

Management commentary

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Business model & objectives

Vision, strategy, core behaviors

STRAUMANN GROUP IN BRIEF

WHO WE ARE AND WHERE WE COME FROM

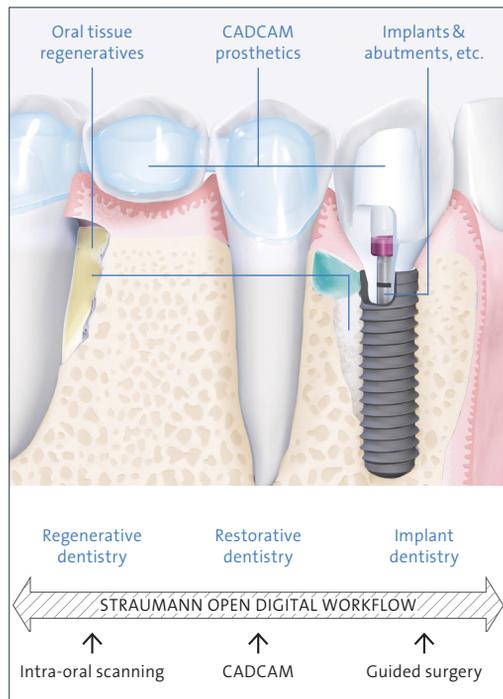
Headquartered in Basel, Switzerland, the Straumann Group is a global leader in tooth replacement. The company was founded in 1954 as a research institute specialized in alloys. In the 1960s, it became a pioneering force in dental implantology, which had become its sole focus by 1990. In 2003, it expanded into oral tissue regeneration and, four years later, entered the field of CAD/CAM tooth restoration in order to provide full tooth replacement solutions. Institute Straumann remained a family-owned business until 1998, when it became a public company, traded on the SIX Swiss exchange.

Today the Straumann Group unites global and international brands that stand for excellence, innovation and quality in tooth replacement and esthetics, including Straumann, Instrandent, Neodent, Medentika, etkon and other fully or partly owned companies and partners (see pp. 20, 23, 25).

The Group develops, manufactures and supplies dental implants, instruments, CAD/CAM prosthetics and biomaterials for use in tooth replacement and restoration solutions or to prevent tooth loss (see p. 31 ff.). The principal production sites for implant components and instruments are in Switzerland, the US, Brazil and Germany, while CAD/CAM prosthetics are milled centrally in Germany, the US, Japan and Brazil. The production facility for Straumann biomaterials is located in Sweden.

The Group offers a wide range of services to dental practitioners, clinics and laboratories all over the world. It is recognized as a leading innovator in its field, working in collaboration with leading universities, clinics, and research institutes to further increase the standard of patient care. Through a unique collaboration with its academic partner the International Team for Implantology (ITI), Straumann supports research and offers training and education to dental professionals.

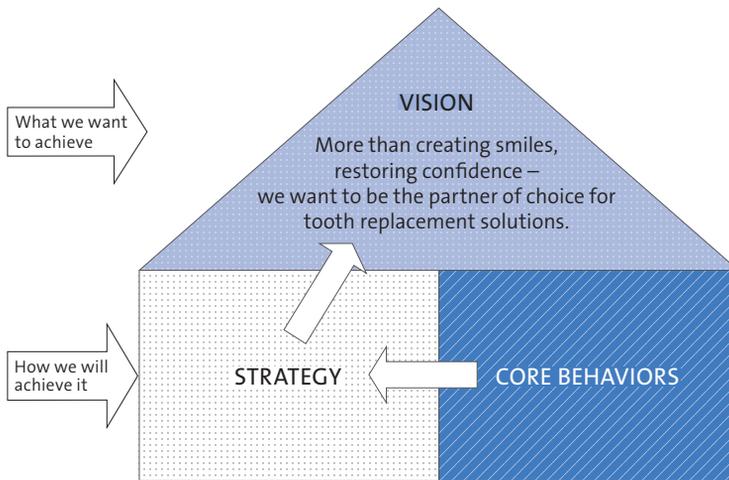
OUR BUSINESS



logy (ITI), Straumann supports research and offers training and education to dental professionals.

The Group currently employs 3797 people worldwide. Its products, solutions and services are available in more than 100 countries through a broad network of distribution subsidiaries and partners (see chart on p. 184 f. for an overview of subsidiary and distributor locations). More than 90% of the business is conducted directly through fully-owned subsidiaries.

OUR COMPANY HOME



OUR VISION

Our vision is: MORE THAN CREATING SMILES, RESTORING CONFIDENCE – WE WANT TO BE THE PARTNER OF CHOICE IN TOOTH REPLACEMENT.

Confidence relates to all our activities; it is built on trust, integrity, respect, communication, transparency, collaboration and delivering what we promise. For our customers, it means peace of mind, because our solutions are predictable and durable. For our employees, confidence means secure, rewarding jobs. For our shareholders, it means sustainable returns from a highly ethical business. For the communities in which we operate, confidence means that we care for the world around us as a responsible corporate citizen. For all our stakeholders it means that Straumann is a reliable partner.

We want to be the first place that people come to do business, to find genuine solutions, to turn ideas into reality, to learn, master, succeed and improve lives. This is what being the partner of choice means for us.

We are committed to being the premium partner of choice in tooth replacement, offering education, innovation, quality, support, expertise, clinically proven long-term success, and peace of mind. At the same time we are making high quality implant solutions more

affordable to a broader population through Neodent, Medentika, Equinox, Zinedent, Anthogyr and our Instrandent platform.

MAKING VISION A REALITY

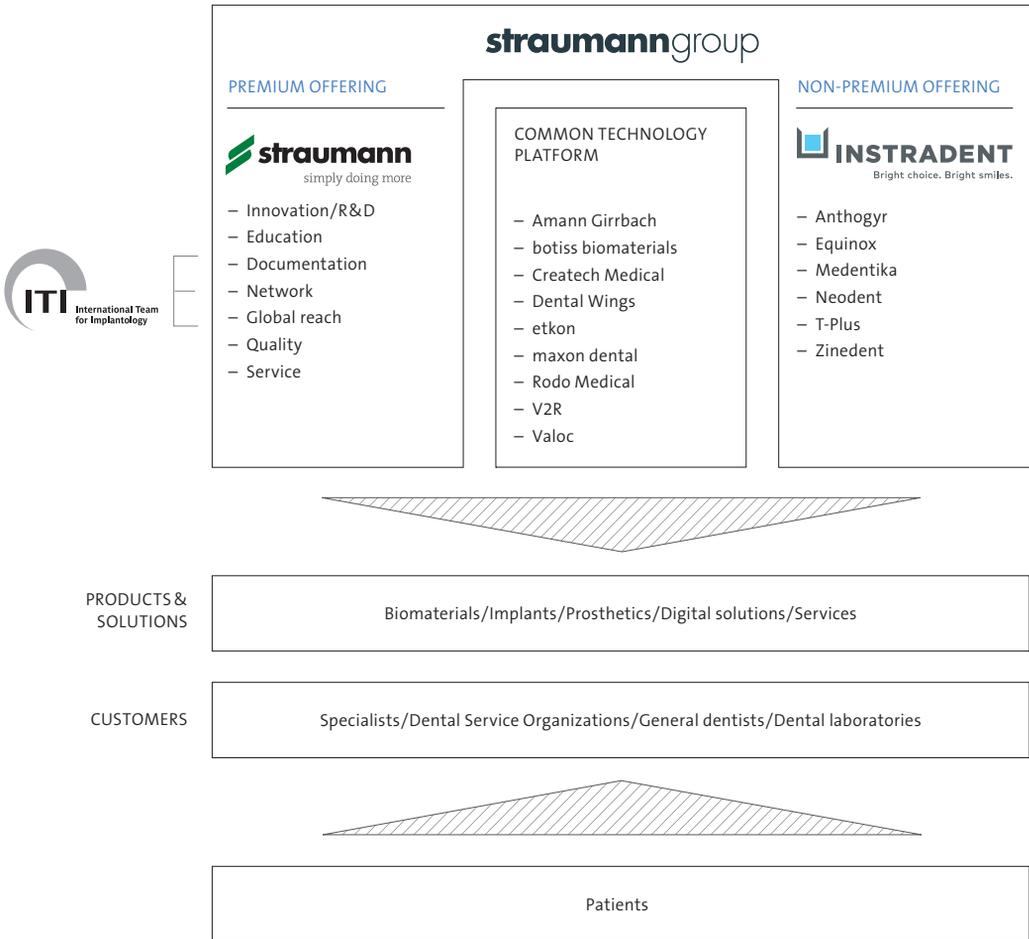
The way to a sustainable future is mapped out in our three 'Strategic Priorities' (see p. 22 ff.) which form the backbone of our strategy and are constantly monitored and adapted. Making it happen is a matter of culture and behavior. Thus vision, strategy and behavior form the figurative building of 'our company home' (see above).

CORE BEHAVIORS BUILT ON LONG-HELD VALUES

Behavior is the key to the culture that we believe will drive and sustain our success in the future. Building on the values that have made Straumann what it is today, we focus on the following eight core behaviors that apply for all employees in the Straumann Group:

- Focus on customers
- Collaborate
- Take ownership
- Create opportunities
- Build trust
- Engage
- Communicate effectively
- Be agile.

OUR BUSINESS MODEL



The Straumann Group is a global leader in tooth replacement. Our core premium business is built on the Straumann Dental Implant system supported by CAD/CAM prosthetics, digital workflows and oral tissue regeneration products, which together make up a comprehensive solution. Innovation (p. 45), research, development, global reach, guaranteed quality, and service excellence are all inherent to the Straumann brand. So too are clinical evidence, high standards of education and a global network. In these areas, we collaborate with leading institutes, universities and the ITI (p. 103).

We produce most of our products in house (p. 115 ff.) and sell them to dental professionals either directly or through distribution partners. Our customers (p. 97 ff.) are specialists, general dentists, and dental labs which prepare the prosthetic restorations for the dentists. Patients are addressed by general dentists, who often decide on the type of treatment and system, and specialists.

We address the value segment of implant dentistry mainly through the InStradent platform of international brands (pp. 23, 37 f.) in which we hold investments. To provide complete solutions, we have entered a number of partnerships/agreements that, together with fully and partially-owned companies, form a shared technology platform that can serve both our premium and InStradent businesses (p. 25).

MINDSET

Having the right mindset is essential for the high-performance culture we are striving to build. We need everyone at Straumann to have a player-learner mindset. Player-learners inspire trust; they are energized and change; they listen, find out, share, collaborate, take risks, find solutions, learn by doing, embrace, encourage and celebrate. The Straumann tradition of 'simply doing more' is an integral part of the Straumann brand; it is at the heart of these behaviours, and is the overriding principle for everything we do.

OUR BRAND

STRAUMANN GROUP – UNITING GLOBAL EXCELLENCE IN DENTISTRY

Our strategy to become the leading global total solution provider for tooth replacement has brought a number of companies and partners into Straumann. What began as a family-owned research institute is now a global Group of national and international companies and brands.

To provide a common identity with which the employees and partners of the Group can identify, we introduced 'Straumann Group' as our overarching brand at the outset of 2017, with a distinct visual identity and positioning.

straumanngroup

The new brand unites and adds value to our brands and partners, allowing them to leverage the global reputation of Straumann without compromising the premium brand. At the same time it allows the individual companies and partners to maintain their unique character, identity and culture while, importantly, it enables us to further differentiate the Straumann premium brand, which will retain its original green color and visual identity.

This initiative will be implemented quickly without disruption to our normal business. No significant investment is necessary, as the names of products, brands, legal entities, etc. will not change.

Strategy in action

Culture: the key to execution

Our goal for the years to come is to be the global provider in tooth replacement. At the heart of the Group's strategy to achieve this are three key priorities which provided our focus in 2016:

- Drive a high-performance culture and organization
- Target unexploited growth markets and segments
- Become a total solution provider in tooth replacement.

The strategic priorities are reviewed annually by the Board of Directors and translate into a number of clearly defined initiatives and deliverables, which are continuously tracked and adjusted as necessary. They also serve as a basis for individual target-setting and performance assessments. For competitive reasons, details cannot be disclosed, although most of the initiatives are reflected in the major activities, investments, product launches, development pipeline and other achievements featured in this report.

STRATEGY EXECUTION – A MATTER OF CULTURE

High performance organizations consistently outperform, continually innovate and steadily improve. They create opportunities, unlock the potential of employees and use resources and energies effectively without waste. They are agile and collaborate as an aligned team with a shared goal. These are the main characteristics of the culture we are building across the Straumann Group. Culture is our first strategic priority because it drives results.

Having established a clear picture of our ideal culture (see p. 104) as well as the mindset and behavioral levers for cultural transformation, we implemented a series of workshops and training modules in 2015 to stimulate the player-learner mindset and core behaviours that are central to the high performance culture that will drive

our future success. We broadened this program in 2016 and, by year-end, more than 40% of our global staff had taken part. Our goal is to extend it to all employees by the end of 2018.

An important lever introduced in 2016 was to integrate our core behaviours into the employee performance management process. To complement this, we are building up a set of modules to develop and strengthen our people. 'Create opportunities' was one core behaviour we emphasized in 2016, as this report illustrates.

To drive cultural change across levels, we formed cross-departmental groups of champions in our largest country organizations and established a global Community of Practice to support the Cultural Journey across the organization.

Although cultural transformation takes several years, regular internal surveys have shown clear signs of progress and high levels of engagement (see p. 104 ff.). In our global staff survey, 85% of respondents said they understood our strategy, 88% said they actively supported our Cultural Journey and 65% observed positive changes in our culture, even after a relatively short time. Further evidence of cultural change can be found in a new open-minded, entrepreneurial approach to concepts and strategic initiatives that were previously 'unthinkable', for example: selling Straumann products in Neodent stores, offering products for immediate tooth replacement protocols (BLT and Pro Arch), selling third-party milling machines that compete with our own milling centers (Amann Girrbach), investing in a company that sells copies of our own products (Medentika), investing in entrepreneurial companies that might or might not be game-changers (maxon dental, V2R, Rodo Medical), and selling third-party implants (Anthogyr).

PORTFOLIO OF INVESTMENTS TO TARGET THE NON-PREMIUM SEGMENT

Company	Specialty	Reach	Key facts	Straumann's stake
Anthogyr (France)	High-quality attractively-priced dental implant system	Registered and established in various markets incl. China	Founded 1980; ≈400 employees. China business transferred to Straumann	30% stake acquired in 2016
Equinox (India)	Fast-growing dental implant company	Ranks #3 in India; distributors in Asia, Africa and the Middle East	Founded 2005; ≈70 employees; acquired at year-end	100% acquired in 2016
Medentika (Germany)	Broad range of implant prosthetics for multiple implant systems; titanium implants and instruments	Products sold directly in Germany and through distributors in Europe and the rest of the world	Founded 2005; 70 employees. German distribution transferred to Straumann in 2016	51% acquired in 2013; controlling interest as of 1 January 2017
Neodent (Brazil)	Full dental implant system and service	Market leader in Brazil; present in other major implant markets through Instra-dent and distributors	Founded 1993; ≈1000 employees	100% (51% purchased in 2015; initial 49% in 2012)
T-Plus (Taiwan)	Dental implants and related prosthetic components	Sold mainly in Taiwan; regulatory approvals in China, Europe & the US	Founded 2009; 20 employees. Opportunity to tap into the lower non-premium segment, e.g. in China.	49% non-controlling interest, acquired in 2015; options to increase to 90% by 2020
Zinedent (Turkey)	Distributes dental implants and related prosthetic components with a view to potential manufacture	Implants for Turkey & other markets	Joint venture	50%

KEY BRANDS BY CATEGORY AND GEOGRAPHY

		EMEA ¹	NAM	LATAM ¹	APAC ¹
Implant systems	Implants	Straumann Medentika Neodent Zinedent	Straumann Neodent	Straumann Neodent	Straumann Anthogyr T-Plus
	Prosthetics	Straumann Createch Medentika Neodent Zinedent	Straumann Neodent	Straumann Neodent	Straumann Neodent Anthogyr T-Plus
Prosthetics for 3rd party implants	Abutments	etkon Medentika	etkon Medentika		etkon
	Precision bars/bridges	Createch			
Digital solutions	Lab scanners	Straumann ²	Straumann ²	Straumann ²	
	Intra-oral scanners	Straumann ²	Straumann ²	Straumann	
	Milling equipment	Straumann ⁴		Straumann ³	
Biomaterials		Straumann botiss	Straumann	Straumann	Straumann

¹ In selected countries² Developed & co-marketed by Dental Wings³ Developed by Amann Girschbach

However, the most significant evidence of this strategy in action is found in our operational performance, full innovation pipeline, and execution of strategic priorities as well as our track record in forging partnerships and building talent.

PURSUING GROWTH OPPORTUNITIES IN UNDERPENETRATED MARKETS AND SEGMENTS

One continuing goal was to gain further access to the Chinese market, particularly the fast-growing non-premium segment. To this end we bolstered our country organization and intensified our efforts to obtain further regulatory approvals. A key strategic step was our investment in Anthogyr, enabling us to take over their Chinese business and thus gain immediate access to the value segment with a dedicated sales team.

It has been our ambition to enter the Indian market for several years. Through the acquisition of Equinox at the end of the year, we became one of the leading implant companies in India and gained a platform to enter the premium segment with the Straumann brand.

Across the world, our strategy to penetrate Latin America advanced when our new subsidiaries in Argentina and Chile went into operation, offering solutions for both the premium and non-premium segments. Closer to home, we deployed a different strategy to enter the non-premium segment in Turkey by forming Zinedent, a joint venture with our former distributor. We also reorganized our regional organizations in Europe to free up resources for new markets in Africa and Central Asia.

Another important development has been the expansion of chains and networks – often referred to as dental service organizations (DSOs) – which range from group practices to international networks of fully integrated clinics with significant purchasing power and influence. We gained a foothold in this segment in 2015 with ClearChoice in the US (see pp. 74, 76) by offering value and premium ranges together with tailored service solutions. This strategy created similar opportunities to win leading chains in Europe in 2016 (see p. 76).

A LEADING POSITION IN THE FAST-GROWING NON-PREMIUM SEGMENT

The premium segment remains a key focus and we are determined to extend our lead in it through innovation, documented clinical research, differentiated

comprehensive solutions, service excellence, high standards of training/education, a global network, and guarantees on original products. Our activities and achievements in each of these respects are discussed in subsequent chapters.

There has been a marked increase in local and regional companies who offer implant and prosthetic products at lower (non-premium) prices. Many are copycats. Few offer the high level of service, support, innovation and long-term assurance that are inherent to the Straumann brand. Nevertheless, the non-premium market segment is growing faster than premium and accounts for more than a third of the global implant market (see p. 49). It offers significant business opportunities and we have to be a top player in it to secure our overall leadership.

Our strategy has been to build a portfolio of non-premium companies with growing footprints in key markets, making them valuable strategic assets for Straumann. The initial approach is through partial ownership, ensuring entrepreneurial flexibility and enabling the companies to maintain their own character and dynamism (see table p. 23). It also enables us to treat our interest as a ‘strategic’ or an ‘entrepreneurial’ investment, depending on the development of the company and the market.

Our intention is not to grow simply through acquisitions but by driving the international expansion of the brands in our portfolio and offering them as part of a full solution with multiple value propositions. We are achieving this through our Intradent platform and have become a top 3 player in this segment worldwide. Intradent expanded further during the year, opening subsidiaries in the Czech Republic and the UK and establishing a European hub to accelerate direct entry into new markets.

Our intention to obtain a controlling stake in the Korean implant company MegaGen by exercising our convertible bond and share purchase option in 2016 was stalled when MegaGen initiated arbitration. When we invested in MegaGen we viewed them as an interesting partner in Asia, but the delay and diminished spirit of collaboration have turned our attention to other partners like Anthogyr in order to take important strategic opportunities while they are still open.

TECHNOLOGY PLATFORM OF GROUP-OWNED COMPANIES AND PARTNERS

Company	Activities	Reach	Key facts	Straumann's stake
Amann Girrbach (Austria)	Pioneer and leader in in-house CAD/CAM solutions	Global; distributed by Neodent in Brazil	In-lab/chairside milling of custom dental prosthetics	Business partner
botiss biomaterials (Germany)	Oral tissue regeneratives	International; Europe's second largest supplier.	Exclusive distribution in Germany transferred to Straumann for a consideration of approx. CHF 9 million	Option to obtain up to 30% in 2017
Createch Medical (Spain)	High-end CAD/CAM bridges, bars and abutments for multiple implant systems	Sold mainly in Spain, Germany and other markets in Europe	Established 2006	30% acquired in 2013; options to increase to 100% by 2019
Dental Wings (Canada)	Dental prosthetics design (CAD), open software and scanners	Distributed by Straumann and leading dental companies in over 45 countries	Established 2007; platform to develop lab & chairside hard- & software solutions	55% non-controlling interest; option to increase to 100% by 2020
etkon (Germany)	Centrally-milled CAD/CAM prosthetics.	Global through Straumann	Established 2000; acquired 2007	100%
maxon dental (Germany)	Ceramic dental implant systems produced by injection moulding	Start-up company	Joint venture with maxon motor established in 2017	Joint venture; 49% non-controlling interest
Rodo Medical (USA)	Prosthetic fixture devices	Start-up company	Established 2009; FDA clearance obtained in 2016	12% acquired 2014
V2R Biomedical (Canada)	Planning service for guided-surgery solutions	Global through Straumann	Established 2008	30% acquired in 2016; option to increase to 100% by 2020
Valoc (Switzerland)	Novaloc & Optiloc overdenture retention systems	Global through Straumann	Established 2011	44% acquired in 2015

Another attractive partner is Medentika, in which we now have a controlling interest. An agreement with their shareholders enabled us to take over their distribution business in Germany and thus to enter the segment for value abutments and implants in the largest EU market.

A TOTAL SOLUTION PROVIDER

Continuing consolidation in our industry presents both challenges and opportunities. While we now have to compete with heavy-weight conglomerates that cover the entire dental spectrum, we have the advantages of agility and focus. We also have the expertise and resources to make strategic acquisitions and to forge strategic partnerships.

To compete in this environment our strategy is to become a total solution provider (TSP) in tooth replacement – which means offering conventional, semi- and fully-digital tooth replacement solutions for all major indications. We have filled some portfolio gaps, e.g. with our Bone Level Tapered implant and our Pro Arch solution for immediate full-arch replacement. One such example in 2016 was the launch of our Novaloc fixation system (p. 34 f.).

To offer a comprehensive solution, we needed a full range of biomaterials. Our strategic partnership with botiss and other suppliers made this possible and we were able to take over distribution of botiss products in Germany in September 2016.

We have also built a comprehensive portfolio for dental laboratories including pre-milled abutments, Variobases, high-end materials, etc. Being able to offer attractively priced, high quality prosthetics for competitor systems through Medentika and etkon iDent (launched in 2016) further positions us as a provider of choice for dental labs. But perhaps the most exciting steps have been in the digital arena. In 2017, we will offer validated digital solutions that cover the full tooth replacement workflow including guided-surgery, a choice of intra-oral scanners, a full CAD/CAM service, a Scan & Shape option, as well as central, in-lab and chairside milling. These developments are complemented by tailored and blended education packages as well as other marketing tools. We have made good progress with our TSP strategy and are now considering the next steps, which might involve broadening our scope.

GAME-CHANGER THINKING

In 2016, we convened a high-level expert event with internal and external experts to consider potential opportunities and risks of substitution technologies, services and business models. We looked at our current business scope and potential opportunities in adjacent fields. Areas in which we will increase our focus include digitalization, customer base shifts, materials and technology.

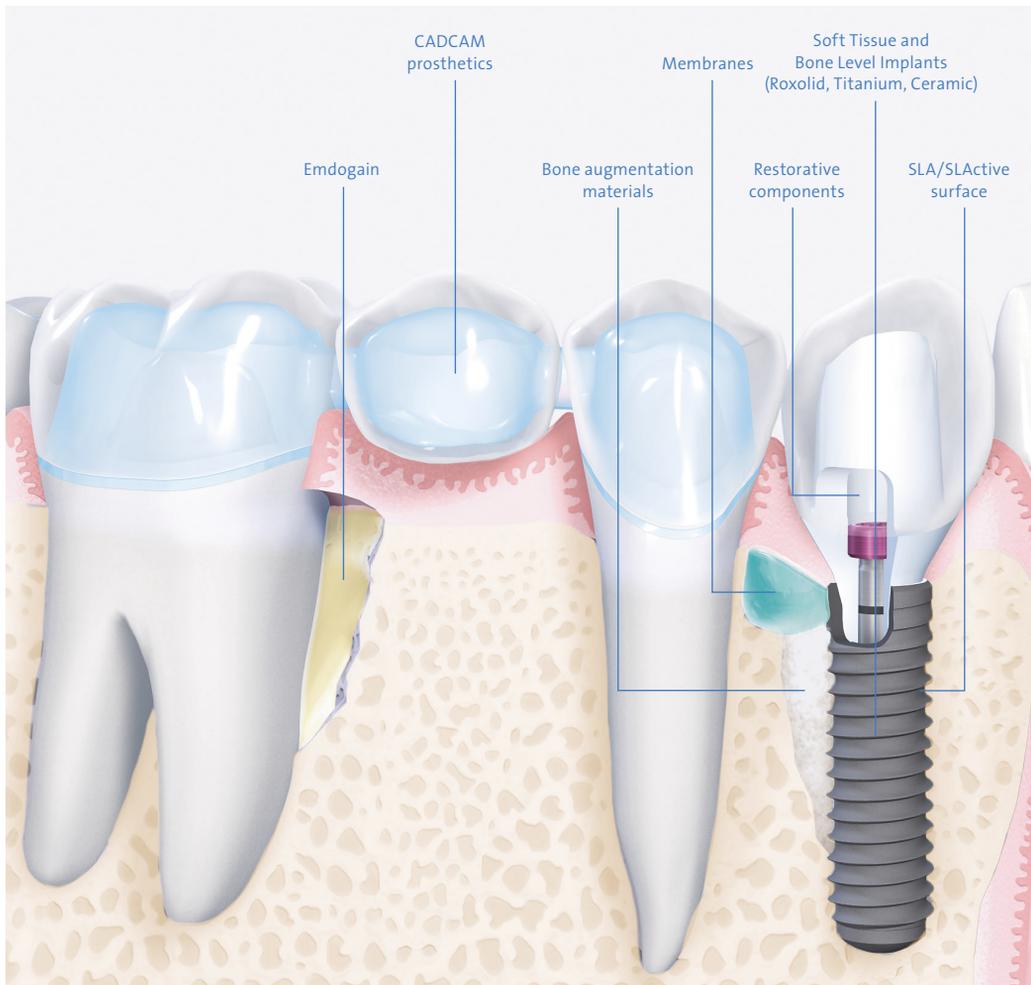
OUTLOOK

Continuing consolidation in our industry raises the question of whether the Straumann Group will have the critical mass to retain its leadership in the field. We are confident that we will – based on our good performance, strong global brand, broad portfolio of partnerships, success in the non-premium segment, and the progress of our Cultural Journey. We continue to evaluate new opportunities for acquisitions, partnerships and scope expansion, vigilant of our changing market and environment and ready to adapt our strategy accordingly.

Products & services

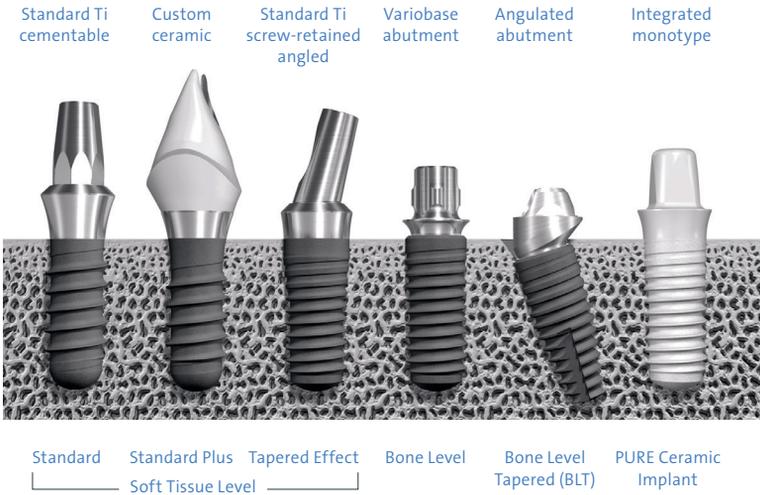
Excellence, innovation, lasting performance

STRAUMANN SURGICAL PRODUCTS



Sectional overview of Straumann's products.

THE STRAUMANN DENTAL IMPLANT SYSTEM



Designed for maximum flexibility with a minimum number of components, the highly versatile Straumann Dental Implant System covers all indications and preferences – from standard applications to highly esthetic individualized CAD/CAM solutions.

PRODUCTS

For more than six decades, Straumann has been innovating, developing, testing and refining products that address patient needs and contribute to their quality of life. We have also been combining products, technologies, procedures and services into solutions that add convenience, save time, reduce cost and add value. Our products and solutions are used by oral surgeons, specialists and general practitioners as well as dental laboratories in procedures that range from saving compromised teeth, to individual tooth restoration right up to complete dental replacement. We strive to broaden treatment options, increase precision and longevity, minimize discomfort, add value and provide security – in line with our vision of ‘more than creating smiles – restoring confidence’.

SAVING COSTS AND IMPROVING QUALITY OF LIFE

Published research shows that – compared with traditional treatments – dental implants are generally cost-saving or more cost-effective for single-tooth replacement. For the replacement of multiple teeth, implants represent a cost-effective option in the long run and lead to further improvements in oral-health-related quality of life and decreased general healthcare costs. Research also shows that acceptance, satisfaction, and willing-

ness to pay for dental implants are high – particularly among elderly edentulous patients.¹

TOOTH REPLACEMENT

The Straumann Dental Implant System covers all tooth replacement indications. It comprises Soft Tissue Level and Bone Level implants (with parallel wall and tapered designs) in a variety of lengths, diameters and materials. It also includes a wide range of standard and individualized prosthetic components, and all the necessary surgical instruments.

STRAUMANN SOFT TISSUE LEVEL IMPLANTS: THE BENCHMARK FOR LONGEVITY

Millions of patients around the world chew, smile, and rely on Straumann Tissue Level Implants, which celebrated their 30th anniversary in 2016 and which account for half of the implants we currently sell.

The soft tissue level implant simplifies soft tissue management and prosthetic restoration, saving time, discomfort and cost, although its greatest benefit may be lasting reliability. It is backed by published ten-year clinical results², showing survival and success rates of 99% and 97% respectively, with zero implant fractures. High survival rates after nine years were also reported in a landmark retrospective study³, published in 2015.



Straumann's Bone Level Tapered implant, fitted with a ceramic CAD/CAM custom abutment.

A follow-up publication in 2016⁴ looking at peri-implantitis (which can lead to implant loss) also showed excellent results.

BONE LEVEL IMPLANTS – USER PREFERENCES COVERED

In contrast to soft tissue level designs, bone level implants have prosthetic connections that are below the gums, at or close to the crest of the jaw bone. While each design claims its advantages, market research shows that the choice of implant type is driven mainly by user preference.

BONE LEVEL TAPERED IMPLANTS (BLT) – POPULAR FOR IMMEDIATE REPLACEMENT SOLUTIONS

Implants with tapered or conical designs make up more than two thirds of the global implant market, and their popularity is expected to increase further. One reason for this is that they provide improved immediate stability, which makes them popular for accelerated tooth replacement procedures with minimal disruption for the patient.

When it was introduced in 2015, Straumann's BLT implant brought a new level of convenience and reliability to this segment, for example with the proven mechanical and biological properties of Roxolid and SLActive. These implants are suitable for placement in tooth extraction sockets⁵ – potentially reducing the need for bone augmentation – and in situations where primary stability is difficult to achieve, e.g. in low density bone. BLT implants are particularly useful for addressing the challenging needs of edentulous patients who want fast, reliable, fixed, full-arch solutions.

SLACTIVE – A BETTER GOLD STANDARD

When Straumann introduced its SLA implant surface in 1997, it became the gold standard, cutting healing times in half and offering improved safety and predictability. As implant dentistry became more common, increasingly difficult cases were treated and surgeons wanted even higher predictability and shorter times to restoration. In 2005, our SLActive surface brought a further reduction in healing times, achieving earlier secondary stability and reduced risk of failure, even in challenging situations like sinus augmentations⁶. Both SLA and SLActive are among the most documented and clinically validated surfaces.

ROXOLID – HIGHER STRENGTH AND EXCELLENT OSSEOINTEGRATION

Biocompatibility, resistance to corrosion, and strength made titanium the most widely-used material for dental implants. However, its strength is limited. Introduced in 2009, Straumann's high performance alloy Roxolid was specifically designed to offer higher strength than pure titanium and excellent osseointegration capabilities. Its strength makes it possible to use reduced-diameter implants⁷ for narrow spaces or extra-short implants for patients with reduced bone height⁸. This helps to avoid bone augmentation, thus reducing invasiveness^{9,10,11} and creating opportunities to treat patients with insufficient bone for conventional implants.

All Straumann implants have been available in Roxolid since 2014 and most customers have upgraded to it. Roxolid is being tracked in one of the largest clinical research programs to be undertaken with a dental implant. Three- and five-year results from randomized controlled clinical trials published in 2015 reported implant survival rates of 100%¹² and 98.9%¹³, respectively.

PURE CERAMIC IMPLANTS – STRONG, ESTHETIC, METAL-FREE

Ceramics provide a good biocompatible alternative for patients asking for metal-free solutions. They also have a distinct esthetic advantage over metals.

The Straumann PURE Ceramic Implant Monotype ('PURE') has a translucent ivory color – just like natural tooth roots – and a ZLA surface to enhance the healing process and promote highly predictable bone integration. Its remarkable mechanical reliability was achieved through an innovative manufacturing process and testing procedure, in which every implant undergoes a 360° strength test – a level of quality checking that is exceptional in the dental implant industry.

These attributes were evident in a multicentre clinical study published in December 2016¹⁴, which reported success and survival rates of 98% with zero breakages, as well as a very stable bone level situation after one year in function. These rates are comparable to the excellent performance of titanium dental implants.

In addition to esthetics, Straumann PURE ceramic implants may offer an additional advantage of soft tissue attachment. A pilot histological study¹⁵ investigating hard and soft tissues surrounding implants was published in 2016 and reported better epithelial attachment than with titanium implants.

Straumann PURE has been available in Europe and Australia since 2014 and was launched in the US and Brazil in 2016. Other markets will follow. It has a monotype (one-piece) design with an integrated abutment, which offers excellent esthetics, stability and reliability. As two-piece designs offer greater flexibility, Straumann has been developing a highly reliable two-piece ceramic solution, which will be presented in 2017. In addition, the Group entered a joint venture with maxon motor in 2016 to develop a new generation of ceramic implants manufactured using injection moulding technology.

PROSTHETICS: THE FINAL BITE

Implants provide the foundation, but the final bite comes with prosthetics. We offer a broad range of standard and customized abutments, which connect the implant to the prosthetic tooth or denture. Abutments for steep-angled implants have to withstand very high mechanical forces. During development, Straumann's angulated

abutments were subjected to more than 5000 hours of rigorous hydropulser tests, representing no fewer than 280 million human bites without breaking.

VARIOBASE BECOMES A FAMILY

The growing trend of using simple titanium-bonding-base abutments (TiBases) prompted the introduction of the Straumann Variobase in 2013, a cost-effective flexible treatment concept offering a very broad range of restorative options, from single tooth to fully edentulous indications, from straightforward to esthetic cases, from cemented to screw-retained solutions. Customers can use these abutments in both conventional and digital workflows.

In the meantime, we have developed a family of Variobases – e.g. for bridge and bar restorations and for Sirona's CEREC system, which offers a chairside option with an original Straumann connection¹⁶.

SOLUTIONS FOR FULLY EDENTULOUS PATIENTS

For decades, people suffering from the debilitating handicap of severely damaged dentition had little alternative than to have their remaining compromised teeth removed and to wear plastic dentures held in place by suction or adhesive. The functional limitations and loss of self-confidence and well-being associated with unanchored dentures are well known and documented^{17,18,19}.

The introduction of dental implants to anchor removable dentures has made a tremendous difference both in terms of health and quality of life. While removable prostheses are proven and popular, many patients prefer fixed solutions. Another development is the acceleration of treatment times, so that patients increasingly expect replacement solutions that function immediately and cause minimal disruption to their daily lives. Straumann addresses both these requirements.

NOVALOC – INNOVATION FOR DURABILITY

Implant-borne dentures that are removable rely on retention devices supplied by a small number of manufacturers. In search of alternatives, Straumann partnered with Valoc and launched its Novaloc system in 2016 with an innovative coating to improve durability. It covers a broad range of clinical situations and, with durable PEEK matrices, provides excellent wear resistance, low maintenance, precise fit, and an original Straumann implant-abutment connection.



The Novaloc system provides excellent wear resistance, low maintenance, precise fit, and an original Straumann connection.



Straumann Pro Arch: complete solutions for accelerated fixed full-arch tooth replacement.

STRAUMANN PRO ARCH – COMPLETE FIXED SOLUTIONS FOR EDENTULOUS PATIENTS

Straumann Pro Arch is a comprehensive solution, comprising a broad range of implants, screw-retained abutments, CAD/CAM frameworks, bars, bridges and other components as well as educational support. Pro Arch enables clinicians and dental technicians to provide accelerated fixed full-arch tooth replacements and is supported by Straumann CARES, the complete digital workflow from treatment planning to guided surgery and computer-designed prosthetics – all from one company.

DIGITAL DENTISTRY

Digitalization is one of the most innovative and fast-moving areas in dentistry. To substitute standard implant prosthetics with individualized, digitally designed and manufactured components is a major trend. Customers appreciate the advantages of high-precision CAD/CAM solutions, since they can offer efficiency gains for dentists as well as time and/or cost savings, greater comfort and lasting satisfaction for patients. Straumann CARES Digital Solutions combine state-of-the-art dental equipment with digital technology and premium materials to provide a seamless, open and fully validated digital workflow for dental professionals.

CAD/CAM RESTORATIVE SOLUTIONS

Computer-assisted design and manufacturing (CAD/CAM) for tooth- and implant-borne prosthetics (onlays, inlays, crowns and bridges) is more efficient than traditional methods. The cornerstones of our system are the software (CARES Visual) for scanning, designing and ordering, and our milling centers in Germany, the US and Japan, which manufacture the prosthetic elements. The

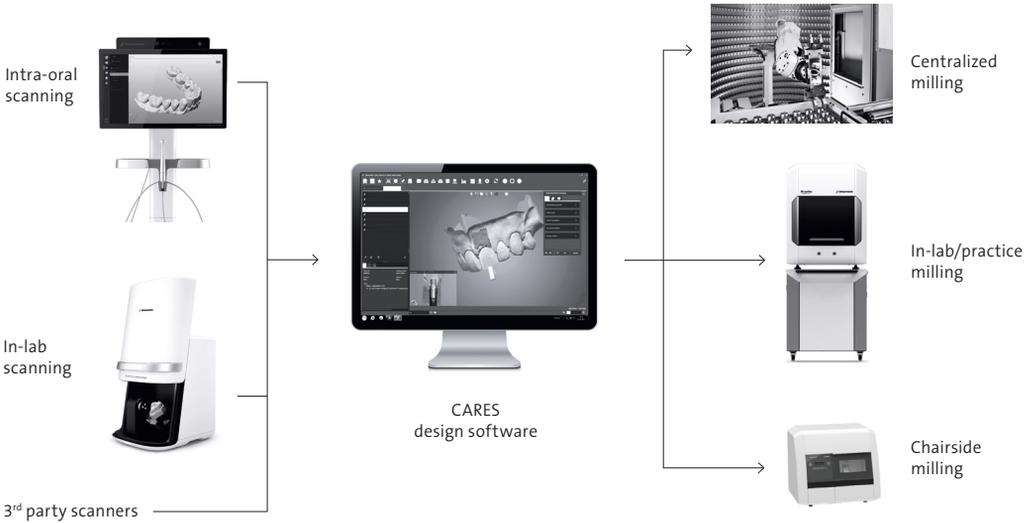
integration of coDiagnostiX – our planning software for guided surgery – into CARES Visual opens new treatment possibilities including true prosthetic-driven implant treatment. The Straumann integrated workflow offers another interdisciplinary tool for treatment planning, implant placement and prosthetic rehabilitation.

A COMPETITIVE NEW INTRA-ORAL SCANNER

Our partnership with Dental Wings has been a key to offering leading-edge software and scanning technology. 2016 saw the introduction in selected markets of the Straumann CARES intra-oral scanner, which – like Straumann's in-lab scanners – was developed by Dental Wings. It is highly intuitive to use, competitively priced and, with one of the smallest hand pieces on the market today, is easy to handle. To offer dental practices a complete solution that combines intra-oral scanning with in-house prosthetic production, we have developed a compact chairside milling machine with Amann Girrbach.

Thanks to our open software platform and data format, users of third-party equipment are able to connect to our system and produce prosthetics through our validated CARES workflow – which is covered by our guarantee – or through alternative milling processes.²⁰ Our CARES Scan & Shape offers a comprehensive CAD/CAM design service for customers who prefer to outsource the design and manufacture of customized restorations.

A COMPLETE DIGITAL SOLUTION



HIGH PERFORMANCE MATERIAL FOR CAD/CAM RESTORATIONS
 In addition to offering prosthetics made from high performance third-party ceramic materials, we now produce our own glass ceramic, n!ce. Its key advantages are high translucency and flexural strength, short milling times and easy finishing. It is available in two stages of crystallization, one of which is easy to mill and can be stained /glazed – making it attractive to labs. The other requires no firing and can be milled, finished and seated directly, making it an ideal chairside solution.

To add marketing power and to help build the n!ce brand worldwide, Straumann signed an agreement in 2016 granting global distribution rights to Planmecca, a global leader in dental equipment, software and CAD/CAM solutions.

BECOMING THE PARTNER OF CHOICE FOR DENTAL LABORATORIES

Having taken our first step into the in-lab milling segment at the end of 2015, we began to introduce the Straumann CARES M Series five-axis in-lab milling machine developed together with Amann Girrbach. It enables dental laboratories to produce an extensive range of restorations for any indication and complements our high-volume, high-precision centralized milling service.

BIOMATERIALS

A large share of implant procedures require guided bone regeneration, which is why it is important for us to offer a full range of effective biomaterials to our customers. Collaborations with botiss and other partners have enabled us to roll out comprehensive guided-bone regeneration solutions internationally.

A WIDE SELECTION OF SOLUTIONS FROM A CONVENIENT ONE-STOP SHOP

	Straumann	botiss
Bone allografts	• ¹	•
Bone xenografts	• ¹	•
Synthetic bone grafts	•	•
Bone blocks		•
Custom bone blocks		•
Collagen cones		•
Fleeces & sponges		•
Membranes	• ¹	•
Soft-tissue grafts		•
Biologics	•	

¹ Sold under license

Through our partnership with botiss, we offer a complete portfolio of innovative and scientifically proven regenerative solutions to customers in various markets



Straumann and botiss biomaterials: a complete portfolio of innovative and scientifically proven regenerative solutions.

around the world, including membranes for guided tissue and bone regeneration, a full range of bovine, allogenic and synthetic bone graft materials, as well as soft-tissue-graft products.

We offer products like Straumann Membrane Plus, Membrane Flex and Straumann Xenograft under license in North America and other markets where the botiss range is not registered.

EMDOGAIN – CREATING MORE REGENERATIVE OPPORTUNITIES

Periodontal disease is the most common cause of adult tooth loss²¹ and is an important health issue. Treatment involves controlling the inflammation and bacteria that cause it and then restoring the tissues that support the tooth. Straumann Emdogain promotes the regeneration of those tissues and thus helps to preserve endangered teeth.

Emdogain remains the gold standard in periodontal tissue regeneration. Backed by almost a thousand peer-reviewed publications and 500 human studies, it has become one of the most extensively investigated products in dentistry. Based on volumes sold, more than two million patients around the world have been treated with Emdogain.

Regulatory clearance in 2016 opened the door for a promising new indication, authorizing the use of Emdogain to support soft-tissue wound-healing processes as part of oral surgical procedures, such as flap surgeries, implantation procedures, soft-tissue grafting and gingivectomy. By accelerating wound closure, modulating

inflammation²², and improving blood vessel formation²³, the application of Emdogain reduces pain and swelling²⁴ as well as the risk of post-surgical complications, and improves esthetic outcomes. The new indication was launched in Europe, with other markets to follow pending regulatory clearances.

OUTLOOK

Together with the Group's technology partners, Straumann continues to develop solutions to improve productivity, treatment options and clinical outcomes. In order to provide clinicians with a comprehensive range of treatment options for their patients, we aim to bring meaningful innovations to the market and to make them widely available. At the same time, we are working on solutions that help labs to grow their business and improve their efficiency.

ATTRACTIVELY-PRICED HIGH-QUALITY SOLUTIONS THROUGH INSTRADENT

Instradent is a global business platform established by Straumann to drive the international expansion of brands that address customer needs for attractively-priced high-quality tooth replacement solutions.

NEODENT

Neodent's philosophy is to make tested implant solutions more affordable to a broader population. For more than 20 years it has specialized in the design, development, and manufacture of dental implants and related prosthetic components and, during that time, has sold approximately 12 million implants. Its wide range of products is designed to address all clinical needs and bone types with various implant designs, two



Neodent's system covers a wide range of clinical needs and features a variety of implant designs and sizes as well as a choice of connections.

connection types (morse taper and external hex) and two surfaces: NeoPoros and Acqua (hydrophilic) to enhance success rates and treatment outcomes. The implants are complemented by a broad range of standard abutments.

Neodent offers excellent alternatives to products sold by competitors of Straumann and appeals to dentists and patients who want high quality, state-of-the-art solutions at an attractive price.

Benefitting from our common technology platform, Neodent has also partnered with Dental Wings and launched its own CAD/CAM service in Brazil, offering in-lab scanners as well as custom abutments and prosthetics under the Neodent Digital brand. In Brazil, it has also become the national distributor for Amann Girrbach products and services, including the Ceramill range of in-lab milling equipment.

EQUINOX

The latest addition to the Straumann Group, Equinox, designs, develops, manufactures and sells dental implant systems that are based on proven treatment concepts with innovative enhancements to simplify procedures and to reduce costs.

Marketed under the Myriad brand, the Equinox implant system has been refined for simplicity and covers requirements for single or multiple-tooth replacements as well as fixed or removable full-arch solutions for edentulous jaws. The implants have a self-tapping, tapered design and use Nanopore surface technology for enhanced osseointegration. The range includes cost-effective one-stage implants with integrated prosthetic connections and two-stage solutions with separate



Equinox: A system of cost-effective one- and two-stage dental implants.

abutments, conveniently packaged with the necessary components for the procedure.

MEDENTIKA

Medentika is a fast-growing provider of attractively-priced implant prosthetics for most leading implant and CAD/CAM systems. Focused on prosthetics, including standard, custom and titanium base implant abutments, Medentika offers dental labs a one-stop source to restore implants. The company also supplies its own range of titanium implants and instruments. Medentika has



Medentika: Attractively-priced implant prosthetics for most leading implant and CAD/CAM systems, and titanium implants.

contributed significantly to Straumann’s strategic goals of providing comprehensive solutions to dental labs and becoming a global leader in the non-premium segment of the tooth-replacement market.

ETKON

etkon is a Straumann Group brand for tooth and implant borne CAD/CAM prosthetics from veneers and on/inlays, to crowns and full arch dentures milled from various materials in our four milling centers. In 2016, we launched etkon iDent, a CAD/CAM service offering high precision



A comprehensive multi-platform solution: etkon iDent prosthetic components, compatible with other major implant systems.

KEY STRAUMANN LAUNCHES IN 2016

Product/Solution	Description	Added value/benefit for customer
SURGICAL		
Bone Level Tapered implant	<ul style="list-style-type: none"> – Range extended – Regional launch in Brazil and Japan 	<ul style="list-style-type: none"> – New implant length (18mm) – Guided surgery integration
Roxolid	<ul style="list-style-type: none"> – Expansion to LATAM and APAC key markets – Lifetime Plus guarantee 	<ul style="list-style-type: none"> – Innovative material widely available for full portfolio – Product replaced and cash contribution to treatment
ProClean Cassette	<ul style="list-style-type: none"> – Instrument cassette fully compatible with machine washing 	<ul style="list-style-type: none"> – More efficiency in centralized reprocessing units
RESTORATIVE		
Pro Arch 2.0	<ul style="list-style-type: none"> – Complete fixed solution for edentulous patients using short Tissue Level implants 	<ul style="list-style-type: none"> – Fast, flexible, reliable solutions – Treatment in situations where bone is limited
Etkon/Creatch screw-retained bars & bridges	<ul style="list-style-type: none"> – High-end prosthetics, complex restorations 	<ul style="list-style-type: none"> – Centralized milling – Very high precision, quality and reliability
Straumann Variobase	<ul style="list-style-type: none"> – Extension of chair-side workflow offering 	<ul style="list-style-type: none"> – Variobase C available for Sirona CEREC workflow – Optimized emergence profile for Bone Level Version – New distribution channel with Zirkonzahn
Novaloc	<ul style="list-style-type: none"> – Retention systems for hybrid dentures with innovative carbon-based abutment coating (ADLC) 	<ul style="list-style-type: none"> – High resistance to wear – Flexibility to compensate for implant divergence
etkon iDent	<ul style="list-style-type: none"> – Attractively priced prosthetic components for other implant systems 	<ul style="list-style-type: none"> – High-quality CAD/CAM prosthetics from a trusted partner – Comprehensive multi-platform choice
PROSTHETIC MATERIALS		
nlce	<ul style="list-style-type: none"> – Fully crystallized glass-ceramic – Developed and produced by Straumann – Available through Straumann CARES centralized milling – For single tooth restorations in different shades and shapes 	<ul style="list-style-type: none"> – Compatible with numerous lab milling systems and available through Straumann CARES centralized milling – High strength through optimized mechanical properties. – Simple & reliable – Significantly improved dental workflow
zerion ML and UTML	<ul style="list-style-type: none"> – High-performance ceramic – Available in high and low translucency – Broad spectrum of applications 	<ul style="list-style-type: none"> – High strength and reliability – Translucency gradation mimics natural teeth – Cost effective
3M ESPE Lava Plus zirconia & coron	<ul style="list-style-type: none"> – Restoration height increase for most popular zirconium dioxide and cobalt chromium restorations 	<ul style="list-style-type: none"> – Increased design flexibility
DIGITAL		
CARES In-lab solution	<ul style="list-style-type: none"> – Extensive in-lab equipment: <ul style="list-style-type: none"> – M series milling machine – Broad range of prosthetic solutions and materials (e.g. pre-mills, discs, blocs) – Dual furnaces 	<ul style="list-style-type: none"> – All-round solution enabling labs to produce wide range of prosthetics from broad selection of materials – Validated workflows providing high versatility and freedom of choice
CARES Intra-oral scanner	<ul style="list-style-type: none"> – Very small hand piece – Hands-free control (voice and gesture operated) 	<ul style="list-style-type: none"> – Attractive price – Intuitive, hygienic, easy of handling – Comfort for patients – Fully validated digital workflow
Scan & Shape service extension	<ul style="list-style-type: none"> – Open STL file upload including screw-retained bars and bridges – Upload from any open system such as 3Shape, exocad, DWOS, etc. 	<ul style="list-style-type: none"> – Access to Straumann's CAD/CAM technology for small practices & laboratories
BIOMATERIALS		
Emdogain wound healing	<ul style="list-style-type: none"> – Extended indication includes wound healing in oral surgery; new marketing materials 	<ul style="list-style-type: none"> – Patient comfort (faster healing, less pain); reduced risk of complications²²
SERVICES		
Patient Pro	<ul style="list-style-type: none"> – Tools to help dentists educate patients, leveraging patients as advocates 	<ul style="list-style-type: none"> – Periodontal disease prevention campaign with waiting room videos, animations, flyers, social media episodes and webpage

attractively-priced prosthetics for implants made by our competitors. The service was launched in the US, UK and Ireland, with further markets in Europe to follow in 2017.

SERVICES

To complement our products and solutions, and to support their effective implementation, we offer a broad spectrum of services under the Straumann brand. For instance, we assist with networking and arrange experienced mentoring on request. We also offer initiatives to help clinicians develop practical skills, such as practice management and business expansion. Straumann services of this kind require staff with a very high standard of professional knowledge, able to provide the necessary information and instruction on products. Extensive training is therefore an important aspect.

ADDING TO CUSTOMER CONVENIENCE AND CONFIDENCE

Straumann serves and supports customers directly through a highly trained sales team, providing personalized service with a high level of expertise. Each Straumann sales subsidiary operates a call center for customers in need of assistance. Callers are quickly linked to a specialist for product support.

While many customers still prefer a more traditional kind of personal service for ordering, Straumann's e-shop platform adds convenience and value for its users. Traffic rose considerably in 2016, and e-commerce now accounts for a substantial part of our business.

PEACE OF MIND

Straumann premium implants are covered by a lifetime guarantee (void when combined with other manufacturers' components), while Straumann abutments and restorations have a limited guarantee. In 2016, we launched the Roxolid Lifetime Plus guarantee in certain countries to include a monetary contribution to the treatment costs in addition to replacing the implant in the rare event of breakage. We believe that this sets a new benchmark in our industry.

COMPUTER-GUIDED SURGERY PLANNING

In 2016, we acquired a 30% stake in V2R Biomedical, a small, privately-owned company in Montreal that specializes in prosthetically-driven guided-surgery solutions. The concept of a surgical planning service is a logical complement to Straumann's Scan & Shape

service. Based on CT scans and intra-oral images of the patient, V2R's experts plan the exact position, angulation and depth of the implants by computer, taking the prosthetic requirements into account. Once the treatment plan has been approved by the surgeon, a precise drill-guide is fabricated and can be delivered together with the implants, drills, abutments, prosthetics and other components as a 'smile-in-a-box' solution, making it possible to perform single/multiple tooth replacements right up to full-arch restorations in a single surgical appointment. This approach saves time for the patient and adds convenience for the dentist.

EXPANDING TRAINING, EDUCATION AND COMMUNICATION

Long-term success and patient satisfaction depend on the education and experience of the dental professional. Under the Straumann brand, we offer a broad educational program, including classic implant dentistry, tissue regeneration and state-of-the-art digital solutions, covering all proficiency levels and relevant specialties.

The program is based on the clinical guidance of the International Team for Implantology (ITI) with most of the teaching provided by ITI specialists and renowned experts, in collaboration with leading universities. Courses are offered around the world, with the highest concentration in North America and the most rapid increase in China, where Straumann has invested significantly in a consultative sales force as well as a local training and education organization.

We expanded our Peer-to-Peer Program, which helps us to attract customers from our competitors and to develop young professionals through mentoring. The program extends from personal coaching to surgical activities, where highly experienced implantologists share surgical techniques and experience with their peers in the operating room (see pp. 28, 30).

SOCIAL MEDIA PRESENCE

Digital Content Marketing Campaigns are increasingly important for reaching customers and addressing their information needs. We are present on Facebook, LinkedIn, Twitter, Instagram and other channels, targeting hundreds of thousands of users with customized content-marketing campaigns.

Straumann's digital customer magazine *Starget*²⁵ is a popular channel for keeping customers up to date on innovation, clinical results, product news, expert opinions and Straumann's presence at trade events. Information on our education programs is also featured as well as video tutorials and other multimedia content.

STRAUMANN PATIENT PRO

One in two patients consults the internet before, after and sometimes even during a consultation with the dentist. Often the choice of treatment and provider is based on the information found on the web. The Straumann Patient Pro platform provides dental professionals with digital information for educating patients and promoting their practices. It supports them with materials and tools for the internet and social media as well as for use in their dental practices.

OUTLOOK

We strive to extend product and service solutions that enhance convenience, leverage efficiency and add value, comfort and security for customers and patients.

Education is the key to driving implant dentistry in both established and new markets. It is also essential for sustaining high treatment standards and success rates. This is why we will continue to be its strong advocate, together with the ITI and dental schools all over the world. To broaden access to education and information, we will make even greater use of new media channels and platforms.

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Innovation

Global excellence, focused on customer needs and commercial success



Creating opportunities in the specialist segment: In Straumann's Peer-to-Peer Program, experts share their knowledge and techniques with dental professionals.



Surgical drill templates for placing dental implants with precision are produced using 3D printing technology.

Straumann was a pioneering force in implant dentistry and still is a leading innovator in the field. Our history is full of developments that have defined industry standards and created opportunities for dental professionals, patients and the company itself. We continue to be a leading contributor to research in the field and invest to ensure a constant flow of projects in our pipeline.

MEANINGFUL INNOVATION

For us, meaningful innovation is the successful commercialization of an idea or combination of ideas. One example of this, introduced in 2016, is our 'smile-in-a-box' solution which delivers all the components needed for implant surgery and restoration at the same time.

The practitioner receives a customized drill-guide, prosthesis, implants, drills, abutments, etc. prior to surgery,

which means the patient can be treated in a single session and leave the practice with functioning new teeth. The concept, introduced at two peer-to-peer events (see pp. 26, 30), relies on careful pre-planning and saves time, cost and inconvenience.

Innovative technology was evident throughout the event: Straumann's interconnected digital workflow was used to plan the surgery, manufacture the guides, produce the prosthesis, order the components, manage the patient information, and even schedule the first check-ups.

The drill guides were produced by 3D printing for precision and cost effectiveness; Roxolid BLT SLActive implants were used for high strength, immediate stability and fast osseointegration; Emdogain was applied to

A STOCKED INNOVATION PIPELINE

	Project	Key benefit target	Introduction/ rollout
	Smaller implants	Less invasive procedures if guided bone regeneration (GBR) can be avoided	2017
	Modular Surgical Cassette	Enhanced surgical flexibility and lower entry barrier	2017
	Single-use instruments	Complete portfolio of instruments for single use	2017
	PURE 2 ceramic implant	High-end esthetics, increased prosthetic flexibility	2017+
	Simplified Guided Surgery	Increasing confidence when placing implants	2017+
	Mini-Implants	Cost effective edentulous procedures	2018
	New Bone Level implant system	Implant system for immediate procedures	2018
	New Tissue Level implants	Straumann heritage revisited	2019
	Variobase prosthetics	Enable cost-effective restorations for the esthetic zone	2017
	New material	Direct venerable CAD/CAM abutments	2017
	Colored prosthetics	Naturally colored abutments for patients with thin gingiva	2017
	New material	Multilayered ceramic material for improved esthetics	2017
	etkon iDent	High quality prosthetic compatible to major brands	2017
	Angulated solution	Allowing for screw-retained restorations in all indications	2017+
	Integrated workflow	Digital workflow support for immediate tooth replacement	2017
	Intra-oral scanner	Further portfolio development of our integrated digital impression system	2017
	CARES milling system	New integrated in-house milling systems and additive manufacturing options	2017
	CARES printing system	Additive manufacturing systems (3D printing)	2017
		Emdogain	New indications
Osteogain		Bone enhancement	2017+

Highlights from Straumann's development pipeline. Introduction/rollout dates may be subject to positive clinical results and regulatory clearances, and barring unforeseen circumstances.

reduce swelling and support wound healing (see p.37); Pro Arch screw-retained prosthetics or high-tech Novaloc retention devices (see p.34 f.) – launched in midyear – were used.

Even the marketing/education approach was innovative, with peer-to-peer mentoring for the surgeons and prosthodontists, and full documentation to record and perfect the technique.

All of these innovations were brought together to treat patients in general daily practice conditions.

INNOVATION – INSPIRED BY AND TAILORED FOR CUSTOMERS

Over time, product, process and solution innovations have proven to be the key drivers of Straumann's global success. The inspiration to turn a multitude of ideas into marketable solutions that address increasing consumer needs comes from various sources:

- The constant internal exchange of ideas between the Straumann Group companies in the areas of product management, production, and R&D;
- Continuous market screening, including scouting at dental congresses/trade fairs and observing other industries for insight into new trends and developments;
- The Straumann 'Idea Portal', a global, web-based platform invites researchers, clinicians, clients, employees and other stakeholders to share innovative ideas

SELECTED KEY PUBLICATIONS ON STRAUMANN'S PRODUCTS IN 2016

Authors	Study Title	Product	Journal	Conclusion
Gahlert M, Kniha H, Weingart D, Schild S, Gellrich NC, Bormann KH	A prospective clinical study to evaluate the performance of zirconium dioxide dental implants in single-tooth gaps.	PURE	Clin Oral Implants Res. 2016 Dec; 27(12):e176-e184.	Monotype ceramic implants can achieve clinical outcomes comparable to published outcomes of equivalent titanium implants.
Monzavi M, Noubissi S, Nowzari H	The impact of in vitro accelerated aging, approximating 30 and 60 years in vivo, on commercially available zirconia dental implants.	PURE	Clin Implant Dent Relat Res. 2016 Nov 9.	Straumann PURE implant performed as well as, or better than the evaluated competitors, especially at longer time points.
Liñares A, Grize L, Muñoz F, Pippenger BE, Dard M, Domken O, Blanco-Carrión J	Histological assessment of hard and soft tissues surrounding a novel ceramic implant: a pilot study in the minipig.	PURE	J Clin Periodontol. 2016 Jun;43(6):538-46.	The epithelial attachment favors the PURE ceramic implant over the titanium one.
Derks J, Schaller D, Håkansson J, Wennström JL, Tomasi C, Berglundh T	Effectiveness of implant therapy analyzed in a Swedish population: Prevalence of peri-implantitis.	Tissue Level implant	J Dent Res. 2016 Jan;95(1):43-9.	The probability of being diagnosed with peri-implantitis 9y after implant therapy was lowest with Straumann TL SLA implants.
Herrmann J, Hentschel A, Glauche I, Vollmer A, Schlegel KA, Lutz R	Implant survival and patient satisfaction of reduced diameter implants made from a titanium-zirconium alloy: A retrospective cohort study with 550 implants in 311 patients.	Roxolid/ SLActive	J Craniomaxillofac Surg. 2016 Sep 23.	Implant survival of 97.4% after 2 years for Roxolid 3.3mm implants.
Medvedev AE, Molotnikov A, Lapovok R, Zeller R, Berner S, Habersetzer P, Dalla Torre F	Microstructure and mechanical properties of Ti-15Zr alloy used as dental implant material.	Roxolid	J Mech Behav Biomed Mater. 2016 Sep;62:384-98.	Enhanced fatigue performance of Roxolid over Titanium.
Calvo-Guirado JL, López Torres JA, Dard M, Javed F, Pérez-Albacete Martínez C, Maté Sánchez de Val JE	Evaluation of extra short 4-mm implants in mandibular edentulous patients with reduced bone height in comparison with standard implants: 12-month results.	4mm implant	Clin Oral Implants Res. 2016 Jul;27(7):867-874.	Implant survival of 97.5% after 1 year for Roxolid extra short 4mm long implants.
Stavropoulos A, Cochran D, Obrecht M, Pippenger BE, Dard M	Effect of osteotomy preparation on osseointegration of immediately loaded, tapered dental implants.	Bone Level Tapered implant	Adv Dent Res. 2016 Mar;28(1):34-41.	Increased primary stability of Bone Level tapered implant in underprepared osteotomies.
Piano S, Romeo E, Sbricoli L, Pisoni G, Cea N, Lops D	Simplified procedure for the immediate loading of a complete fixed prosthesis supported by four implants in the maxillary jaw: a 2-year prospective study.	Pro Arch	Clin Oral Implants Res. 2016 Dec;27(12):e154-e160.	Immediate loading of four implants positioned anteriorly to the maxillary sinus could be a reliable treatment procedure to support fixed complete restorations.
Dard M, Shiota M, Sanda M, Yajima Y, Sekine H, Kasugai S	A randomized, 12-month controlled trial to evaluate non-inferiority of early compared to conventional loading of modSLA implants in single tooth gaps.	SLActive	Int J Implant Dent. 2016 Dec;2(1):10.	Early loading of SLActive implants in single tooth gaps in molar regions is non-inferior to conventional loading approach in terms of crestal bone level change in short follow-up period.
Alayan J, Vaquette C, Saifzadeh S, Huttmacher D, Ivanovski S	Comparison of early osseointegration of SLA and SLActive implants in maxillary sinus augmentation: a pilot study.	SLActive	Clin Oral Implants Res. 2016 Sep 29.	SLActive performs better than SLA with regards to percentage of bone to implant contact and composition of the tissue surrounding the implant.
French D, Cochran DL, Ofec R	Retrospective cohort study of 4591 Straumann implants placed in 2060 patients in private practice with up to 10-year follow-up: the relationship between crestal bone level and soft tissue condition.	SLA	Int J Oral Maxillofac Implant 2016 Nov/Dec; 31(6):e168-e178.	Long term data with a high number of implants showing outstanding performance.
Mattheos N, Li X, Zampelis A, Ma L, Janda M.	Investigating the micromorphological differences of the implant-abutment junction and their clinical implications: a pilot study.	Original Straumann implant-abutment connection	Clin Oral Implants Res. 2016 Nov;27(11):e134-e143.	Non-original abutments present morphological differences from the original ones.
Maymon-Gil T, Weinberg E, Nencovsky C, Weinreb M	Enamel Matrix Derivative promotes healing of a surgical wound in the oral mucosa.	Emdogain	Clin Oral Investig. 2016 Apr; 20(3):589-95.	EMD improves incisional wound healing by promoting formation of blood vessels and collagen fibers in connective tissue.

with us. Out of the hundred ideas submitted and evaluated in 2016, a handful have potential for further development;

- Interaction with customers is an important source of innovation. Besides individual customer visits, we organize global, national and regional meetings to understand professional, business, and market needs and to discuss existing and potential innovations. In 2016, 130 participants from 20 nations attended these meetings.

PRECLINICAL AND CLINICAL RESEARCH SUCCESS BASED ON SCIENCE

It is essential that all products destined for patients are appropriately tested for biocompatibility, stability, and strength, and to ensure that the properties developed in the laboratory can be reproduced on a commercial scale. Technologies, materials and designs that demonstrate the necessary characteristics are studied *in vivo*, together with the surgical techniques in appropriate cases.

Straumann products and technologies are thoroughly evaluated in a defined global clinical study program, which includes single- and multi-center studies, as well as investigator-initiated studies. Proposals for the latter are carefully screened and may be supported in various ways. Clinical investigation can further include large post-market surveillance and non-interventional studies covering a range of patients and indications treated in daily practice conditions. Very few implant companies perform clinical studies on this scale. The results provide clear reasons why our customers trust in Straumann products.

DOZENS OF PUBLICATIONS

In 2016, an impressive body of scientific evidence on our products was published in peer-reviewed journals. There were at least 77 publications, including results from our own programs, ITI-funded studies (p. 103) and independent research. These are some of the highlights:

- A study published by French et al. reported outstanding performance of almost 4 600 Straumann implants in more than 2 000 patients. Many of the implants had been functioning for more than ten years and bone loss was minimal (less than half a millimeter on average) even after this time.
- Following their publication in 2015 on relative risk for implant loss, Derks et al. published the second part of

their study in early 2016. Looking at periimplantitis, which can lead to implant loss, the follow-up publication also showed excellent results for Straumann.

- 2016 also saw the first multicentre clinical data on Straumann PURE ceramic implants, published by Gahlert et al.; reporting a success and survival rate of 97.6% as well as very stable bone level after one year in function. These high rates are comparable to the excellent performance of titanium implants.

An overview of selected key studies published in 2016 is presented in the table on p. 47. More details on these and other relevant publications on Straumann products can be found at <http://www.straumann.com/en/home/science>

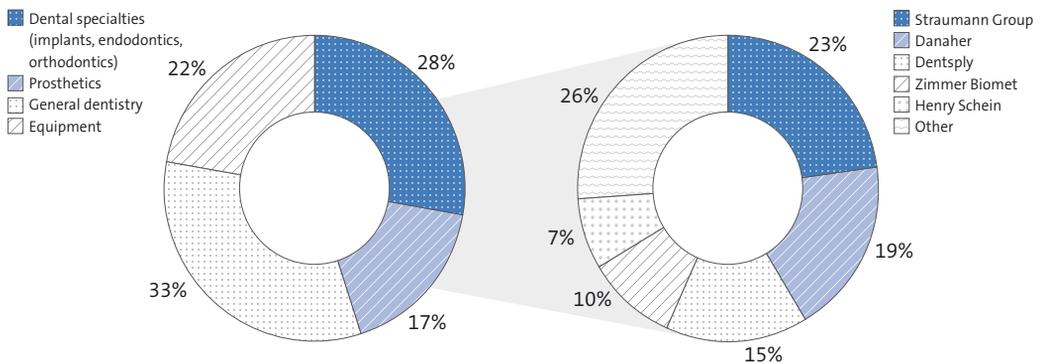
OUTLOOK

Customer needs and commercial success are the driving forces of Straumann's innovation process. Straumann continues to rigorously test its products under scientific conditions in order to provide customers and patients with reliability, quality and peace of mind. With this in mind we will continue to invest significantly in research and development for more life-long smiles worldwide.

Markets

Leadership strengthened in a CHF 7 billion market

THE CHF 24BN GLOBAL DENTAL MARKET BY CATEGORY AND IMPLANT SEGMENT SHARE



Consolidated figures for Straumann (incl. Neodent), Danaher (incl. Nobel Biocare, Implant Direct and Alpha-Bio Tec.), Dentsply Sirona (incl. Dentsply, AstraTech and MIS) and Henry Schein (incl. Camlog and BioHorizons). The global market for implant dentistry (chart on the right) is worth CHF 3.5 billion.

THE GLOBAL DENTAL MARKET BY CATEGORY

The global market for dentistry is an attractive segment of the medical device sector with annual sales of approximately CHF 24 billion¹. Typically it grows 1.5 to 2 times faster than global GDP, driven by increasing oral health awareness and an aging population. In the past decade, studies have linked missing or poor dentition with significant nutritional changes, increased risk of diabetes, stimulation of coronary artery disease, and higher probability of some forms of cancer.^{2,3}

The implant and abutment segment, where Straumann generates most of its revenues, accounts for nearly 15% of the overall dentistry market and is part of the dental specialties segment (see chart above). Independent research indicates that this segment will continue to grow faster than general dentistry and offers an attractive

return on invested capital, particularly to those companies that serve a large share of the market.

Market size and growth have to be estimated using internal intelligence and independent research because very few companies in these markets publish sales and other relevant performance information.

In recent years, Straumann has entered new fast-growing markets organically and with partners, which has provided new insights. We have also broadened the geographical and segmental scope of our market intelligence efforts and currently believe that the global market for implant dentistry is worth CHF 3.5 billion⁴, including implant fixtures, abutments and related instruments.

In 2016, the world market continued to grow at 3–4%, bringing the estimated total number of implants placed to approximately 18 million. Growth was higher in volume than in monetary terms, reflecting strong growth in emerging markets (where average prices are lower), the increased share of non-premium products, and modest price deflation in general.

Geographically, Europe remains the strongest region and, together with North America, accounts for approximately three quarters of the global market value. Asia continues to be a growth engine, increasing twice as fast as the next fastest region, North America. The implant market in Europe grew modestly and showed mixed dynamics in national markets. While traditional markets like Italy, Switzerland or the Netherlands fell short of the previous year's level, demand in other key markets like Iberia, France, the UK, and Scandinavia increased. The development was bolstered by high growth markets in Eastern Europe, except for Russia, which is still suffering from the economic crisis. Latin America grew modestly despite a stagnating Brazilian implant market.

The implant market can be divided into two segments: premium and non-premium. Premium companies are distinguished by their pre-clinical research and development activities; pre- and post-market clinical documentation; degree of product innovation and breadth; as well as added-value customer service including training and education. The Straumann Group leads the global implant market. Under its premium brand, Straumann, it offers a wide range of implants priced at multiple levels, depending on the material and surface technology. The Group also competes in the non-premium segment through its Instrandent platform and its associated partners.

By consistently outperforming the market average in recent years, the Group has strengthened its leadership position and commands an estimated market share of 23%.

By value, about 70% of the market is controlled by the leading five companies. The remaining 30% is distributed among several hundred non-premium manufacturers, who compete mainly on price, offering only limited research, training and education services. However, in several developing countries where overall treatment

costs are low (namely Brazil, Russia, Israel and South Korea), non-premium manufacturers hold substantial combined market shares. Even though the growth differential between the two segments is diminishing, the non-premium end of the market continued to grow faster in 2016.

Straumann entered the fast-growing non-premium segment in 2012 through a partnership with Neodent, and the Group's value platform has continued to expand since then. Our strategy is to offer an attractively priced portfolio in all relevant markets through Instrandent without compromising the premium leadership of our legacy brand. Instrandent comprises well-respected brands and uses a different distribution model to match specific market needs and affordability.

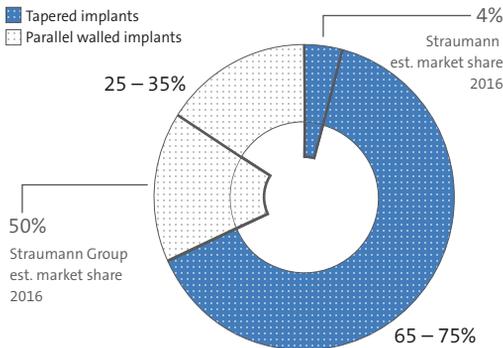
The attractiveness of the industry continued to stimulate the appetite of strategic buyers and private equity firms in 2016 and several companies took advantage of the historically low interest rates to make acquisitions. The largest transaction (USD 5.5 billion⁵) was the stock-for-stock merger between the Dentsply International and Sirona Dental Systems in February 2016, creating a dental conglomerate with annual revenues of USD 3.8 billion⁶. Dentsply also acquired the Israeli non-premium implant company MIS Implants Technologies for USD 375 million. In 2016, the Straumann Group acquired a 30% stake in the French implant manufacturer Anthogyr. Finally, the Carlyle Group, one of the world's leading private equity companies, acquired a majority stake in the German company exocad, a provider of innovative dental laboratory CAD/CAM software. In 2011, Carlyle invested in 'mydentist', a large dental chain in the UK with 450 practices focusing on National Health Service dentistry.

THE TAPERED IMPLANT SEGMENT OFFERS HIGH POTENTIAL

Dental implants are distinguished by their thread and body design. Tapered implants offer high primary stability, while parallel-walled implants are versatile and have been documented for 30 years. More than two thirds of the implants sold in 2016 were tapered.

Over the years, Straumann and the ITI have been strong proponents of parallel-walled implants and Straumann controls roughly half of this segment (see chart opposite). Contrastingly, our Neodent brand has offered

IMPLANT CATEGORIES AND THE STRAUMANN GROUP'S VOLUME SHARE OF EACH



tapered implants for many years. In 2015, Straumann entered the tapered segment with its premium BLT implant which had gained a (volume) market share of slightly more than 4% by end of 2016. We aim to increase this in the coming years through targeted marketing initiatives and further product line extensions.

IMPLANT PENETRATION LEVEL STILL LOW

The principal factors driving growth in the tooth replacement market are increases in:

- The number of older people,
- The middle class in developing countries,
- The use of implants,
- Patient awareness, and
- People choosing cosmetic surgeries and implants.

Over the past decade, the proportion of elderly people in developed countries has increased every year. The percentage of the US population over the age of 60 has more than tripled and now amounts to 14%.⁷ This is expected to rise to 22% by 2020.

More than 35 million Americans are fully edentulous.⁸ This is expected to continue rising as the baby boomer population ages. Older patients are far more likely to require tooth replacement or be partially or fully edentulous than the younger generations. The American College of Prosthodontists estimates that the number of partially edentulous patients will continue to increase in the next 15 years to more than 200 million.⁸ 90% of edentulous people use simple, unanchored dentures. Some may not see a need for improvement in their

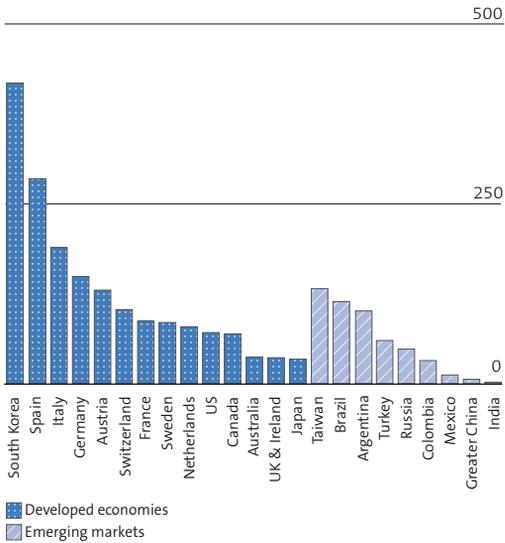
chewing function and have accepted the limitations of their gum-supported dentures. Others cannot afford implant procedures and seek low-end permanent restoration solutions (WHO estimates more than 60% fall in this category). Still others want to upgrade to implant-supported fixed or removable overdentures. To serve this market, Straumann offers its customers various premium solutions including Pro Arch (see p. 35 f.) and Novaloc.

While the absolute number of edentulous people is rising, epidemiological data indicate that the rate of toothlessness in the US⁹ and Germany¹⁰ is decreasing as preventive measures to reduce tooth decay and periodontal diseases become effective. Today, one in eight people in Germany aged 65–74 is edentulous, in contrast to one in four 20 years ago. Nevertheless, despite improvements in highly developed countries, edentulism is still increasing in emerging markets.¹¹ Consequently, patients in countries with better oral health will require more single- and multiple-tooth restorations than full dentures. In emerging markets, simpler surgical protocols that reduce technical barriers for dentists and can be performed at lower cost will be required to serve a larger pool of patients.

The pool of potential implant patients seems inexhaustible. In the developed world more than 600 million people are affected by tooth loss, but each year fewer than 60 million seek treatment¹². It is striking to see that 178 million people in the US are missing at least one tooth, yet only a million are treated per year (corresponding to 2.3 million implants). This level is low in absolute terms and in comparison with other countries.

In 2016, the 5th edition of the widely recognised German oral health study ('Deutsche Mundgesundheitsstudie V') was published. It is limited to Germany, but is probably the most systematic and comprehensive study in the industry and provides interesting information on the trends and prevalence of modern tooth replacement. The study revealed that roughly 10 times more patients have implant-supported crowns or bridges compared with 1997, which supports the prevailing trend of increased fixed tooth replacement. Yet, despite the positive trend, implant prevalence is still modest. Only 3% (2005: 1%) of young German adults (35–44 years old) have one or more implants, while 8% of people aged between 65 and 74 years (2005: 3%) have implant-borne

DENTAL IMPLANT PENETRATION BY COUNTRY (PER 10 000 POPULATION)



With very few exceptions, tooth replacement is an out-of-pocket expense. In South Korea, reimbursement was gradually introduced for senior citizens in 2014. This, together with the fact that over 70% of the dentists in the country place implants, explains the high penetration rate. By contrast, large economies like China and India remain heavily underpenetrated due to a lack of qualified dental professionals.

prosthetics. Further evidence of a positive trend is that the implant penetration among younger adults with high social status reaches 20%, although only 2% of the German population aged between 65–74 have received implant-borne solutions to replace missing teeth.

As the chart above shows, the number of implants placed per 10 000 population in the US is only half that in the largest European market, Germany, which illustrates the considerable growth potential. Other highly populated countries like the UK and Japan also show strong upside potential.

It is well established that the primary causes of tooth loss are decay and injury, but periodontal disease, cancer, simple wear, or anodontia (absence of permanent teeth) can also create a need for tooth replacement.

Despite the fact that statistics show positive effects of enhanced oral hygiene and preventive measures, the

increased substitution of implants for conventional dentures, bridges and crowns is the main driver for growth in the dental implant market. Manufacturers are therefore seeking to unlock potential by raising awareness of the advantages and long-term clinical benefits of implant solutions among patients and dentists.

Despite the fact that implant-supported tooth replacement has become an accepted, well established treatment in all developed markets, only 15–20% of the 1.2 million world's active dentists are surgically active.¹³ Dentists with a post-graduate degree (e.g. periodontists, oral and cranio-maxillofacial surgeons) place a high number of implants and get referrals from less-trained general dentists.

The referral concept is still common in many countries because most dental schools do not offer hands-on implant courses in their undergraduate programs, and implant-based procedures require experience.

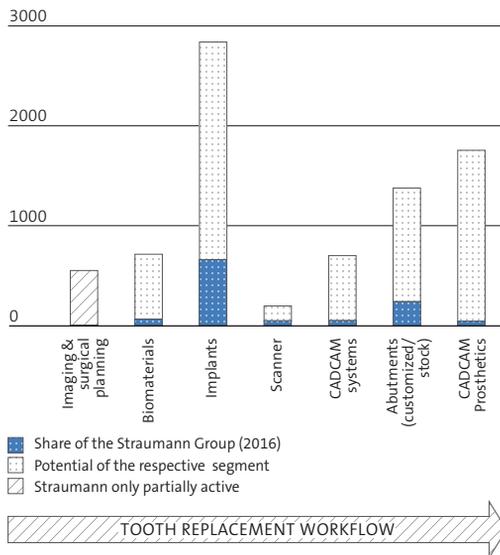
Practitioners are slowly becoming comfortable with the surgical procedure. Research data show that a typical US dental practice restores 220–330 teeth per year, but places only 20 implants.¹⁴ In contrast, specialists place several hundred implants per year. Straumann therefore has several initiatives to increase adoption and to reduce the entry barriers for younger dentists (see pp. 86 ff., 98).

Our penetration analysis indicates that 15–20% of US adults who are medically eligible and seek treatment for tooth loss actually receive implants.¹⁵ In Germany, the penetration level is approximately 20%, and in Switzerland, our internal surveys indicate that it is close to 40%.

Cost is an obstacle. In a few cases, the public healthcare system reimburses part of a dental implant procedure. Private insurance schemes on the other hand are either financially unattractive or apply strict entry criteria. Even in cases where insurance companies do cover dental implant procedures, the amount reimbursed is often insufficient to cover the full cost of treatment, leading to considerable out-of-pocket costs for patients, who are discouraged from choosing the procedures.

Market research shows that some patients seek metal-free implant solutions, which is why Straumann

STRAUMANN'S ADDRESSABLE MARKET
(WORTH CHF 7BN)
(in CHF million)



developed its all-ceramic PURE implant. Although this type of implant currently represents less than 1% of the global implant volumes, demand is expected to grow significantly in coming years.

BECOMING A FULL SOLUTION PROVIDER – ADDRESSING A CHF 7 BILLION MARKET

Besides its implant business, the Straumann Group is also active in the prosthetic and regenerative dentistry market, which includes both consumables and equipment. Restoration and regeneration are strongly connected with implant procedures and offer the Group considerable cross-selling potential (see chart above). Straumann has increasingly focused on these fields in recent years. By doing so, the Group has increased its addressable market and is now active in dental segments that are collectively worth approximately CHF 7 billion (see chart above).

Thanks to investments in Dental Wings, Valoc and Medentika, as well as partnerships with Amann Girrbach, botiss and others (for a complete overview please refer to page 25), the company is able to offer its customers a complete range of biomaterials as well as a comprehensive range of CAD/CAM tools and services.

THE DENTAL PROSTHETICS MARKET

Tooth restorations (e.g. crowns, inlays, onlays, bars and bridges) are made increasingly by automated processes rather than by hand. Digitalization now makes it possible to design and make prosthetic elements by Computer-Aided Design and Manufacturing (CAD/CAM), saving time and increasing accuracy. Straumann's products in this area help dental practitioners to complete a dental tooth replacement procedure more efficiently with digital tools.

Digital dentistry – from CT/DVT imaging and intra-oral impression taking in the practice to automated output in the laboratory – is still at an early stage, although less so for laboratories than for dentists. As the technology advances, more dentists and laboratories will recognize the benefits and value of investing in CAD/CAM technology and will offer them to their patients.

CAD/CAM makes it possible to use strong, translucent glass-ceramic materials such as Straumann nIce and zirconia, which look natural and are fracture-resistant. Internal and independent surveys have shown that patients are increasingly willing to invest in treatments that not only restore function, but which also improve appearance.

The sale of CAD/CAM-produced prosthetic elements is the largest part of this market segment. In 2016, we estimate that one in three prosthetic elements (tooth- and implant-borne) was made by CAD/CAM. This is expected to increase. Market research¹⁶ indicates that general dentists usually obtain CAD/CAM manufactured crowns and bridges from local labs. About two thirds use models or impressions to order the restorations. In an internal US labs survey, labs reported that they receive fewer than 1 in 10 impressions from the dentist in digital form. In the next few years, general practitioners anticipate that most CAD/CAM restorations will be outsourced but that digital scans will increasingly replace physical models.

CAD/CAM EQUIPMENT

Different CAD/CAM sites deploy different equipment:

- In chairside systems scanning, design and milling are all performed in the dental practice. The milling machine is small.
- Full in-lab systems offer scanning, design and manufacture on medium-sized milling machines.

- In central milling, in-lab scanners are connected to an offsite milling center that uses sophisticated, heavy milling machines.

Currently, penetration of complete chairside milling systems remains low. Only an estimated 15–20% of dental practices in developed markets like the US, Germany or Switzerland have made the investment¹⁶, underscoring the value proposition and market opportunity the technology holds.

In contrast to the slow adoption of chairside scanning and milling systems, dental labs have invested in CAD/CAM technology. 60% of the dental labs surveyed have an in-lab scanner and 40% have also invested in a milling system. Of the larger labs, 85% have a scanner, milling system, and sintering furnace, and a significant proportion intends to invest in additional CAD/CAM equipment.¹⁷ While small labs are eager to adopt automated workflows, the high cost means that few own CAD/CAM milling equipment.

In-lab scanning with centralized milling is an attractive solution because it offers labs access to the latest technology without investing in expensive, high-maintenance milling equipment. The etkon ‘Scan & Shape’ service offers scanning and milling to labs that do not have their own scanning capability. This service benefits smaller and medium-sized labs when complex restorations need to be milled. Through its collaboration with Amann Girrbach, the Group gained an initial foothold in the in-lab milling segment at the end of 2015. In 2017, Straumann will also begin to offer chairside systems. Lack of reliable market data makes it difficult to quantify market shares in CAD/CAM prosthetics. We estimate that in 2016, our share of the centrally-milled and in-lab milling segment was in the single digit range.

THE MARKET FOR DENTAL BIOMATERIALS

The market for oral bone and tissue regeneration products grew robustly in the mid-single digit range in 2016. As biomaterials are frequently used to support implant procedures, the market exhibited similar growth to the implant and prosthetic market. Our geographical expansion has provided us with a more accurate picture of this sub-segment, which is estimated to be worth CHF 600 to 700 million.

Due to our late entry and the fact that botiss biomaterials do not yet have regulatory approvals in most markets outside Europe, the respective market shares are still low compared with our core business. The potential of this business should help the Group to grow successfully in the coming years.

The biomaterials market can be divided into three segments:

- Bone-graft materials
- Membranes
- Tissue-regeneration products.

Bone-graft materials form the largest segment and account for more than 60% of the market. They are used mainly in dental implant procedures, but sometimes to preserve a tooth extraction socket, and in smaller volumes in periodontal procedures. Thanks to successful collaborations with botiss and other partners, the Straumann Group has been able to roll out comprehensive guided-bone regeneration solutions internationally and now plays in each segment of the biomaterials market.

BONE GRAFT MATERIALS

It is currently estimated that every other implant patient¹⁸ requires bone augmentation or graft procedures. Four types of bone graft material are commonly used:

- Autografts (patient’s own bone)
- Allografts (human donor bone, e.g. Straumann Allograft, botiss maxgraft)
- Xenografts (bone sourced from animals, e.g. Straumann Xenograft, botiss cerabone)
- Synthetic bone (e.g. Straumann BoneCeramic, botiss maxresorb).

Traditionally, European dentists tend to use xenografts, while Americans prefer allografts, so the markets are regional. In 2014, Straumann entered the xenograft segment, which accounts for 45–50% of the bone graft substitute market. The synthetic and allograft segments make up 15–20% and 35–40% of the market, respectively, and the Group has been present in both for more than five years.

MEMBRANES

Oral membranes are used in up to 60% of bone augmentation procedures¹⁹ and act as barriers to prevent the

growth of soft tissue in the space required for bone formation. Straumann has competed in this segment since 2010.

SOFT TISSUE REGENERATION

Between 10 and 15% of the overall population in developed countries suffer from severe periodontitis²⁰, a common cause of tooth loss. To treat the disease, periodontists or general dentists aim to regenerate the tissues that anchor the tooth if they have been damaged by periodontal disease. Through its product Emdogain, Straumann leads the segment for soft tissue regeneration and its share of this segment is more than 50%.

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2016 Business performance

Group

The Straumann Group reported a strong performance in 2016, as revenue grew 15% in Swiss francs to CHF 918 million, fueled by double-digit increases across all businesses. 13% of the growth was organic, with North America (+16%) contributing the largest portion, and Asia/Pacific posting the strongest relative growth (+20%).

The Group invested significantly in new markets and segments, in its strong R & D pipeline and in production capacity expansion, but still achieved further improvements in underlying profitability, as operating and net profit rose 22% and 29% respectively, with the corresponding margins reaching 25% and 20%. At CHF 230 million (earnings per share: CHF 14.68), net profit actually exceeded operating profit by CHF 3 million due to a one-time tax gain of CHF 43 million resulting from the merger of Straumann Brazil with Neodent.

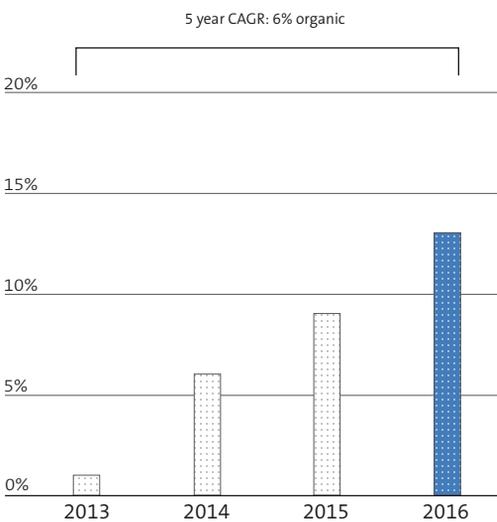
The Implant business was the main contributor to growth throughout the year. Volumes expanded at a double-digit rate, led by the Bone Level Tapered (BLT) range and the high-performance implant material Roxolid. More than 20% of the Straumann implants sold in 2016 were tapered and the trend continues. BLT enables Straumann to address the large conical implant segment, where high primary stability is important especially in accelerated treatment protocols. Based on independent market research, the share of tapered implants worldwide is greater than 70%. Since its launch in 2015, BLT has gained an estimated 4% volume share of this segment.

The Group’s intense efforts over the past two years to become a total solution provider for dental labs have led to sustained double-digit growth in the restorative business. Sales of prosthetics – both standard and CAD/CAM – developed very positively. The success of Straumann’s flexible Variobase abutments, which can be restored in a milling center, in the lab or even in the dental practice, together with campaigns to promote original connections contributed to sales, while Straumann’s new intraoral scanner and Amann Girrbach milling solutions added to growth in digital solutions.

The Group’s smallest business, Biomaterials, was the fastest growing. Thanks to successful collaborations with botiss and other partners, the Group has been able to roll out comprehensive guided-bone regeneration solutions internationally and now plays in each category of the biomaterials market. One additional highlight in 2016 was the approval and launch of Emdogain in oral soft-tissue wound healing.

The Group succeeded in improving its share of the biomaterials market and has exclusive distribution rights for botiss products in most countries. In 2017/18, the two partners will work to add biomaterials in countries where they are not yet available.

ORGANIC REVENUE GROWTH



KEY PERFORMANCE FIGURES

	2016		2015	
	Reported	Excluding exceptionals ¹	Reported	Excl. business combination exceptionals ²
Revenue (CHF m)	917.5		798.6	
Gross profit margin (%)	78.3		77.0	78.6
EBITDA margin (%)	28.3		26.0	27.6
EBIT margin (%)	24.8		21.6	23.3
Net profit margin (%)	25.0	20.4	9.0	18.1
Free cash flow margin (%)	15.1		18.9	

¹ In H1 2016, net profit was lifted by a one-time effect of CHF 43m (corresponding to CHF 2.74 earnings per share) related to the capitalization of deferred tax assets in Brazil.

² Charges in 2015 related to the Neodent business combination amounted to CHF 77m (CHF 73 m after tax), which includes inventory revaluation expenses of CHF 13 m and a CHF 64 m net loss below the EBIT line.

OPERATIONS AND FINANCES

Early in 2016, Straumann Brasil Ltda was merged into Neodent. As a result, Neodent will benefit from future tax savings and has recognized a deferred tax asset, leading to a one-time profit of CHF 43 million in 2016. In the prior-year, the consolidation of Neodent resulted in several one-time effects, which reduced gross/operating income by CHF 13 million and net profit by CHF 73 million. These effects are defined as ‘exceptionals’ and the key financial figures are shown both on a ‘reported’ and an ‘underlying’ (i.e. excluding exceptionals) basis in order to facilitate the performance comparison.

DOUBLE-DIGIT VOLUME EXPANSION LIFTS GROSS PROFIT

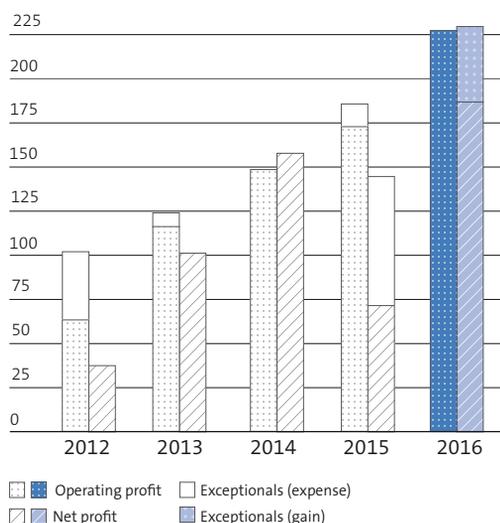
Strong demand for Straumann’s premium and value products lifted gross profit by 17% to CHF 719 million, corresponding to a margin of 78%. The comparative margin in 2015 excluding exceptionals was 30 base points higher, reflecting a lower share of value and third-party products. Double-digit volume increases over the past three years have made it necessary to invest in capacity expansion, which led to higher production costs.

EBIT MARGIN EXPANDS FURTHER

Distribution costs, which comprise salary and commission fees for the direct sales force as well as logistic expenses, increased by CHF 38 million to CHF 211 million as the company continued to invest in high-growth markets and projects. This includes amortization expenses of CHF 6 million for customer-related intangible assets of Neodent.

OPERATING AND NET PROFIT

(in CHF million)



Administrative expenses, which include marketing, research & development, general management and support functions, rose CHF 11 million to CHF 283 million. The increase includes a low million expense for the transfer of finance functions to a European accounting services center in Germany and start-up costs related to Intradent’s European hub as well as the 12-month effect of the Neodent business, which was consolidated in March 2015. In addition, the Group bolstered its R & D

capabilities in Basel to drive the stream of promising R&D projects and to provide supporting clinical documentation. In spite of all these items, administrative expenses decreased as a percentage of revenue by 3 percentage points to 31%, thanks to tight cost control.

Due to these operating improvements, earnings before interest, tax, depreciation, amortization (EBITDA) and exceptionals increased CHF 39 million to CHF 259 million. The respective margin reached 28%, which represents an underlying improvement of 70 basis points.

After amortization and depreciation charges of CHF 32 million, operating profit amounted to CHF 227 million compared with CHF 173 million (CHF 186 million underlying) last year. The underlying EBIT margin increased from 23% in 2015 to almost 25% in 2016.

ONE-TIME TAX GAIN ADDS TO STRONG NET PROFIT

Interest expenses of CHF 3 million related to the outstanding CHF-200-million corporate bond were paid in 2016. Still, the financial result improved by CHF 13 million compared with the prior year, when the financial result was impacted by fair-value adjustments of various financial instruments.

Straumann’s share of results from its associate partners (Medentika, Dental Wings, Createch, Anthogyr, T-Plus,

Valoc, V2R and Zinedent), which is shown net of tax and after intangible amortization, was a negative CHF 2 million in contrast to a negative CHF 12 million in 2015.

Income taxes in 2016 reached a positive CHF 7 million after a one-time tax gain. Excluding this, tax expenses would have amounted to CHF 35 million, reflecting an underlying tax rate of 16%.

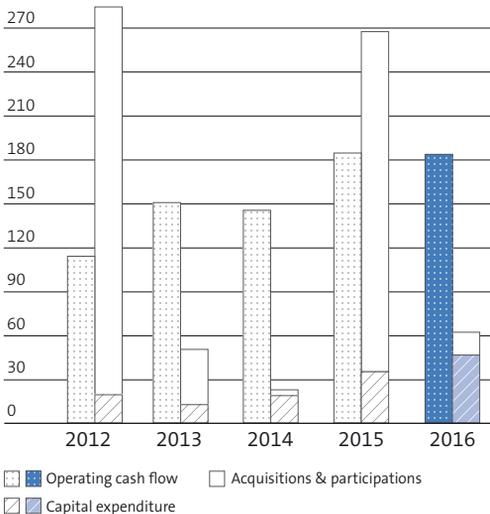
Taking all these factors into account, the Group generated net profit of CHF 230 million, which amounted to 187 million (margin: 20%) before the one-time tax gain. Underlying (basic) earnings per share grew 30% to CHF 11.94 (2015: CHF 9.19).

SOLID FREE CASH FLOW OF CHF 139 MILLION

Net cash from operating activities of CHF 185 million remained roughly at the prior year level. The result was constrained by higher inventory levels due mainly to the extension of the Group’s product range (including digital equipment) and the opening of new subsidiaries and Intradent organizations. Apart from this, dynamic topline growth in emerging and distributor markets was followed by an increase in accounts receivable from 53 to 55 days of sales outstanding.

The Group invested in production-capacity expansion at various sites, increasing CAPEX by CHF 12 million to a total of CHF 46 million. The combination of these effects meant that free cash flow reached CHF 139 million, bringing the respective margin to 15%.

CASH FLOW AND INVESTMENTS
(in CHF million)



INCREASED DIVIDEND AND FURTHER INVESTMENTS IN THE VALUE SEGMENT

A portion of the free cash flow was used to acquire the Equinox business in India and a minority stake in the French implant manufacturer Anthogyr as part of the Group’s strategy to invest in the non-premium segment. In addition, the Group took over the exclusive distribution of botiss products in Germany. Collectively, these investments amounted to CHF 40 million. Total cash used in investing activities reached CHF 83 million.

In April, the shareholders’ AGM approved a dividend increase to CHF 4.00 per share, resulting in total payout of CHF 63 million. This and the acquisition of 531 632 Straumann shares for a total consideration of CHF 200 million in an accelerated book-building process were the

main components of the cash used for financing activities, which totaled CHF 257 million.

As a result, cash and cash equivalents at the end of December amounted to CHF 164 million, CHF 154 million lower than a year previously. With an equity ratio of 58% the Straumann Group remains solidly financed to further invest in strategic growth initiatives.

Based on the results and positive developments in 2016, the Board proposes a dividend increase to CHF 4.25 per share, payable on 13 April 2017. Going forward, the Board's intention is to increase the dividend per share subject to further good performance.

OUTLOOK 2017

(BARRING UNFORESEEN CIRCUMSTANCES)

The Straumann Group expects the global implant market to grow at a similar rate (3–4%) in 2017 and is confident that it can continue to outperform by achieving organic growth in the high single-digit range. Despite further investments in strategic growth initiatives and assuming that currency exchange rates remain fairly stable, the expected revenue growth and operational leverage should lead to further improvements in the (organic) operating profit margin.

SUMMARY OF MAIN INVESTMENTS

INVESTMENTS IN HIGH-GROWTH SEGMENTS AND REGIONS

One of the Group's strategic priorities is to penetrate the fast-growing non-premium segment. To this end we invested significantly in recent years in our Instrand platform (see p. 23) by acquiring or investing in value brands in different markets.

In 2016, we acquired a 30% stake in the French implant manufacturer Anthogyr. The agreement provided the Group with immediate access to the value segment in China. Subsequently we acquired the dental implant manufacturer Equinox, which has a leading position in the Indian market. These investments totaled approximately CHF 37 million.

INVESTMENTS TO STRENGTHEN EXISTING PARTNERSHIPS

Having partnered with botiss biomaterials since 2013, we took over the exclusive distribution of their products in Germany, their major market, for a consideration of

approximately CHF 9 million. Straumann has an option to acquire up to 30% of the shares in botiss biomaterials in 2017.

INVESTMENTS IN PRODUCTION

To meet strong growth in demand for our products, we invested approximately CHF 16 million in machinery at our production plants in Switzerland, the US, Germany and Brazil. Major plant expansions will materialize in the coming years in Brazil and in Switzerland.

INVESTMENTS IN TECHNOLOGY

In pursuit of our strategy to become a total solution provider, and to secure access to innovative technologies and concepts, we have invested in several partner companies in recent years, which form a common technology platform (see p. 25). We added to this platform in 2016 by acquiring a 30% stake in V2R Biomedical Inc., an entrepreneurial Canadian company specialized in prosthetically-driven guided-surgery solutions.

Shortly afterwards, we announced a joint venture with maxon motor to develop ceramic components for dental implant systems that are produced by injection moulding. The Group holds 49% of the joint venture company.

These two investments totaled CHF 9 million.

OTHER INVESTMENTS

The International Team for Implantology (see p. 103) is Straumann's longstanding academic partner and shares our goal of developing optimal treatment solutions to the benefit of patients. In 2016, the Group supported the ITI with total investments of approximately CHF 11 million.

Investments in people (training and development) are covered in the Employees section of this report. Information on investments in distribution, including selling activities as well as research, development, intangible and tangible assets and our investment in organizations like the ITI are presented in our financial report.

Business performance

Regions

The Group currently operates in 54 distributor markets, two thirds of which are in the region we define as Europe, Middle East and Africa. At the outset of 2017, our Central European subsidiaries were combined with Western Europe, enabling a dedicated team to focus on expansion in distributor markets in Eastern Europe and the Middle East, in addition to developing our business in Russia and new markets (e.g. in Africa and Central Asia).

Throughout 2016 we outperformed the market significantly and gained share in all regions. The strong performance was led by dynamic growth in North America and Asia/Pacific – which was our fastest growing region.

Latin America's impressive growth shone out against a backdrop of economic and market recession. Our largest region, EMEA, performed well and crossed the double-digit growth threshold in two quarters, posting robust growth of 9% over the full term.

To support future growth, we enlarged our geographic footprint, opened new markets and entered the non-premium segment in Argentina, China, Germany, India, Turkey, and the UK, contributing to triple-digit revenue growth in our global Intradent business.

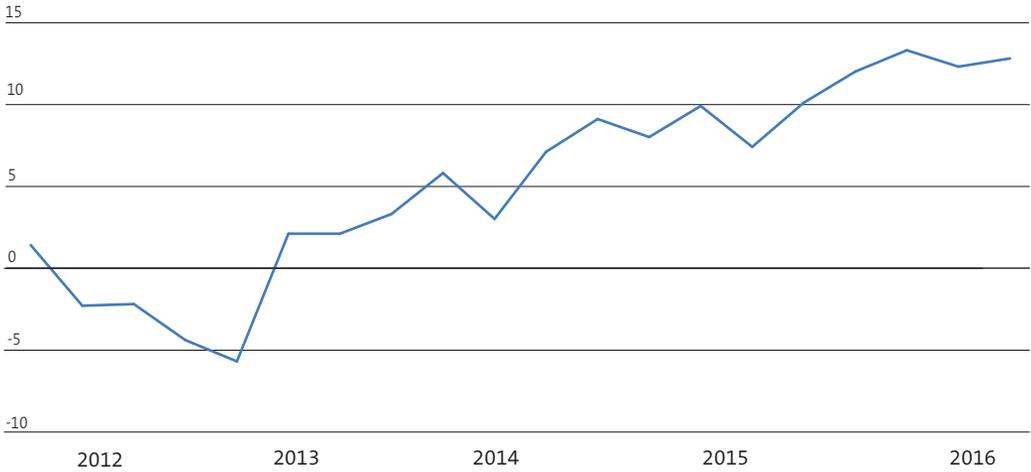
REGIONAL SALES PERFORMANCE BY QUARTER

(in CHF million)	Q1	Q2	Q3	Q4	Total 2016	Total 2015
Europe, Middle East & Africa	108.0	108.2	89.1	105.6	410.8	375.0
Change in CHF %	9.5	14.6	7.6	6.4	9.5	(3.6)
Change (local currencies) in %	9.4	11.1	7.7	8.0	9.1	6.1
As a % of Group revenue					44.8	47.0
North America	62.0	64.5	61.7	67.5	255.7	216.9
Change in CHF %	15.4	21.0	18.7	16.6	17.9	12.3
Change (local currencies) in %	12.5	16.9	17.3	16.0	15.6	8.3
As a % of Group revenue					27.9	27.2
Asia/Pacific	35.5	39.7	36.3	41.0	152.5	122.9
Change in CHF %	22.9	26.1	25.3	22.1	24.1	15.2
Change (local currencies) in %	21.0	20.2	17.0	20.5	19.7	19.4
As a % of Group revenue					16.6	15.4
Latin America	17.5	25.9	26.7	28.3	98.5	83.7
Change in CHF %	46.0	(0.6)	15.8	25.3	17.6	292.9
Change (local currencies) in %	79.7	17.2	12.7	15.0	22.8	396.5
Change (organic ¹) in %	13.3	17.2	12.7	15.0	14.6	11.0
As a % of Group revenue					10.7	10.5
TOTAL	223.0	238.3	213.9	242.4	917.5	798.6
Change in CHF %	15.4	16.1	14.4	13.7	14.9	12.4
Change (local currencies) in %	15.5	14.7	12.5	13.0	13.9	18.6
Change (organic) in %	12.2	14.7	12.5	13.0	13.1	9.1

¹ 'Organic' means excluding the effects of currency fluctuations and acquired/divested business activities. As of 1 March 2015, the Neodent business was fully consolidated and led to an acquisition effect in the Latin American region.

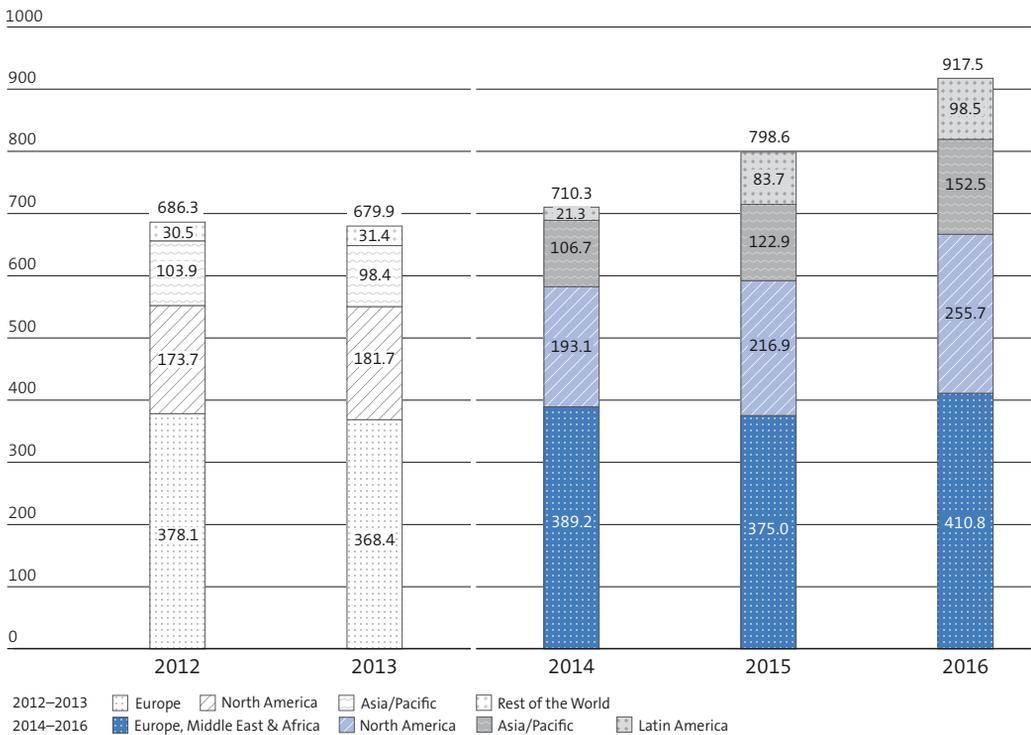
FIVE-YEAR QUARTERLY REVENUE GROWTH (ORGANIC)

(in %)



REGIONAL SALES PERFORMANCE BY YEAR

(in CHF million)



Europe, Middle East & Africa (EMEA)

While it may not be our fastest-growing region, EMEA contributes the lion's share (45%) to Group revenue. With Europe delivering its strongest performance since the economic crisis of 2008, the region grew 9% organically and 10% in Swiss francs.

ALL COUNTRIES REPORT GROWTH

By country, the results were generally positive, with Iberia, Italy, and Germany as principal contributors, despite their competitive environments. We also grew well in France and Scandinavia. Demand was strong in distributor markets, especially in Eastern Europe, and in Russia, where our new subsidiary made a good start.

MORE CUSTOMERS

New products and strong sales execution helped us to expand our customer base. The key growth drivers were BLT, which completed its first year on the market, screw-retained bar-and-bridge prosthetics and Variobase abutments, which have enabled our restorative business to close the gap on implants in terms of volume growth.

The uptake of botiss biomaterials, which complement our implant business perfectly, has been very positive and we were excited to take over exclusive distribution of botiss in Germany, together with their sales team.

TOTAL SOLUTIONS FOR LABS

In recent years, dental laboratories have invested increasingly in CAD/CAM equipment to produce prosthetics in house. Our collaboration with Amann Girrbach opened the door to the in-lab milling segment and the launch of our CARES M Series in-lab mill (p. 36) as part of a complete lab solution.

To promote this and the launch of our CARES Digital Solution strategy, we staged an impressive truck tour across Germany and Switzerland. Other successful promotional activities included trade events in France (ADF), Italy (ITI congress) and Spain (Expodental) as well

as peer-to-peer events (see. p. 30) and seminars across the region.

GROWING VALUE BUSINESS

Having a full range of premium and value solutions supported by a digital workflow makes us an attractive partner for dental service organizations and opened the door to significant accounts in 2016 for example in Italy, the Netherlands, Portugal and Spain.

We achieved our goals in the value segment by creating Intradent UK, building Zinedent in Turkey, and establishing a European hub to provide distribution and services for our Intradent subsidiaries, agents and customers. In view of the strong demand, we also created an Intradent Europe subsidiary to serve key customers in Germany, France, the Nordic and Benelux countries with the Neodent range. We were also able to take over the German distribution business of our partner Medentika, a leading supplier of attractively-priced prosthetics, marking our entry into the value segment in Europe's largest market.

OUTLOOK

Our business has not been affected by the general uncertainty in Europe related to Brexit. Our new Intradent subsidiaries and European hub will help to expand our business in the value segment and we will create opportunities for Zinedent and Medentika in other markets.

The IDS and ITI World Symposium will be major opportunities to present innovations and promote new products and solutions in Europe in 2017.

Having conducted market-acceptance tests in Europe for our intra-oral scanner produced by Dental Wings and the compact milling machine developed by Amann Girrbach, we plan to launch them both in Europe in 2017, offering our own chairside milling solution.



GROUP'S PRESENCE IN KEY REGIONAL MARKETS IN 2016

Market (in order of size)	Contribution to regional revenue	Implants/prosthetics		CAD/CAM	Biomaterials
		Premium	Non-premium		
Germany	1	•••••	yes	yes	yes
Italy	2	•••••	yes	yes	yes
Spain	3	•••••	yes	yes	partial
France	4	•••••	yes	yes	yes
Switzerland	5	•••••	yes	yes	yes

• Dots denote: 1. Titanium standard range; 2. Roxolid; 3. SLActive; 4. Bone Level Tapered; 5. PURE

ORGANIC GROWTH

+9%

HIGHLIGHTS

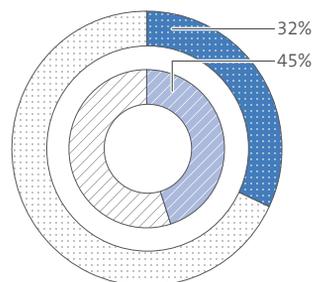
- Continued solid growth
- Expansion in non-premium segment
- Resources freed up for new and emerging markets

CHANGE IN CHF

+10%

CONTRIBUTION COMPARISON

■ % of Group growth
■ % of Group revenue



REVENUE

CHF 411m

North America

North America gathered momentum and posted organic revenue growth of 16%. The region contributed a third of the Group's overall growth. Thanks to an appreciation of the dollar, growth in Swiss francs reached 18%, bringing net revenue to CHF 256 million.

The performance was driven by strong demand across all businesses and by new customers, many of whom are attracted by Roxolid, BLT and our Pro Arch solutions for edentulous patients.

Our Variobase family of abutments helped to win back lab customers by offering a cost-effective, versatile solution with an original implant interface. Variobases also offer the flexibility of producing the restoration in a milling center, in the lab or even chairside.

NEW LAUNCHES AND INITIATIVES

Straumann PURE, our fully ceramic implant, made its regional debut in February and has been well received. While metal-free implant solutions are currently a niche market, we believe that the availability of ceramic implants with similar performance, price and flexibility to their metal counterparts will change the market and are a potential game changer.

The CARES intra-oral scanner, which was developed by Dental Wings, was launched early in the year at the Chicago Midwinter meeting. To offer it to a broader group of customers, we granted distribution rights to Benco and Burkhart, two of the largest dental distributors in the US.

CADCAM FACILITY EXPANDED

To meet growing demand for CAD/CAM prosthetics – especially from large customers like ClearChoice (see p. 74) – we significantly expanded and increased the technical capabilities of our North American milling center in Arlington and opened the extension in April.

IMPRESSIVE GAINS IN THE VALUE SEGMENT

We made notable gains in the value segment thanks to Neodent's range of attractively-priced implant solutions. These were complemented by the launch of Medentika's cost-effective prosthetic solutions.

'SMILE-IN-A-BOX' INVESTMENT

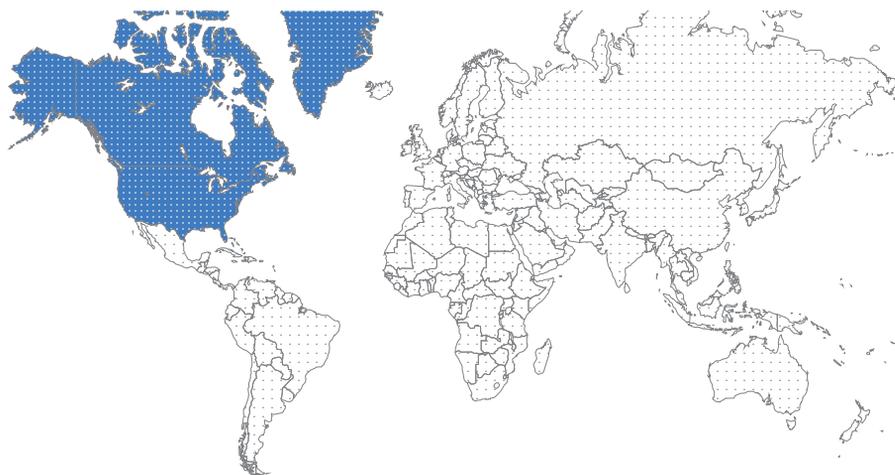
In the third quarter, we acquired a 30% stake in V2R Biomedical, a Canadian company specializing in prosthetically-driven guided-surgery solutions. V2R offers a planning service for guided surgery and delivers patient-specific drill-guides, implants, prosthetics and other components as a 'smile-in-a-box' solution, making it possible to perform up to full-arch restorations in a single surgical appointment, saving time for patients and adding convenience and predictability for dentists.

OUTLOOK

The North American market still offers considerable opportunities in view of its comparatively low penetration, and we are confident that we can gain further market share in the region in 2017.

More than 70% of implants sold in North America have tapered designs and we are making broad inroads into this segment, with further line extensions planned in the near future.

In 2017, we will add Medentika and our etkon iDent range of prosthetics for third-party implants, creating further growth opportunities in the value segment. We will also launch CARES in-lab and chairside milling machines. These and other new products will complement our intraoral and in-lab scanning solutions, and our expanded central milling and computer-guided surgery services as part of a complete solution for customers across North America.



GROUP'S PRESENCE IN KEY REGIONAL MARKETS IN 2016

Market (in order of size)	Contribution to regional revenue	Implants/prosthetics		CAD/CAM	Biomaterials
		Premium	Non-premium		
USA	1	•••••	yes	yes	yes
Canada	2	•••••	yes	yes	yes

• Dots denote: 1. Titanium standard range; 2. Roxolid; 3. SLActive; 4. Bone Level Tapered; 5. PURE

ORGANIC GROWTH

+16%

HIGHLIGHTS

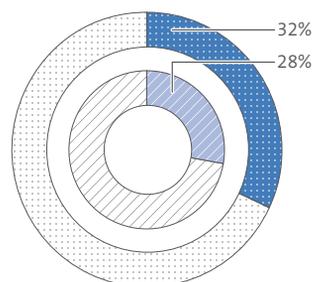
- Momentum increases
- Strong demand in all businesses
- Further gains in non-premium business

CHANGE IIN CHF

+18%

CONTRIBUTION COMPARISON

■ % of Group growth
■ % of Group revenue



REVENUE

CHF 256_m

Asia / Pacific

DOUBLE DIGIT GROWTH THROUGHOUT

Asia Pacific, which accounts for approximately 16% of Group revenue, was our fastest growing region throughout 2016 with organic revenue climbing almost 20%. Growth in Swiss francs amounted to 24%, reflecting the appreciation of the yen.

CHINA – A KEY SOURCE OF GROWTH

More than half the regional growth was generated in China, where we continued to benefit from the dynamic market; our investments in sales, training, and education; and the hybrid distribution model we implemented in 2015.

Our strategic investment in Anthogyr (see pp. 23, 58) provided immediate access to the fast-growing value segment, avoiding long regulatory delays. In June we integrated their business in China and began to roll the brand out through our distribution network and the combined sales team.

LEAD EXTEND IN JAPAN

Customers in Japan were eager to use our BLT implants, SLActive surface and high strength Roxolid material, which were all launched recently and helped us to win further market share. The first Straumann Scientific Forum in Tokyo in mid-year attracted 1800 dental professionals making it our largest congress in Asia to date. A quarter of the participants were new customers and the event provided an excellent platform to launch Roxolid, our Pro Arch solutions and our local CAD/CAM milling service.

NEW PRODUCTS LIFT AUSTRALIA AND KOREA

Roxolid, SLActive and BLT helped us to outperform the market in Australia. These products, together with the successful launch of our botiss biomaterials range and reimbursement changes, contributed to strong growth in Korea, where Straumann is the only leading foreign implant company to maintain a direct presence.

We continued to make good progress in other established regional markets, all of which delivered double-digit growth.

OPPORTUNITIES OPEN IN INDIA

In 2016, we entered the Indian market, where the need for implant-based tooth-replacement is huge. With the acquisition of Equinox in November, we became the third largest supplier of dental implants in India. In addition, we gained the infrastructure and local expertise to launch the Straumann premium brand, our first implant production site in Asia, and an implant system that is affordable for a very broad population.

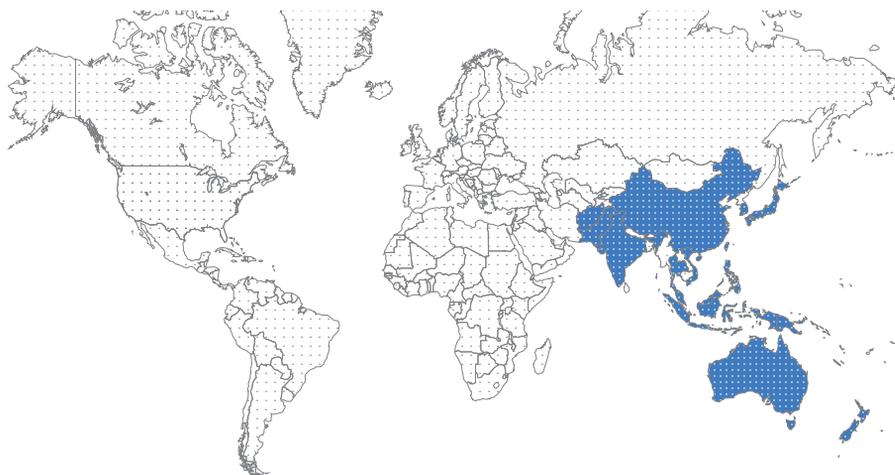
OUTLOOK

We plan to invest in additional subsidiaries in South East Asia, bringing us closer to customers.

We will also drive further expansion in the value and premium segments in China and are looking forward to launching Roxolid, BLT, Pro Arch and CAD/CAM in the near term, pending regulatory approvals. We are working to add biomaterials and CAD/CAM in all markets where they are not yet available.

We will enhance capacity and our offering in India, including the introduction of Straumann premium implant solutions in the near term.

Our plans to partner with the Korean implant company MegaGen have been delayed by arbitration regarding our convertible bond. Fortunately, we now have alternative brands to address markets where MegaGen would have been an asset.



GROUP'S PRESENCE IN KEY REGIONAL MARKETS IN 2016

Market (in order of size)	Contribution to regional revenue	Implants/prosthetics		CAD/CAM	Biomaterials
		Premium	Non-premium		
China	1	••	yes	no	no
Japan	2	••••	no	yes	partial
Australia	3	•••••	no	yes	partial
Korea	4	••••	no	no	yes
India	n/a		yes	no	no

• Dots denote: 1. Titanium standard range; 2. Roxolid; 3. SLActive; 4. Bone Level Tapered; 5. PURE

ORGANIC GROWTH

+20%

CHANGE IIN CHF

+24%

REVENUE

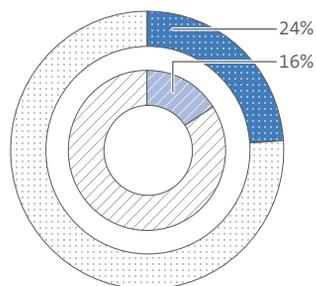
CHF 153m

HIGHLIGHTS

- Dynamic performance powered by China and Japan
- Entry into non-premium segment in China
- Third largest implant company in India

CONTRIBUTION COMPARISON

■ % of Group growth
■ % of Group revenue



Latin America

The dental markets in Latin America suffered from the continuing economic recession especially in the region's largest economy, Brazil. While the tooth replacement market contracted, our Neodent and Straumann businesses both achieved double-digit increases, gaining market share and lifting our organic revenue growth to 15%. The Brazilian real depreciated year-on-year leading to a negative currency impact of 5% points and reported regional revenue to CHF 98 million or 11% of the Group.

SURPRISING SHOP SUCCESS

Several factors contributed to the exceptional performance in Brazil: Neodent's network of stores across the country proved invaluable as it assured product availability without customers' having to keep stocks themselves – a business 'lifesaver' in a recession. Against our policy of segregating value and premium brands, we started selling Straumann products in Neodent stores with surprising success.

BLT DRIVES GROWTH

The uptake of our BLT implant was another key factor and by year-end more than a third of Straumann implants sold in the region were BLTs. Neodent also introduced new products, fuelling a shift towards higher value implants featuring internal connections and the Acqua surface.

BROAD RANGE OF DIGITAL SOLUTIONS

Neodent and Straumann are now able to offer a broad range of digital solutions in Brazil including in-lab scanning and milling solutions in addition to a central milling service. In 2016, Neodent took over distribution of Amann Girrbach milling solutions in Brazil, which cover the full workflow for dental labs to produce CAD/CAM prosthetics in house for tooth-borne and implant-based restorations. Neodent began selling the range at CIOSP Congress in February.

MOBILE PRACTICE RAISES BRAND AND SOCIAL AWARENESS

Neodent also benefited from a brand and social awareness campaign (NeoSorriso) in Brazil featuring a trailer with a mobile dental practice offering free consultations. This was first presented at Neodent's triennial congress in June, which attracted more than 2000 dental professionals.

EXPANSION INTO NEW MARKETS

With the Brazilian market subdued, Mexico actually achieved the fastest growth, thanks to significant customer acquisitions, strong demand in both the premium and the value businesses, and the renewal of a military supply contract. To complete its range, Mexico launched the Straumann CARES portfolio including scanning and milling solutions at the Straumann LATAM Congress in Cancun, which attracted more than 400 customers.

Argentina is the second largest market in the region, with 400 000 implants sold annually. In 2016, we incorporated our former distributor and began selling both brands directly through our own subsidiary. Colombia made an initial contribution to regional growth, confirming our decision to invest there. We also invested in a subsidiary in Chile, which was established in 2016 and opened at the beginning of 2017.

OUTLOOK

In addition to building up our new subsidiary markets we will extend our reach to other emerging markets in the region. We will also expand our range of products and services, including a new CAD/CAM chairside offering and a new e-shop platform in 2017.

To meet increasing international demand for Neodent, we are investing in office and production facilities as well as a fully automatized logistics center in Curitiba.



GROUP'S PRESENCE IN KEY REGIONAL MARKETS IN 2016

Market (in order of size)	Contribution to regional revenue	Implants/prosthetics		CAD/CAM	Biomaterials
		Premium	Non-premium		
Brazil	1	••••	yes	yes	partial
Argentina	3	••••	yes	no	partial
Mexico	2	••••	yes	yes	partial
Columbia	5	••••	yes	no	partial
Chile	4	••••	yes	no	partial

• Dots denote: 1. Titanium standard range; 2. Roxolid; 3. SLActive; 4. Bone Level Tapered; 5. PURE

ORGANIC GROWTH

+15%

HIGHLIGHTS

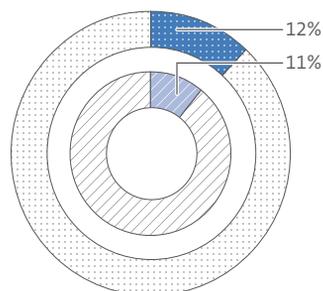
- Exceptional performance in Brazil
- Subsidiaries open in Argentina and Chile
- Broad range of digital and milling solutions

CHANGE IN CHF

+18%

CONTRIBUTION COMPARISON

■ % of Group growth
■ % of Group revenue



REVENUE

CHF 98m

Business Performance Financials

79	Consolidated income statement
80	Consolidated statement of financial position
82	Consolidated cash flow statement
84	Five-year overview

Consolidated income statement

(The notes referred to in this and subsequent tables are the notes to the consolidated financial statements on pp. F 10 ff.)

(in CHF 1 000)	Notes	2016	2015
Revenue	4	917 517	798 600
Cost of goods sold		(198 987)	(183 662)
Gross profit		718 530	614 938
Other income	21	2 376	2 161
Distribution costs		(211 004)	(173 439)
Administrative expenses		(282 726)	(271 092)
Operating profit		227 176	172 568
Finance income	24	35 260	44 115
Finance expense	24	(38 607)	(60 326)
Loss on consolidation of Neodent	24	0	(63 891)
Share of results of associates	7	(1 603)	(12 268)
Profit before income tax		222 225	80 198
Income tax expense	18	7 375	(8 687)
NET PROFIT		229 600	71 511
Attributable to:			
Shareholders of the parent company		229 600	70 679
Non-controlling interests		0	832
Basic earnings per share attributable to ordinary shareholders of the parent company (in CHF)	25	14.68	4.52
Diluted earnings per share attributable to ordinary shareholders of the parent company (in CHF)	25	14.60	4.47

Consolidated statement of financial position

ASSETS

(in CHF 1 000)	Notes	31 Dec 2016	31 Dec 2015
Property, plant and equipment	5	119 320	105 478
Intangible assets	6	314 027	246 500
Investments in associates	7	61 284	48 232
Financial assets	8	49 907	54 396
Other receivables		4 013	2 751
Deferred income tax assets	18	84 119	43 730
Total non-current assets		632 670	501 087
Inventories	9	101 957	76 113
Trade and other receivables	10	181 645	140 598
Financial assets	8	1 105	1 059
Income tax receivables		8 522	9 142
Cash and cash equivalents	11	164 024	318 297
Total current assets		457 253	545 209
TOTAL ASSETS		1 089 922	1 046 296

EQUITY AND LIABILITIES

(in CHF 1 000)	Notes	31 Dec 2016	31 Dec 2015
Share capital	12	1 588	1 572
Retained earnings and reserves		632 093	603 398
Total equity attributable to the shareholders of the parent company		633 681	604 970
Straight bond	13	199 632	199 520
Other liabilities	15	13 759	6 975
Financial liabilities	14	831	618
Provisions	16	24 511	28 832
Retirement benefit obligations	20	46 763	44 496
Deferred income tax liabilities	18	2 078	1 503
Total non-current liabilities		287 574	281 944
Trade and other payables	17	138 702	124 173
Financial liabilities	14	440	925
Income tax payable		12 739	15 572
Provisions	16	16 785	18 712
Total current liabilities		168 666	159 382
Total liabilities		456 241	441 326
TOTAL EQUITY AND LIABILITIES		1 089 922	1 046 296

Consolidated cash flow statement

(in CHF 1 000)	Notes	2016	2015
Net profit		229 600	71 511
Adjustments for:			
Taxes charged	18	(7 375)	8 687
Interest and other financial result		2 574	3 181
Foreign exchange result		2 156	(259)
Fair value adjustments		(1 382)	5 356
Loss on consolidation of Neodent		0	63 891
Share of results of associates	7	1 603	12 268
Depreciation and amortization of:			
Property, plant and equipment	5, 22	22 852	25 579
Intangible assets	6, 22	9 171	9 455
Change in provisions, retirement benefit obligations and other liabilities		(5 761)	(10 482)
Share-based payments expense	19, 23	4 242	3 599
Gains on disposal of property, plant and equipment		0	109
Working capital adjustments:			
Change in inventories		(19 856)	(740)
Change in trade and other receivables		(33 203)	6 383
Change in trade and other payables		11 623	14 310
Interest paid		(4 626)	(4 461)
Interest received		2 305	3 373
Income tax paid		(29 180)	(26 162)
Net cash from operating activities		184 743	185 598

(in CHF 1 000)	Notes	2016	2015
Purchase of financial assets		(348)	(9 479)
Purchase of property, plant and equipment		(39 170)	(32 063)
Purchase of intangible assets		(7 526)	(3 114)
Purchase of investments in associates		(15 706)	(14 206)
Acquisition of a business, net of cash acquired		(24 703)	8 083
Contingent consideration paid		(782)	(3 153)
Proceeds from loans		6 244	3 149
Disbursement of loans		(2 931)	(1 401)
Dividends received from associates		894	3 388
Net proceeds from sale of non-current assets		642	700
Net cash used in investing activities		(83 386)	(48 096)
Purchase of shares of non-controlling interests		0	(224 532)
Transaction costs paid		(426)	(813)
Dividends paid to the equity holders of the parent	26	(63 152)	(58 564)
Dividends paid to non-controlling interests		0	(5 016)
Proceeds from finance lease		0	18
Proceeds from exercise of options		14 062	13 321
Sale of treasury shares		2 228	912
Purchase of treasury shares		(209 763)	0
Net cash used in financing activities		(257 051)	(274 674)
Exchange rate differences on cash held		1 421	(3 952)
Net change in cash and cash equivalents		(154 273)	(141 124)
Cash and cash equivalents at 1 January	11	318 297	459 421
CASH AND CASH EQUIVALENTS AT 31 DECEMBER	11	164 024	318 297

Five-year overview

OPERATING PERFORMANCE

(in CHF million)	2012	2013	2014	2015	2016
	Restated				
Net revenue	686.3	679.9	710.3	798.6	917.5
Growth in %	(1.1)	(0.9)	4.5	12.4	14.9
Gross profit	531.5	535.9	558.7	614.9	718.5
Margin in %	77.5	78.8	78.7	77.0	78.3
Operating result before depreciation and amortization (EBITDA)	119.5	148.4	176.2	207.6	259.2
Margin in %	17.4	21.8	24.8	26.0	28.3
Growth in %	(24.1)	24.3	18.7	17.8	24.9
Operating result before amortization (EBITA)	91.5	122.6	153.1	182.0	236.3
Margin in %	13.3	18.0	21.5	22.8	25.8
Growth in %	(30.6)	33.9	24.9	18.9	29.8
Operating profit (EBIT)	63.1	115.8	148.3	172.6	227.2
Margin in %	9.2	17.0	20.9	21.6	24.8
Growth in %	(21.1)	83.6	28.1	16.4	31.6
Net profit	37.5	101.2	157.8	71.5	229.6
Margin in %	5.5	14.9	22.2	9.0	25.0
Growth in %	(47.1)	169.8	56.0	(54.7)	221.1
Basic earnings per share (in CHF)	2.43	6.55	10.15	4.52	14.68
Value added / economic profit ¹	(7.7)	52.7	113.7	27.1	182.2
Change in value added	(37.4)	60.4	59.3	(86.6)	155.1
Change in value added in %	(125.9)	785.3	109.2	(76.2)	572.5
as a % of net revenue	(1.1)	7.8	16.0	3.4	19.9
Number of employees (year-end)	2 517	2 217	2 387	3 471	3 797
Number of employees (average)	2 530	2 308	2 302	3 232	3 615
Sales per employee (average) in CHF 1 000	271	295	309	247	254

¹ Figures as reported in the financial reports

FINANCIAL PERFORMANCE

(in CHF million)	2012	2013	2014	2015	2016
	Restated				
Cash and cash equivalents	140.5	383.8	459.4	318.3	164.0
Net working capital (net of cash)	63.0	57.3	64.9	63.3	123.9
as a % of revenue	9.2	8.4	9.1	7.9	13.5
Inventories	63.6	62.3	69.2	76.1	102.0
Days of supplies	152	161	149	155	171
Trade receivables	91.8	93.2	106.8	125.2	148.9
Days of sales outstanding	49	49	51	53	55
Balance sheet total	776.9	1 019.7	1 160.8	1 046.3	1 089.9
Return on assets in % (ROA)	4.7	11.4	14.5	6.8	21.5
Equity	601.7	631.4	736.8	605.0	633.7
Equity ratio in %	77.4	61.9	63.5	57.8	58.1
Return on equity in % (ROE)	5.9	16.4	23.1	11.8	37.1
Capital employed	187.7	162.3	142.9	341.8	476.2
Return on capital employed in % (ROCE)	27.4	66.2	97.2	50.5	55.5
Cash generated from operating activities	114.6	151.5	146.2	185.6	184.7
as a % of revenue	16.7	22.3	20.6	23.2	20.1
Investments	(286.1)	(50.6)	(22.8)	(44.5)	(87.9)
as a % of revenue	41.7	7.4	3.2	5.6	9.6
thereof capital expenditures	(19.4)	(12.6)	(18.8)	(35.2)	(46.7)
thereof business combinations related	(0.7)	0	(4.0)	4.9	(25.5)
thereof investments in associates	(266.0)	(38.0)	0	(14.2)	(15.7)
Free cash flow	95.2	139.2	128.4	151.1	138.7
as a % of revenue	13.9	20.5	18.1	18.9	15.1
Dividend	57.9	58.2	58.6	63.2	65.1 ¹
Dividend per share (in CHF)	3.75	3.75	3.75	4.00	4.25 ¹
Pay-out ratio in % (excluding exceptionals)	75.7	53.3	37.1	43.4	35.6

¹ To be proposed to the shareholder's AGM in 2017

Risk and sustainability report

90	Risk management
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104	Employees
113	Communities
115	Global production & logistics
117	Environment

Risk management

A comprehensive internal control framework

The management of opportunities and risks is an integral part of corporate governance and sustainability. We are committed to implementing appropriate controls, processes and strategies to identify, assess and manage risks associated with our activities in order to prevent or minimize the impact of unexpected events on our business and our ability to create value.

The objective is to apply—at an early stage and with foresight—a globally standardized process for identifying and managing possible developments within or outside the Group that could jeopardize the Group's sustained growth, profitability and objectives.

Our approach generally takes into account all relevant types of risk, such as operational, strategic, compliance-related and market risks, as well as internal and external factors. Risk-relevant information is compiled once a year and ad hoc as necessary. The documentation contains a description, an assessment of possible damage, the probability of occurrence, and a list of measures to monitor and counteract the risk.

RESPONSIBILITIES AND ORGANIZATION

Risk monitoring and control are management objectives. At Straumann, the Chief Financial Officer is the Chief Risk Officer (CRO) and is responsible for risk management. We believe that risk assessment and management must be embedded in a comprehensive internal control framework, and we address it through a holistic, disciplined and deliberate approach. For more information see Group Note 29 (p. F 55 ff.).

Our approach matches that of the COSO (Committee of Sponsoring Organizations of the Treadway Commission), whose integrated internal control framework is one of the most widely used. For identified risks that arise from accounting and financial reporting, relevant

control measures are defined throughout Straumann's Internal Control System (ICS) framework (p. 151).

Various tools and aids are used to assess and manage risks. For instance, foreign exchange risks are managed with an SAP Treasury tool, while external consultants are used on a regular basis to assess insurance coverage risks.

RISK REPORTING

A comprehensive corporate risk assessment report is produced annually and serves as a working document for the coming year. It includes key risks that are critical for the Group's business.

A specific scenario is developed for each risk topic, including existing and new measures and controls. The risks are ranked and prioritized. Action plans are defined and the implementation of measures to reduce risk is monitored.

The significance of a risk scenario is estimated in terms of EBIT cumulated over three years. Certain risks are assessed according to qualitative criteria, e.g. risks to the Group's reputation.

The reporting of key risks is based on fixed value limits. The report is prepared by Internal Audit and the CRO, and is discussed with the Executive Management Board. The Audit Committee assesses and discusses risks on the basis of the report in consultation with the CRO and/or relevant members of Senior Management regularly. Key findings are presented to the Board.

Pressing risks that emerge very rapidly are discussed by the Board at short notice.

RISK ASSESSMENT

STRATEGIC RISK

MARKET ENVIRONMENT

Straumann is active in specialty segments of the dental industry. Based on the aging population, the rising number of professionals trained, and increasing awareness, there are no discernible reasons why these segments should not continue to offer attractive growth prospects in the long term (p. 49 ff.). However, current economic uncertainties and consolidation might continue for some time and dampen the prospects of market growth.

Straumann's strategic priorities for 2016 were to drive a high performance culture and organization, to target unexploited growth markets, and to become a total solution provider for tooth replacement (p. 22 ff.).

Our future revenues depend on market reach and expansion as well as on our ability to defend and increase our business with existing customers, to enlarge our customer base, to develop innovative solutions that meet customers' needs and bring them to market in a timely manner.

New market entrants and price pressure from discounters pose a threat to established companies like ours. We conduct analyses of competitors based on our own and external market intelligence to counteract such risks and to evaluate our opportunities. A key strategy in this respect is our expansion into other segments through alliances, partnerships and acquisitions.

OPERATIONAL RISK

LEGAL AND INTELLECTUAL PROPERTY RISKS

We operate in a competitive market, in which intellectual property rights are of significant importance. We therefore actively pursue a strategy of protecting our intellectual property, patents and trademarks.

In 2016, the Straumann Group was involved in important IP disputes against Nobel Biocare at the US International Trade Commission, whose decision was appealed and is now pending at the US Federal Circuit Court of Appeal. The action filed by Nobel in the US Central District Court of California, Southern Division is still pending the outcome of the ITC appeal. The Group is also in a dispute with Sirona regarding a patent infringement action filed in the Federal District

Court of Delaware. The case is pending as Straumann has successfully initiated an IPR. The decision was appealed by Sirona in the US Federal Circuit Court of Appeals. Straumann also contests a patent infringement action filed by the company Zircore in the US Eastern District Court of Texas, Marshal Division. Apart from this, Straumann is involved in a pending arbitration against MegaGen and some shareholders relating to the exercise of its conversion right and call option.

MANUFACTURING AND SUPPLIER RISK

The Group has spread its manufacturing risk by establishing production centers for key products on both sides of the Atlantic. The addition of Neodent's production facilities in South America further spreads this risk.

With regard to suppliers, we pursue a second source strategy, which offers a high degree of independence from single suppliers. Straumann and Neodent production facilities keep about a year's stock of titanium, the key material for our implant systems, to avoid any bottleneck in the supply/demand chain.

ETHICAL SUPPLY CHAIN

Adherence to ethical behaviour in accordance with Straumann's Code of Conduct is not only expected from our employees and our suppliers. We revised our 'Code of Conduct for Suppliers' in September 2016, which refers to working conditions, human rights protection, business ethics, legal compliance, and environmental protection in the supply chain. Responses have been positive and by year-end more than two thirds of our key suppliers had signed it.

PRODUCT RISK AND TREATMENT OUTCOME

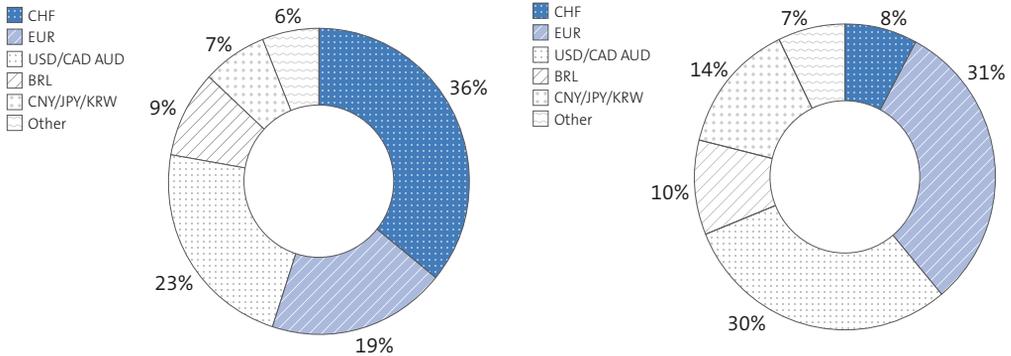
We seek to minimize product risks by going well beyond the minimum statutory requirements and conducting large-scale trials under real-life conditions, followed by controlled, selective introductions and long-term product surveillance wherever appropriate. We also offer a comprehensive range of education courses at all levels in all countries where our products are sold.

FINANCIAL RISK (SEE ALSO P. F 55 FF.)

EXCHANGE RATE RISK

As the majority of our business is international and because we prepare our financial statements in Swiss

COST (LEFT) AND REVENUE (RIGHT) BREAKDOWN – MAJOR CURRENCIES



Allocation of cost of goods sold, distribution and administrative expenses (left) and net revenues (right) across the various currencies. In general, the target is to concentrate the currency risk mainly in Switzerland at the Swiss Group companies. All numbers are rounded approximations.

francs, fluctuations in exchange rates affect both the Group’s operating results and the reported values of its assets and liabilities.

Straumann’s Corporate Treasury is responsible for managing the risks created by currency fluctuations within the Group, following the scope of the policy approved by the Executive Management Board and the Audit Committee of the Board of Directors.

The Group is exposed to transactional and translation risks. Hedging decisions are taken by Corporate Treasury with subsidiaries being co-responsible for identifying currency exposures and informing headquarters.

The key objective is to limit the foreign currency transactional exposure of the Group. Transactional risk arises when the currency structure of Straumann’s costs and liabilities deviates to some extent from the currency structure of the sales proceeds and assets, as well as from imbalances in the payment streams between the various currencies. Straumann hedges these risks by means of options, spot transactions and forward transactions based on the principles stated in the Treasury Policy. The limitation and management of the translation exposure is a secondary priority.

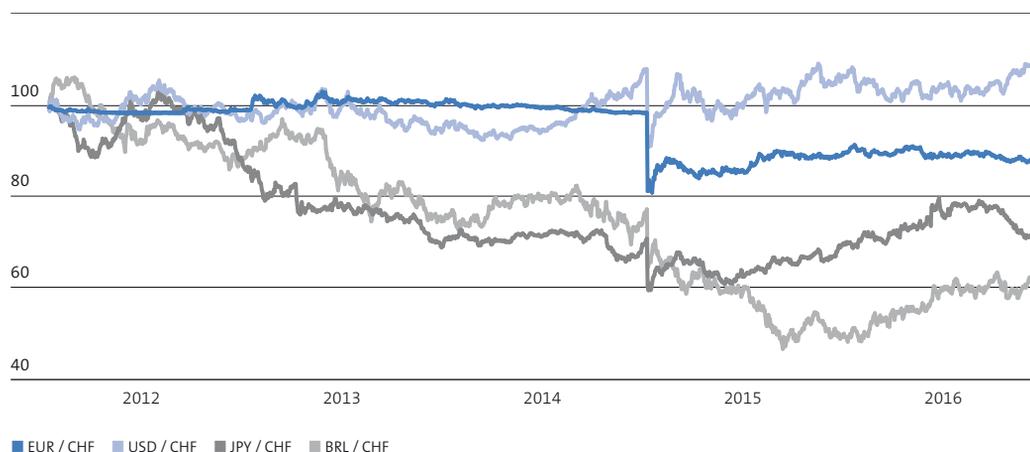
The major foreign currencies in Straumann’s business are the euro, the US dollar, the Brazilian real, the Chinese renminbi and the Japanese yen. Straumann invoices its subsidiaries in local currencies and its distributors mainly in euro and US dollars. Each subsidiary invoices its local third-party customers in the local currency. Exchange rate fluctuations have an impact on the company’s balance sheet and earnings, which are reported in Swiss francs.

At year end, the Group’s gross transactional booked exposure (TBE) to the euro was 25%. The euro accounted for 31% of the sales and 19% of costs, making it the Group’s most important currency. The US dollar, Canadian dollar and Australian dollar collectively make up 30% of sales, 23% of costs and 49% of TBE. Our major Asian currencies (Japanese yen, Chinese renminbi and Korean won) collectively make up 14% of sales, 7% of costs and 20% of TBE. The Brazilian real makes up 10% of sales and 9% of costs and 1% of transactional booked exposure.

CREDIT RISK

Credit risks arise from the possibility that customers may not be able to settle obligations as agreed. There are no significant concentrations of credit risk within the Group.

CURRENCY CHART (DOLLAR, EURO, YEN, REAL)



COUNTERPARTY RISK

Counterparty risk encompasses issuer risk on marketable securities, settlement risk on derivative and money-market contracts, and credit risk on cash and time deposits. Exposure to these is closely monitored and kept within predetermined parameters.

Further information on financial risk management is provided in Note 29 on financial risk management objectives and policies (see p. F 55 ff.), in Note 30 on financial instruments, p. F 59 ff. of consolidated financial statements.

INSURANCE POLICIES

Straumann covers its inherent key business risks in the same way that it covers product or employer liability risks and property loss through corresponding insurance policies held with reputable companies.

PENSION LIABILITY RISKS

The Group offers its staff competitive pensions. The pension funds are managed locally and invested by independent financial institutions. The investment strategy is determined by the Group's Pension Fund Commission and is executed by the financial institution. Neither Straumann nor the trustees are allowed to influence the specific investment decisions. The pension funds publish regular reports for all members.

The Swiss pension fund represents the largest pension plan of the Group. Based on the recommendations of the Pension Fund Trustees, the Straumann Swiss Pension Fund was transferred completely to the independent GEMINI Collective Foundation on 1 January 2016. The transfer has no impact on the pension scheme participants.

FINANCIAL REPORTING RISK

Straumann's Internal Audit acts as an independent and objective assurance and consulting body, which reports directly to the CFO and the Audit Committee. Internal Audit does not confine itself to financial audits, but also monitors compliance with external and internal policies and guidelines. Acting in a consulting role, its main tasks are to assess internal processes and controls, propose improvements, and assist in their implementation. The objective is to safeguard the Group's tangible and intangible assets and to evaluate the effectiveness of its risk management and governance processes.

COMPLIANCE RISK

LEGAL COMPLIANCE

It is essential for Straumann to ensure that the company in general and the individual employees conduct business in a legal, ethical and responsible manner. To this end, we implemented a Code of Conduct in 2006.

ISO CERTIFICATION AND AUDITS PERFORMED IN 2016

Standard	ISO 9001 Quality management system	ISO 13485 Medical device quality management system	ISO 14001 Environmental management system
Institut Straumann AG (Basel, Gräfelfing)	Yes	Yes	No
Straumann Villeret SA (Villeret)	No	Yes	Yes
Straumann Manufacturing Inc (Andover)	No	Yes	Yes
J.J.G.C Indústria e Comércio de Materiais Dentários S.A [Neodent] (Curitiba)	Yes	Yes	No
Etkon GmbH (Markkleeberg)	No	Yes	No
Biora AB (Malmö)	No	Yes	Yes

All employees are required to report any breach of this internal policy to the Compliance Officer by e-mail or telephone. Infringements of the Code are tracked and appropriate measures taken against non-compliance. We monitor laws and revisions and adapt our internal processes to cover new legal requirements. We fully comply with the 'Sunshine' legislation in the United States and France, not least through implementing a data collection system and corresponding policies and guidelines.

Like other leading manufacturers, the Group is exposed to the risk of damaged public perception of dental implants by third parties, which might be the result of poor implant placement, competitor's inferior implant quality, or unethical business practices.

Many Straumann country organizations are members of associations of manufacturers of medical/dental products, such as FASMED in Switzerland, Comident in France and ABIMO in Brazil (Neodent). These associations are dedicated to the advancement of medical technology and its safe and effective use.

REGULATORY COMPLIANCE

Companies in the medical device industry face growing scrutiny from regulators around the world and increasing requirements for documentation. In Europe, the Medical Device Regulation is under review. The anticipated outcomes include greater surveillance, involvement of competent authorities for higher-class products, longer approval times, access to technical documentation, tests on products, and unannounced audits. We have noticed a reduction in the number of Notified Bodies and an increase in their control. To ensure the readiness of all our certified sites, we have taken the initiative to conduct unannounced internal audits and dedicated audits of our technical files.

In 2016, Straumann subsidiaries in Madrid (Spain), Paris (France), Freiburg (Germany), Oslo (Norway), Crawley (GB) and Burlington (Canada) were inspected by the local authority. No major observation was identified.

Several regulatory authorities continue to inspect manufacturers in foreign countries. We are prepared for this and have built up experienced teams of regulatory and compliance specialists in Basel, the US, China,

Japan, Korea and Brazil. As a consequence, successful registrations of our BLT implant portfolio, ceramic implant and n!ce in various countries were based on excellent collaboration of our experts in Basel with our colleagues in different regions.

Stricter requirements and regulations are also expected in smaller markets, which will increase the need for enhanced compliance and safe and efficient products.

QUALITY COMPLIANCE

To avoid the risks associated with regulatory compliance for Medical Devices, we have a qualified team of specialists in regulatory and quality assurance.

Focused quality objectives, supported by key performance indicators, and comprehensive internal as well as supplier-related quality audit programs assured our status of substantial compliance and helped to identify opportunities for improvement. To streamline processes we run a continuing education program.

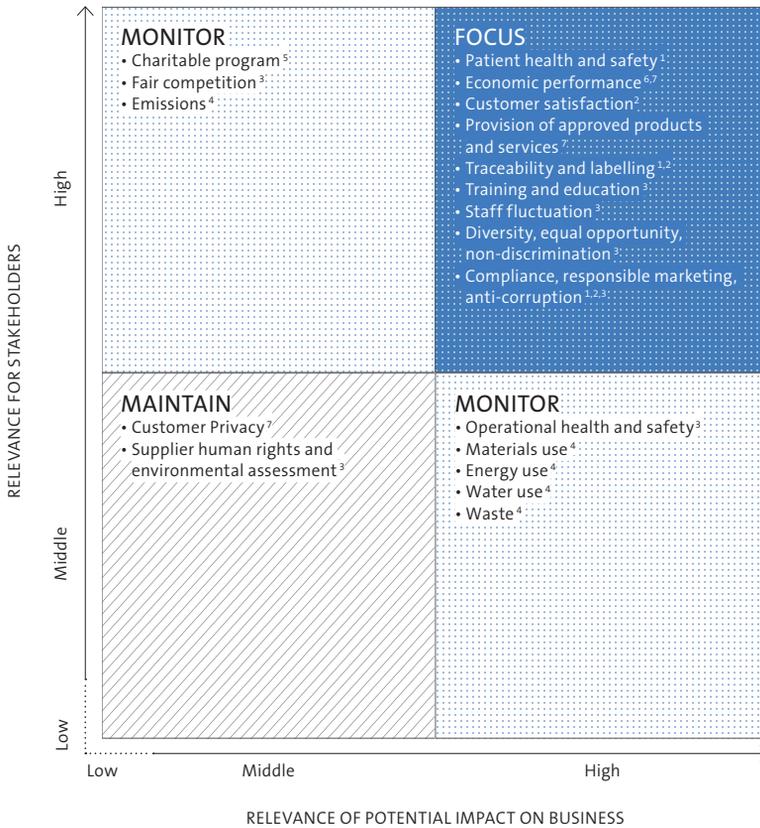
We consolidated our 'One Quality Management System' (same quality management system at design centers and manufacturing sites) after a successful recertification of the quality system.

In 2016, we passed all Notified Body audits, which are required to maintain the certification status of the quality and environmental management systems at our manufacturing and design/development sites. Overall, there were no critical issues with any authorities at any of our manufacturing and design sites.

We also continue to challenge our quality by mock FDA inspections at the FDA registered establishments to ensure that people and processes have the appropriate readiness for inspections.

Straumann continues to collaborate with Neodent in the area of quality compliance and regulatory affairs. Neodent products have received approvals in various markets outside Brazil, including the US, Europe and APAC.

SUSTAINABILITY MATERIALITY MAP



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

- ¹ Risk Management, page 90
- ² Customers, page 97
- ³ Employees, page 104
- ⁴ Environment, page 117
- ⁵ Communities, page 113
- ⁶ Operational performance, page 60 ff.
- ⁷ Addendum GRI Sustainability Reporting

The Addendum includes further information and is published on www.straumann.com under Media > Publications and Reports > Annual Reports.

SUSTAINABILITY – MATERIAL TOPICS

We believe a key contribution to our long-term success is to identify and address relevant (or ‘material’) sustainability topics, i.e. economic, ecological and social issues that present significant risks or business opportunities. Risk and opportunity management and sustainability are therefore closely linked in our business processes and stakeholder communications, which is why we pursue open communication and interactive dialogue with all relevant stakeholder groups.

To identify and address relevant and material sustainability topics, we conducted interviews with senior managers across the company that were aligned with the provisions of Global Reporting Initiative (GRI) Principles for Defining Report Content to determine the most pertinent sustainability issues for Straumann and our stakeholders. The chart above gives an over-

view of the sustainability topics found to be most relevant for our business success (horizontal axis) and the interests expressed by our stakeholders such as clients, investors or community representatives (vertical axis). The 2016 interviews did not indicate any major changes in the materiality of our sustainability topics since the prior year. We plan to revisit the assessment for our next annual report and to revise it if necessary.

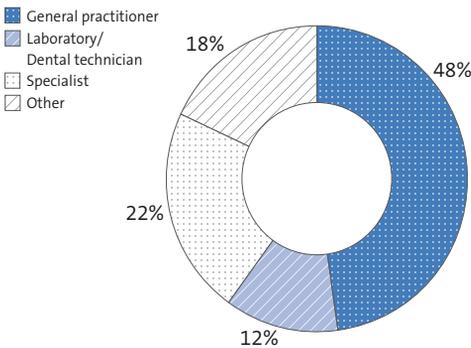
The material sustainability topics are discussed in various parts of this report especially in the following sections on customers, employees, communities, and environment.

This page includes information on GRI indicators G4-18 and G4-19 (see also p. 191 f.).

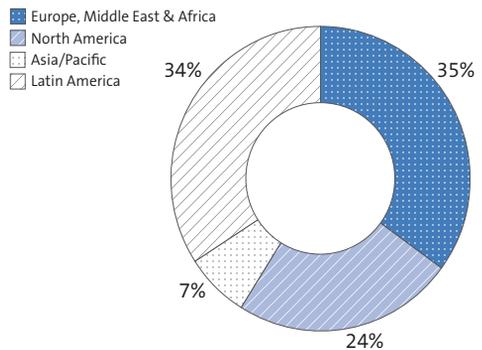
Customers

Increasingly global, corporate and female

STRAUMANN'S CUSTOMERS BY SEGMENT



STRAUMANN'S CUSTOMERS BY REGION



Our customer base by grouping/segment did not change significantly in 2016. Corporate customers (e.g. dental chains, distributors, hospitals and university clinics) are included in 'other' in the chart on the left. The number of customers grew in all regions, while the regional spread remained fairly constant.

GLOBAL CUSTOMER BASE EXPANDS

In 2016 our global customer base increased by more than 10% and comprises general dentists, specialists (oral surgeons, periodontists, prosthodontists), dental technicians/laboratories and an increasing number of corporate customers spread across more than 100 countries.

While education programs and starter courses attracted general dentists, we succeeded in winning customers from our competitors through innovative products, comprehensive solutions, our value range, and sales excellence. Apart from this, we gained clients through acquisitions (e.g. Equinox in India, Anthogyr in China), the incorporation of distributors (e.g. Russia and Argentina)

and distribution agreements (e.g. botiss in Germany and Amann Girrbach in Brazil).

All regions reported customer increases. 35% of our customers are located in Europe compared with 52% five years ago, reflecting the further spread of implant dentistry from its roots, the global expansion of our business and the pace of growth in emerging markets like China, Brazil, and Russia.

Customer feedback and survey results underline the importance of product availability, which is challenging in large emerging regions with limited infrastructure. In China, we operate with a network of distributors across the country supported by our own consultative sales

and education team. In Brazil, we began using Neodent's local stores and distribution centers to sell Straumann products, assuring availability without customers having to carry large stocks. In India, Equinox offers a versatile implant system with few components and uses a third party logistics network ensuring delivery and payment receipt (see p. 58).

PARTNERING WITH CHAINS

Another important development has been the expansion of dental chains and networks, particularly in North America and Europe. These range from local group practices to national and international networks of fully integrated clinics with significant purchasing power and influence. We entered this segment in 2015 as the preferred supplier of ClearChoice (see pp. 74, 76) and the experience we have gained has enabled us to establish agreements with leading chains in Europe.

Without economies of scale, purchasing power, the resources to offer 7-day-a-week services, budgets for direct-to-consumer advertising, and the ability to invest in expensive technology, some small practices and labs struggle to compete. Some are bought up by chains, others close.

A larger portion of our business will therefore be determined by a smaller number of customers who have greater purchasing power and focus heavily on profit. They have special needs, including premium and non-premium ranges, private label lines, logistics services, support for international expansion and more. In view of the scope of these requirements and the size of the business, we are extending our capabilities in high-level key account management.

EDUCATION A RESPONSIBLE APPROACH TO GROWTH

Dental chains and service organizations also require support with education as they tend to attract young dentists who have little exposure to implant dentistry. Staff movement and fluctuation adds to this need. Over the past two years we have developed concepts and tools which together with the ITI's Online Academy (see p. 103) offer blended learning opportunities for working dental professionals.

Further education for dentists to deepen their knowledge and expand their competence is offered for

example through the ITI, Straumann's Peer-to-Peer Program, Neodent's partner the ILAPEO institute, and more.

Market research¹ indicates that, in the near future, more implants will be placed collectively by GPs than by specialists. To gain further access to this group and to support teaching and mentoring we began early in 2016 to collaborate with the Engel Institute in the U.S., which has provided implant education to more than 7 000 dentists since opening its doors in 2005.

BUILDING THE NEXT GENERATION

The sustainability of our business in the mid-to-long term depends on our ability to attract young professionals to implant dentistry. Perception-pulse studies in the past revealed that their most common expectation from companies like ours is for help in building up their business and establishing a reputation as a specialist.

We continued to take a structured approach to this group through dedicated programs, including our Young Professional Program (YPP) which has now been running for more than four years and supports budding professionals on their career paths from studying, through residencies and clinic employment, to setting up their own practices. The program was expanded in 2016, is currently offered in 17 countries and more than 6 500 participants have enrolled.

THE SHIFT IN GENDER

Market research shows that more women are graduating from dental school than men^{2,3}. In some countries, e.g. Germany, up to 70% of dental school graduates are female. This trend is evident in most developed countries. At the same time women are less likely to own dental practices and many prefer to work part-time as employees in dental practices. Our research also shows that they are more likely to work in esthetic- or paediatric dentistry rather than in surgical specialties⁵. This trend will affect the dental markets in the mid to long term and Straumann is working on several initiatives to address it. We believe that early integration of implant dentistry in the dental curriculum as well as career planning, coaching and female mentoring programs are important to meeting future needs for dentists and will help women to step into implantology or implant prosthodontics.⁴ In 2016, we held an international workshop with female dentists (see pp. 100, 102) to gain deeper insights into

their needs and to create opportunities for networking and coaching. In addition, our academic partner, the ITI, formed a task force dedicated to young dentists. Straumann is well positioned to be the partner of choice for women dentists in tooth replacement because:

- Our tissue level implant solution was designed to support the referral model, in which specialists perform the surgery and generalists do the restoration.
- Our system is comprehensive, designed for simplicity, flexibility and predictable outcomes, and is one of the best documented.
- We are a leader in education together with the ITI and other partners.
- We are working together with dental schools to support the inclusion of implant dentistry in their curricula.
- We reach out early to young dentists, e.g. through our YPP, which also addresses the needs and preferences of women.

EMBRACING DIGITAL MARKETING

Straumann serves customers directly through more than 1 300 sales and marketing professionals, most of whom are highly trained sales representatives or service staff. Our direct sales approach adds value for customers and helps us to identify, manage and learn from their needs. In 2016, we continued the global training program to enhance the effectiveness of our sales representatives and to help our customers improve their businesses. The success of this program is reflected in our revenue growth.

We made good progress with our e-shop and reached our frequency and turnover targets in most countries. This channel offers a number of advantages:

- Product returns have decreased significantly
- Customer service teams have more time for customer needs and active selling
- E-commerce is a good source of information on customer behavior.

To tap into the huge opportunities offered by digital marketing we are building new capabilities and investing in new software tools.

CHECKING CUSTOMER EXPECTATIONS

Instead of large general perception pulse surveys across several markets we have conducted more targeted enquiries focused on specific customer groups and

solutions. For instance, prior to introducing the intra-oral scanner developed by our partner Dental Wings in Europe, we conducted market acceptance tests with customers to ensure satisfaction even though the scanner had already been launched in North America.

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' interest, much of the scientific information used to endorse our products is peer-reviewed.

OUTLOOK

In 2017, our customer base will broaden as we expand in Asia, Latin America and Eastern Europe, and as we pursue opportunities in new geographies like Africa. Our strategy to penetrate the global non-premium segment and to address price-sensitive customers with different value propositions will also broaden our customer base.

Our initiative to support female dentists has led to the creation of the 'Women in Implant dentistry Network' (WIN), which we will extend internationally in 2017 and beyond.

We will continue to invest in new education tools and concepts, like our 'Smart' blended learning concept and our Peer-to-Peer Program, in addition to our regular training and education programs. Building up digital marketing capabilities will require investment and full use of the opportunities offered by key international events (see p. 178) in 2017, e.g. the ITI World Symposium in Basel and the International Dental Show in Cologne, to reach new and existing customers.

REFERENCES/FOOTNOTES

- ¹ Exevia, 2014, based on market research data in Germany, Italy, Spain and the US.
- ² Distribution of dentists in the US, by region and state, 2009. America Dental Association. 2011 Apr.
- ³ FDI Oral Health Atlas p. 61.
- ⁴ Boll A, Gehrke P: Gender aspects of implant dentistry: opportunities and career paths. *Z Zahnärztl Implantol* 2014;30:267–287.
- ⁵ Exevia, 2016, Market Research data Germany, Italy, US, China.

The ITI and Straumann

Academia and industry moving forward in step

For more than three decades, the unique relationship between the ITI and Straumann has created remarkable opportunities for dental professionals and patients. As Straumann's academic partner, the ITI's primary focus is on education as well as research into implant dentistry and its related fields, which complements Straumann's core competencies of developing, manufacturing and marketing commercial products and solutions.

The ITI is the largest academic organization in its field, comprising a global network of more than 15 000 professionals. In its ongoing quest for excellence, the organization underwent significant restructuring in 2016 to embrace the extended field of treatment providers as well as treatment approaches and demand for new learning formats. The new leaner structure allows for Task Forces to be established ad hoc to respond quickly and efficiently to significant changes and their impact on the needs of the ITI membership.

SUPPORTING RESEARCH AND EDUCATION

Since 1988, the ITI has committed more than CHF 2 million annually to research projects that are selected from internal applications and from non-affiliated scientists. In 2016, 22 of the 86 applications were supported.

Educational support is provided in various ways. Since 1998, the ITI has awarded scholarships to young practitioners, giving them the opportunity to spend a year in an ITI Scholarship Center with an ITI Fellow mentor. 22 scholarships were awarded in 2016 and 25 for 2017. The ITI also reaches out to its Fellows and Members through 650 Study Clubs around the world and Education Weeks in eight centers worldwide.

In 2016, 13 national congresses were organized through the ITI's 27 Sections, including spectacular events in China, Italy and North America, which each attracted

more than 1 000 participants. Preparations continued for the triennial ITI World Symposium, which will be in Basel in 2017. More than 4 000 participants are expected.

Every five years the ITI convenes a Consensus Conference with experts from various disciplines in implant dentistry to review the latest literature and define evidence-based guidelines for the profession. Preparations for the next conference, in 2018, are also underway.

The ITI's most ambitious project is its Online Academy, which has added valuable content and services since it began in 2014. This user-centric e-learning platform offers top-quality evidence-based educational material to practitioners 24/7. In 2016, a University Campus concept was added, allowing universities and dental schools to establish a private learning space with multiple virtual classrooms. This is free of charge and is accessible only to authorized members. Each institution has access to all ITI Online Academy content and can add its own material to create a structured curriculum.

The ITI Curriculum complements the Online Academy and will be piloted later in 2017. It has been developed to offer practitioners, particularly those with limited experience, a structured approach to implant dentistry through multiple channels to provide 'blended' learning.

OUTLOOK

In 2017, in addition to the above activities, the ITI intends to advance in step with Straumann, addressing the needs of the implant dentistry community, and maintaining a place at the leading edge of progress in treatment and technology.

Employees

Diverse, highly engaged and proud to work for Straumann

The strength, diversity and spread of our global team increased again in 2016, reflecting the growth in demand for our solutions and our strategy to expand in emerging markets. We added 326 employees, bringing headcount to 3 797. The majority of the new positions were in sales and manufacturing. Our staff in Switzerland increased by 73 to 842.

CULTURAL JOURNEY ADVANCES

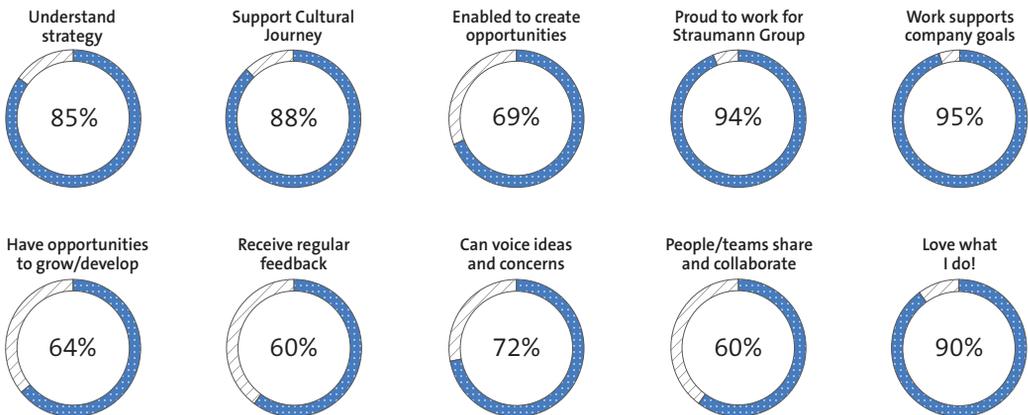
Almost three years ago, we defined the culture that we believe will sustain our success. It fosters constructive behavior, collaborative leadership and high performance. This means enabling everyone to do their best, focusing our efforts and resources optimally on aligned priorities, being agile to seize opportunities, constantly challenging what we do in order to improve and innovate,

sharing openly, collaborating efficiently, avoiding waste, and continually delivering what we promise.

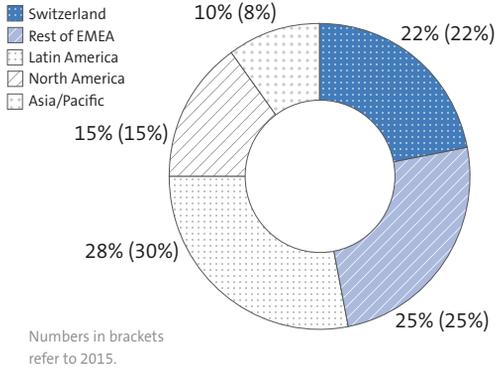
Driving a high-performance culture and organization is a key strategic priority for Straumann (see p. 22) and since we started our Cultural Journey in 2014 we have invested more than CHF 2.5 million in training and development initiatives worldwide. In 2016, we extended our program of workshops and training modules which have now included about a third of our global staff.

To drive cultural change across all levels, we formed additional interdisciplinary groups of Cultural Change Champions (CCCs) around the world and a Community of Practice to act as role models and a communication bridge across the organization.

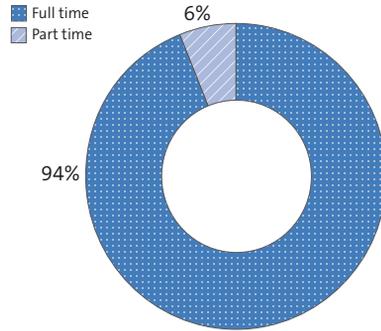
GLOBAL PULSE CHECK RESULTS



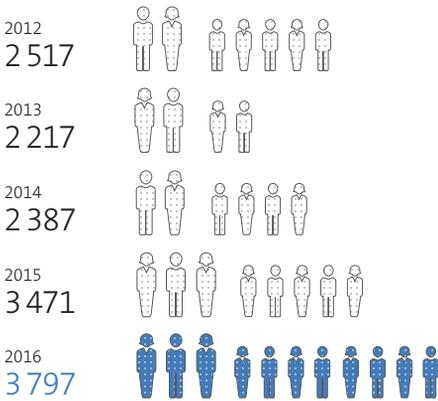
EMPLOYEES BY REGION



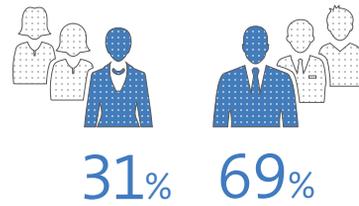
EMPLOYMENT



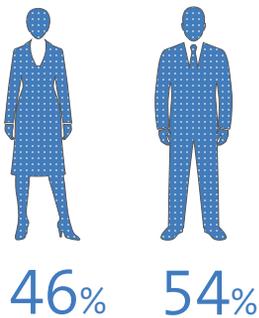
EMPLOYEES



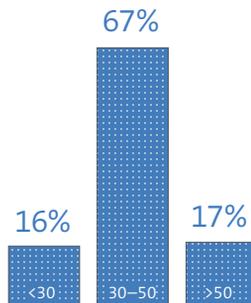
LEADERSHIP BY GENDER



GENDER



AGE



Headcount increased by 326 of which the majority were new jobs.

HUMAN RESOURCES KEY FIGURES

Parameter		Unit	2016 ¹	2015 ¹	2014
Staff size	Employees	Total headcounts	3 797	3 471	2 387
		Full-time equivalents	3 729	3 235	2 330
Employment type	Part-time employees	% of headcount	6	6	7
Gender diversity	Women in general staff (excl. Mgmt)	%	50	45	48
	Women in SMD pool ²	%	25	21	24
	Women in management ³	%	31	28	29
Training and education	Investment in staff learning ⁴	CHF million	3.1	2.6	1.7
	Average annual training & learning	Days/employee	4	3	3
Fluctuation and absence	Staff fluctuation ⁵	%	12	9	13
	Absence rate due to sickness ⁶	%	3	4	3
	Absence rate due to workplace accidents ⁶	%	0	0	0
	Work-related fatalities	Number	0	0	0
Employee protection	Reported cases of discrimination	Number	0	0	0

¹ Including Neodent.

² Strategic Management Development group.

³ Job position "Manager" and all levels above.

⁴ 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.

⁵ Includes resignations and terminations (incl. Neodent).

⁶ Switzerland only. Proportion of absence time compared to target working hours.

STAFF STRUCTURE BY CATEGORY AND AGE GROUP (%)¹

Age	<30	30–50	>50	Unit	2016
General staff (excl. Management)	15	54	12	% of headcount	81
Management ²	1	13	5	% of headcount	19
TOTAL	16	67	17		100

¹ Including Neodent.

² Job position "Manager" and all levels above.

As the key to achieving our aspired culture lies in mindset and core behaviors (p. 19) we have included behavioural assessments in the staff performance management process and we are building up a set of training modules to help in areas where improvement is needed. In addition, we redefined and simplified Straumann's global competency model to reflect our vision, core behaviors and ideal culture. This will be reflected in all employee-related processes and interactions such as recruiting, onboarding, performance management, promotions, development and succession planning.

HIGH ENGAGEMENT

Regular meetings between the Executive Management and various focus groups – including the CCCs – provide open and constructive dialogue as well as direct feedback on staff engagement. During the year, 14 general staff meetings were held with the CEO in 11 countries in addition to 14 informal small group sessions in Basel.

We extended our tracking of mood and engagement to all our employees on 2016 by expanding the simple anonymous survey tool used at headquarters in 2015. More than 70% of our global team responded and the results were generally very positive: around 90% said that they

love what they do, are proud to work for Straumann, actively support the Cultural Journey, and that their work helps the company to achieve its goals (see chart on p. 104).

The lowest scoring items received 60% positive ratings and revealed feedback, leadership, collaboration as areas for improvement. Using the survey feedback, our strategic management team committed to specific actions including the following:

- Focus on developing people, including a leadership program for all people managers in 2017
- Extend the Cultural Journey workshops to all Group organizations and staff
- Foster a strong, direct feedback culture (e.g. providing workshops on difficult conversations)
- Manage workloads effectively (initiatives in 2016 included ‘world-café’ workshops with more than 120 employees at headquarters).

DEVELOPING SKILLS, ENHANCING LEADERSHIP

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 offered updates to staff who have been with the company for some time.

We extended our continuing training and education programs considerably, aligning them with our high performance culture and cultural change, and continued to offer a choice of informal educational sessions. The overall investment in staff training and education, as well as actual training days increased significantly in 2016, with a considerable portion devoted to the cultural change programs and high performance.

STRATEGIC MANAGEMENT DEVELOPMENT (SMD)

The SMD process involves senior management, staff in key positions, and future leaders; it reviews leadership, performance, behavior, and career potential as a basis for development, deployment, and succession planning.



Straumann's family day in Basel – one of many social events during the year intended to nurture collaboration, communication and trust.

GLOBAL DEVELOPMENT PROGRAM (GDP)

This program identifies and develops future leaders with a view to filling our succession pipeline. The 18-month program is for members of general staff to middle management, who have leadership aspirations and potential. It includes international assignments, assessments and mentoring by top management. The program included 8 participants in 2016.

PROFESSIONAL CAREER PATH (PCP)

The PCP is designed to provide career opportunities outside line-management by enabling individuals to progress through four defined stages to the level of ‘Expert’. The model already includes R & D and is being extended to Sales, Marketing and other functions.

In addition to the above, we maintained our apprenticeship, internship and Corporate Graduate Programs.

A BETTER PLACE TO WORK

One aspect of our Cultural Journey is to encourage and enable our staff to make Straumann ‘an even better place to work’. A recent example is the ‘We Care’ initiative, which started in 2016 in our four largest country organizations and seeks to promote health at work.

DIVERSITY AND EMPLOYEE PROTECTION

The acquisition of Equinox further broadens our diversity. 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 46% female employees.

RESPONSIBILITY AND ETHICAL BEHAVIOR

Straumann's Code of Conduct defines our expectations for ethical behavior in all our business activities. Being an integral part of the company's employment contracts, it prohibits any form of human rights violation, bribery, corruption, unfair competition, misleading marketing, etc.

Neodent has a good record as a responsible, ethical company and its Code of Conduct is very similar to Straumann's, which led to the successful integration of the Group's ethical principles in 2016. Our onboarding training for new employees focuses on corporate alignment including our Code of Conduct, which protects employees from discrimination (unequal treatment based on gender, race, religion, or sexual orientation).

No cases of discrimination were reported in 2016. Health/safety training and awareness are given due importance throughout the Group, and no workplace fatalities or serious accidents were reported in 2016. Employees are obligated to report any violation, suspected violation or misconduct. In 2016, five Code of Conduct violations were reported worldwide, all of which led to dismissal.

OUTLOOK

We expect our workforce to grow in 2017 as we meet increasing demand for our products and as we pursue our strategy to exploit growth opportunities in emerging markets and attractive segments. We will continue to refine and expand our staff development programs, but the key priorities in 2017 will be implementing our leadership development program and driving behavioral and mindset changes to create and sustain a high performance culture. Our goal is to extend our 3-day Cultural Journey workshop program to all employees by year end and for all managers with leadership roles to participate in the new leadership program in the next 2–3 years.

An array of externally provided assessment tools are used to measure organizational culture and effectiveness as well as group and leadership styles. It usually takes 3–4 years to see a distinct change in an organization's culture, which is why we do not foresee an organizational cultural inventory re-assessment until 2018.

Communities

Enhancing well-being and quality of life

Our solutions help more than one-and-a-half million people every year by providing safe, effective, lasting solutions that enhance well-being and quality of life. This is our biggest contribution to the community.

At the same time, we acknowledge that millions of people do not have access to even basic dental care, which motivates our support for initiatives that make dental treatment and education about oral hygiene available to the underprivileged. Like most of our charitable activities, these are connected to our field of business – since this is where we can make a meaningful difference.

SUPPORT FOR THE UNDERPRIVILEGED

2016 was similar to previous years in terms of sponsoring activities. We evaluated 65 requests and supported 20 (see table overleaf). In addition, Straumann UK helped to organize a fund-raising event in which customers and employees raised more than GBP 50 000 for an international charity that trains local healthcare workers in the provision of emergency dental treatment in some of the poorest communities in the world.

STRAUMANN AID

Straumann AID (Access to Implant Dentistry), which was set up in 2007, is another global initiative to help underprivileged patients who are in need of treatment but cannot afford it. It relies on collaboration with dentists from the ITI network, who provide the implant treatment without charge, while Straumann makes the respective product donations.

OUTREACH IN DEVELOPING REGIONS

Elsewhere, we continued to support basic dental care initiatives, mostly in developing regions. We are grateful to our dental partners—many of whom are volunteers—for their devotion and for ensuring that the funds are used efficiently.



Many people around the world are unable to benefit from dental care. As an industry leader and responsible corporate citizen, we help in a practical, meaningful way.

HELPING ECTODERMAL DYSPLASIA PATIENTS

We continued our longstanding commitment to helping people affected by ectodermal dysplasia. Sufferers typically have severely malformed or missing teeth from infancy, and their dental treatment is rarely covered by insurance. Straumann provides free implants and prosthetics as well as financial support to the National Foundation for Ectodermal Dysplasia (NFED), a US-based non-profit organization that helps patients and their families around the world.

SUPPORT FOR YOUNG DENTISTS

We continued to sponsor four young dental students in Cambodia and Nicaragua, who are connected with charitable projects that we support there. Our hope is that these students will help to address the huge local need and to sustain the respective projects.

All the abovementioned projects focus on dentistry and promote Straumann's reputation among stakeholders as a caring, responsible corporate citizen. This supports our business and thus adds value for our shareholders.

MAIN INITIATIVES AND PROJECTS SPONSORED BY STRAUMANN IN 2016

REGION	LEAD PARTNER	OBJECTIVE ¹	STATUS/RESULTS
Cambodia	'Hope for All' Clinic	Dental student scholarships and clinic support	Support ongoing since 2007; three students fully supported
	University of Basel, Switzerland	Dental outreach project	2016 project completed
Cameroon	University of Geneva, Switzerland	Dental treatment at Mfou, Obala and Soa hospitals	2016 project completed; approx. 360 patients treated
Dominican Republic	University of Zurich, Switzerland	Dental outreach project	2016 project completed
Ethiopia	Julius-Maximilians-University Würzburg, Germany	Dental outreach project	2016 project completed
Kenya	Dentists for Africa, Germany	Dental treatment at hospitals	2016 project completed
Korea	Smile Foundation, Korea	Supporting dental treatment for underprivileged and handicapped people	2016 project completed
Myanmar	600Kids, Switzerland	Dental treatment for children in the delta region	Ongoing project
	Witten/Herdecke University, Germany	Free dental care for children	2016 project completed
Nicaragua	Sonrisa Foundation, Switzerland	Free dental care for orphaned children; dental student scholarship	Support ongoing since 2006
Syria/Turkey	Alkawakibi Association for Democracy and Human Rights, Germany	Prosthetic restorations for patients with facial damage (donations of implants)	2016 project completed
Tanzania	Secours Dentaire International, Switzerland	Training for dentists and assistants	2016 project completed
Uganda		Donation of equipment and sanitary installations	2016 sponsoring project completed, clinic treats up to 100 patients per day
United States	National Foundation for Ectodermal Dysplasia, USA	Financial, treatment and PR	Support ongoing since 2004
	University of Connecticut School of Dental Medicine, USA	Dentures for native people in south-east Alaska	Annual outreach trip completed
Other	Straumann UK / Bridge2Aid	Training local healthcare workers in the provision of emergency dental treatment in the developing world	GBP > 50 000 raised; third consecutive year of support
	Straumann AID	Free products for underprivileged individuals	Ongoing project

¹ In each case clear prerequisites and goals were set.

CLEAR PRINCIPLES AND GOALS

Sponsoring requests and initiatives are evaluated according to clearly defined principles and policies by our Corporate Sponsoring Committee, which reports periodically to the Executive Management. For each charitable project, clear goals were set. We look for continuity and sustainability in the projects we support, which is reflected in our long-standing relationships and commitments.

OUTLOOK

We shall continue our support for charitable activities in the dental field, focusing on education programs and initiatives or projects that provide access to dental treatment for needy people. We also plan further sponsored events, for example to treat edentulous patients who are unable to afford tooth replacement treatment. This kind of involvement is in the interest of multiple stakeholder groups.

Global production & logistics

Driving efficiency and expanding capacity to ensure future success

RISING TO THE CHALLENGES OF GROWING IN EVERY DIRECTION

Double-digit growth across all our businesses in 2016 reflects the strong increase in demand and the corresponding pressure on our production and logistics teams to supply higher volumes with uncompromised quality. At the same time, the inclusion of new products and brands in our overall portfolio significantly increased the logistics challenges – not to mention requirements for timely delivery and the fact that every day we serve more customers in more places than ever before.

Moreover, our profitability target meant that gross margin contribution had to be maintained. This was only possible thanks to a number of successful projects to improve efficiency, for example the continuation of our automation strategy including unmanned turning operations in our implant system production facilities, which contributed to an 8% increase in productivity in our core business.

NEW PRODUCTS

Upscaling for the rollout and extension of recently introduced lines has also been demanding for Villeret and Andover.

Having now sold almost a million Straumann BLT implants since the initial launch in 2014, we are still increasing production. In addition, we have extended the range and added new guided surgery tools. At the same time, the success of our Variobase abutments has led to a whole family of new products.

New products and above all the international expansion of Neodent's business stretched capacity in Curitiba, making it necessary to rephase certain launches in order to avoid backorders for in-market products.



In 2016, our milling center in Arlington, Texas, was extended and refurbished.

In CAD/CAM prosthetics, we added further options to our existing lines which are milled centrally in Markleeberg, Arlington, Curitiba and Narita. Our biggest project was to create the etkon iDent multiplatform service, offering a large range of high quality custom abutments for implants made by our major competitors.

These are just a few examples of the many initiatives that occupied us in 2016 (see p.39); many are still to come.

NEW CAPACITY

Our growth makes it essential to expand. Our extension in Arlington became operational at the beginning of 2016 and we continued to leverage capacity elsewhere for example by operating additional shifts. We invested in additional machines in Andover. We also completed the technology transfer from Villeret to Andover so that the two facilities now have equivalent capabilities. Lack of capacity in Villeret makes a production expansion necessary. Production expansion is also under construction in Curitiba.

Apart from this, the acquisition of Equinox in India has added an implant production facility to our global pro-

STRAUMANN'S PRODUCTION SITES

LOCATION	PRODUCTS	STAFF	MARKETS	CERTIFICATION
Villeret, Switzerland (Straumann)	Implant systems	386	Global	ISO, FDA, Anvisa, MHLW
Curitiba, Brazil (Neodent)	Implant systems	417	Latin America, US, Iberia, Italy	Anvisa, ISO, FDA
Andover, USA (Straumann)	Implant systems	114	Global	ISO, FDA, Anvisa, MHLW
Mumbai, India (Equinox)	Implant systems	39	India, neighboring countries	ISO
Markkleeberg, Germany (Straumann, etkon)	CADCAM prosthetics	68	Europe	ISO
Arlington, USA (Straumann, etkon)	CADCAM prosthetics	37	USA	FDA
Narita, Japan (Straumann, etkon)	CADCAM prosthetics	15	Japan (Asia)	n / a
Malmö, Sweden (Straumann)	Biomaterials	27	Global	ISO, FDA, Anvisa, MHLW

duction network. This and the creation of new jobs increased our global production headcount to more than 1100.

NEW TECHNOLOGIES

Aside from efficiency and capacity increases, we have been evaluating innovative technologies like injection moulding to produce ceramic implants, 3D printing (for example to fabricate models), milling of abutments from bars, and 3D printing combined with milled metal frameworks. We also invested in state-of-the-art production equipment for our proprietary glass ceramic material, to coat abutments and to enhance our custom abutment range.

UPGRADING OUR INFRASTRUCTURE

In addition to purchasing equipment, we have also invested in our infrastructure, for example in Villeret, where we have introduced a new software system to manage increasing complexity and to further standardize shop floor processes. It brings us closer to our goal of creating a paperless workflow and supports our commitment to high quality and compliance. External audits in general have reconfirmed the high standard of our quality management system (p. 94).

NEW WORKFLOWS FOR LOGISTICS

The main challenge in Logistics has been the stream of new products and the significant increase (more than 500 per year) in new articles from our development pipeline in addition to articles from Neodent, Medentika, botiss and Anthogyr—resulting in double digit volume growth. To manage this we have introduced new systems and structures—for example a ‘pick-to-light’ system in our Swiss, German and US warehouses and a new structure allowing efficient drop shipments.

OUTLOOK

In 2017, production and logistics will focus primarily on the geographic roll-out of our value business as well as new products and various measures to increase capacity. Our aim is to leverage output in Villeret and Andover by a quarter and to almost double capacity in Curitiba by 2018. We will also upgrade production in India and will work towards establishing new milling capabilities in various locations. In logistics, we will complete the installation of new systems in our main warehouses and evaluate extending it to other sites.

All of this will require substantial investments in plant and equipment.

Environment

Creating opportunities to use energies and resources more effectively

One attribute of the high-performance culture we are working to create is the effective use of resources and energies without waste. Straumann recognizes that sustainable development and environmental protection is a global challenge that must be addressed collectively. To do our part, we monitor our environmental performance, which enables us to deepen the understanding of our impacts and uncover innovative ways to reduce our footprint.

As a leading provider of implant dentistry solutions, the environmental impacts associated with our operations are relatively minor. Apart from production and research activities, our impacts are low compared to most manufacturing companies. We do not produce dental filling materials or surgical equipment, and therefore do not use significant amounts of problematic metals such as mercury, lead, or manganese that are often found in production processes of manufacturers serving the dental industry. However, this does not absolve us of the responsibility to operate in an environmentally conscious manner.

Our environmental initiatives are focused on areas Straumann has the greatest potential to impact. Consequently, resource efficiency, energy consumption and waste reduction are key priorities.

OUR RESPONSIBILITY

Our product portfolio ranges from titanium and ceramic dental implants to prosthetic elements made of ceramic, metal, or polymer, and to biomaterials for tissue regeneration. We also distribute digital equipment such as scanners and milling machines, which are manufactured by third parties.

The Straumann Group's environmental impact occurs mainly in the production process as well as in research

and development. Our principal product is dental implants, which are produced from rods of titanium or titanium-zirconium alloy on computerized CNC lathes. In the manufacturing process, cutting oil is used as a cooling agent, followed by sand-blasting, acid etching, cleaning, packaging, and sterilization. As a medical device manufacturer, we are subject to stringent regulations. Adherence to strict quality-control protocols for identity and purity as well as analysis of raw materials ensure that manufactured products are safe and effective. We fully document all manufacturing processes to provide traceability.

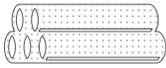
At Straumann, environmental stewardship goes beyond compliance with laws and regulations. As outlined in our Code of Conduct, we encourage management and employees to consider environmental protection as an integral part of their daily responsibilities. Suppliers are also expected to uphold our values as outlined in our Supplier Code of Conduct. The code specifies our expectations with regards to environmental protection in addition to social and legal requirements. To deliver on these commitments, we monitor energy consumption and corresponding greenhouse gas emissions (GHGs), certify our environmental management system to ISO 14 001, and communicate our progress over time. This environmental performance report is based on available data for our group headquarters in Basel (Switzerland) and all production sites in operation during the entire reporting year: Villeret (Switzerland), Markkleeberg (Germany), Malmö (Sweden), Andover (USA), and Arlington (USA), Curitiba (Brazil) and Narita (Japan).

OUR CONTRIBUTION

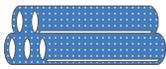
To reduce the impacts associated with our operations, we closely monitor our energy consumption and corresponding CO₂ emissions. In 2016, we implemented a variety of energy conservation measures across our facilities. For example, we applied a new energy model in

TITANIUM RECYCLING

(tons)



2015
11.9



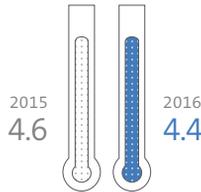
2016
14.1

+18%

Strong volume growth accounted for increased consumption, emissions and waste material.

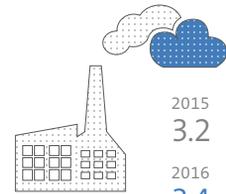
HEATING ENERGY

(GWh)



-4%

CO₂ EMISSIONS PER CAPITA

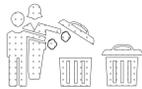


+6%

REFUSE

(tons)

2015
230



2016
241

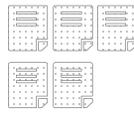


+5%

Measures to conserve energy implemented across sites.

PAPER CONSUMPTION PER CAPITA

(sheets)



2015
3 529



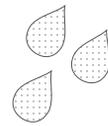
2016
3 117

-12%

WATER

(m³)

2015
49 734



2016
62 336



+25%

Villeret, our largest production site in terms of energy and materials consumption. By participating in the Energy Agency of the Swiss Private Sector (EnAW) program, we have agreed to implement measures to increase energy efficiency by 2% per year for the next 10 years. To monitor our progress towards this goal, we will report our performance to the Canton of Bern between 2015 and 2024.

Participation in this program reduces our carbon footprint and energy costs. It also supports the mission of the Swiss Energy Strategy 2050 to reduce GHGs nationally and complies with the CO₂ Act, which is in line with the UN Climate Conference accord to limit global warming to 2°C. In 2016, our Villeret production facility saved over 87 000 kWh as a result of these measures.

Straumann's US headquarters in Andover, the refurbished facility in Arlington, and the new milling center in Narita (Japan) also contributed to improving energy efficiency by using LED lighting. The upgrade from metal halide lighting in Andover is expected to save over 226 000 kWh annually and to reduce maintenance costs due to the longer life of LEDs.

COMMITMENT TO TRANSPARENCY

We interact with stakeholders through a variety of reporting activities, including the Carbon Disclosure Project CDP. In the context of CDP's Climate Change program, we regularly and transparently communicate our CO₂ emissions and reduction initiatives. In 2016, we reached the 'Awareness' level of disclosure. Companies who achieve this have started to implement changes to reduce emissions and identify risks and opportunities. This achievement reflects the continuous improvement since our first participation in 2010, emphasizing our commitment to improve transparency and disclosure regarding our environmental performance.

ENVIRONMENTAL PERFORMANCE

In 2016, our production volumes increased considerably. This accounts for the main differences in our environmental reporting and performance compared with 2015. Following the full acquisition of the Brazilian implant company Neodent in 2015, we worked hard to integrate their operations in our reporting promptly and pragmatically. In 2016, we improved the consistency of our data collection and have restated the 2015 electricity con-

sumption figures and associated Scope 2 emissions accordingly. We have also included full-year data for our new milling center in Narita (Japan), which opened at the end of 2015 and had only a small impact on our environmental key figures in 2016.

RAW AND OPERATING MATERIALS

The volumes of implants and abutments sold expanded considerably in 2016, and with it the amounts of titanium used and recycled.

Yttrium stabilized zirconium oxide is used for ceramic implants and prosthetic components. Cobalt-chrome and polymethylmethacrylate (PMMA) are used in customized crown and bridge solutions. Consumption of these raw materials increased significantly due to increased demand and the continuing shift to high-end prosthetic materials.

One of our goals is to implement paperless workflows in several areas. Villeret introduced a computerized system that replaces paper-based workflow on the shop floor, reducing paper consumption and human error. The manufacturing execution system (MES) tracks and documents the transformation of raw materials to finished goods and already covers 80% of product volumes. It also helps to manage the increasing complexity of an expanding portfolio—in 2016, Straumann added 500 new items to its product range. In addition, our facility in Arlington supported this goal by switching to paperless invoicing for its shipping activities. Collectively this resulted in a further reduction of paper consumption overall and per-capita for the fifth consecutive year. We are exploring opportunities to extend these systems to other production sites to further reduce paper consumption in the future.

ENERGY USE AND GREENHOUSE GAS EMISSIONS

Energy use increased due to production growth. While electricity consumption developed roughly in line with production activities, heating energy slightly declined, mainly due to favorable climatic conditions.

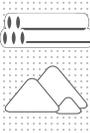
Increased electricity consumption led to higher emissions. We monitor CO₂ emissions that are generated by electricity and heating, and distinguish between direct (Scope 1) and indirect (Scope 2) emissions. While Scope 1

encompasses emissions from sources such as burning natural gas, Scope 2 comprises emissions from purchased electricity and district heat.

OUTLOOK

The increase in our environmental footprint in 2016 was due to strong volume growth and the expansion of our business in general – which are expected to continue. Looking forward, our commitment to continuous improvement will be critical to minimizing our environmental impacts. To help offset increased energy consumption, we are evaluating the installation of photovoltaic panels at our Curitiba site. Furthermore, we will continue introducing paperless processes wherever feasible to support our goal of using resources more efficiently. We will also work towards including data for the recently acquired Equinox production facility, although this may take some time.

ENVIRONMENTAL KEY PERFORMANCE FIGURES

		Performance indicator	Unit	2016	2015
 Product raw materials	Titanium	Consumption	tons	27.51	22.36
		Recycled (consumption minus product) ²	tons	14.12	11.90
	Cobalt chrome	Consumption	tons	5.39	3.16
		Recycled ²	tons	1.54	1.96
	Zirconia	Consumption	tons	3.58	2.28
Polymethyl methacrylate	Consumption	kg	38	24	
 Operating materials	Various oils	Consumption	tons	78.15	77.45
		Recycled ²	tons	58.94	41.84
	Cleaning solvents ²	Consumption ²	tons	44.12	36.60
		Recycled ²	tons	26.47	21.50
	Acids	Consumption	tons	64.61	52.93
Paper	Consumption	million sheets	5.56	5.85	
	Consumption per capita ³	sheet/employee	3 117	3 529	
 Energy and CO ₂	Electricity	Consumption ^{4,5}	MWh	25 640	22 803
		Consumption per capita ^{3,5}	MWh/employee	14.39	13.76
	Heating	Total heating energy	MWh	4 377	4 604
		– Fossil fuel	MWh	3 479	3 801
		– District heat	MWh	897	803
Total heating energy per capita ³		MWh/employee	2.46	2.78	
 Emissions	CO ₂ emissions ⁶	Total emissions	tons	6 098	5 323
		– Direct (Scope 1) ^{5,6,7}	tons	1 116	1 083
		– Indirect (Scope 2)	tons	4 983	4 239
	Total emissions per capita ^{3,5}	tons/employee	3.4	3.2	
 Water	Water	Consumption	m ³	62 336	49 734
		Consumption per capita ³	m ³ /employee	35.0	30.0
	Untreated waste water	Disposal	m ³	112	101
 Waste	Diverse waste	Hydroxide sludge ²	tons	16.9	17.1
		Contaminated material	tons	156	131.3
		Solvents ²	tons	3.6	3.3
	Refuse	Total	tons	241	230
Per capita ³		kg/employee	135	139	

¹ Includes data for our Narita milling center.

² Data is not yet available for Neodent – our environmental data collection process is being refined.

³ Per capita figures refer to employees at the relevant sites only.

⁴ Includes 1505 MWh (2015: 1138 MWh) diesel consumption for electricity generation.

⁵ 2015 data for Neodent revised.

⁶ Scope 1 covers CO₂ emissions directly emitted by sources owned or controlled by Straumann such as heating boilers, while Scope 2 comprises emissions from generating electricity and heat we consume.

⁷ CO₂ emissions associated with electricity consumption of 4783 tCO₂e (2015: 4061 tCO₂e) calculated according to the location-based approach, as defined in the GHG Protocol Scope 2 Standard. Results can be used as a proxy for the market-based approach.

Pages 119-121 include information on the Global Reporting Initiative (GRI) indicator G4-22 (see also page 191 f.).