.6	5.4
	Refuse	Total refuse	tons	446	446	345
		Per capita ¹	kg/employee	153	156	147

- 1 Per capita figures refer to headcount per end of year at relevant sites only, and are calculated analogous to previous years
- 2 Includes 1266 MWh (2017: 1246 MWh) diesel consumption for electricity generation.
- 3 Scope 1 emissions comprise greenhouse gases emitted by sources owned or controlled by the Group, such as heating units.
- 4 Scope 2 emissions comprise greenhouse gases emitted in the production of electricity and district heat the Group consumes. Due to an update of electricity emission factors, the figure for 2017 has been slightly adapted as compared to last year's report.
- 5 Greenhouse gas emissions associated with electricity consumption of 6974 t CO₂e (2017: 6265 t CO₂e) were calculated according to the location-based approach, as defined in the GHG Protocol Scope 2 Standard.

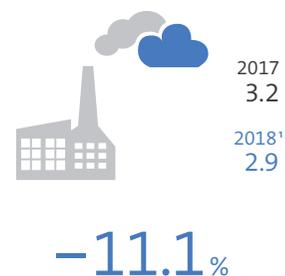
Electricity consumption
(per capita; in MWh)



Heating energy
(per capita; in MWh)



CO₂ emissions
(per capita; in tons CO₂e)



Refuse
(per capita; in kg)



1 Figures exclude new sites.