

Annual Report 2018

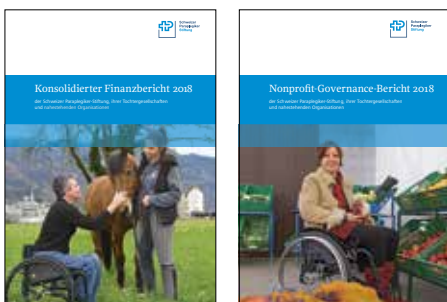
of the Swiss Paraplegic Foundation, its subsidiaries
and closely related organisations



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This annual report, together with the situation and performance report in the finance report and the non-profit-governance report (both available in German), provides a comprehensive insight into the wide-ranging work performed by the Swiss Paraplegic Foundation, its subsidiaries and closely related organisations.

The publications can be downloaded from the Internet (paraplegie.ch/jahresberichte) or are available on request from the Secretarial Office of the Swiss Paraplegic Foundation, 6207 Nottwil (phone 041 939 63 63, sps.sec@paraplegie.ch).



Vision

The Swiss Paraplegic Group is a centre of excellence and the reference institution for anyone with a spinal cord injury in Switzerland and its neighbouring countries.

Mission

The Swiss Paraplegic Group adopts a comprehensive approach to the treatment and rehabilitation of people with spinal cord injury and helps them to lead a self-determined life.

Values

The Swiss Paraplegic Group places the emphasis on people. In everything that it does, it is constantly seeking to achieve its overall objective. It acts responsibly with regard to its patrons, uses resources for their intended purpose and provides transparent information about its activities. Its daily work is governed by trust, esteem, teamwork, results and the maintenance of its pioneering role in the industry.

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Annual Report 2018 of the Swiss Paraplegic Foundation, its subsidiaries and closely related organisations

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Dear Reader

Ten group companies are now in operation under the umbrella of the Swiss Paraplegic Foundation, which was founded 44 years ago. Their brief is to treat, care for, and advise people with spinal cord injuries in Switzerland. Together, they constitute the well-known, globally unique network of services available to people living with a spinal cord injury from the time of their accident to the end of their life.

Without financial support, such comprehensive services for reintegration into family life, work, and society would not be possible. We are therefore also accountable to our benefactors, donors, and funding bodies. Our annual reports provide transparent information about how we use the funds.

In this process, we increasingly have to deal with the self-critical question: how can we be sure that we are doing the right thing? To answer this question, the Board of Trustees commissioned Swiss Paraplegic Research to develop an impact model to serve as a basis for the systematic recording of the impact of our services.

As a result, we can, on the one hand, show our benefactors and donors, as well as the funding bodies and authorities, what effect their contribution has for people with spinal cord injuries. On the other hand, the impact assessment ensures that we continually look at the effectiveness of our activities and adjust them to fit our strategy.

The group companies of the Swiss Paraplegic Foundation were once again firmly committed to providing the best possible services for people with spinal cord injuries in the year under review. More than 1,600 dedicated professionals and 1.8 million benefactors support these services. We owe them all our sincere thanks for what they have achieved and for their loyal support.



Dr. sc. tech. Daniel Joggi
President of the Swiss Paraplegic Foundation

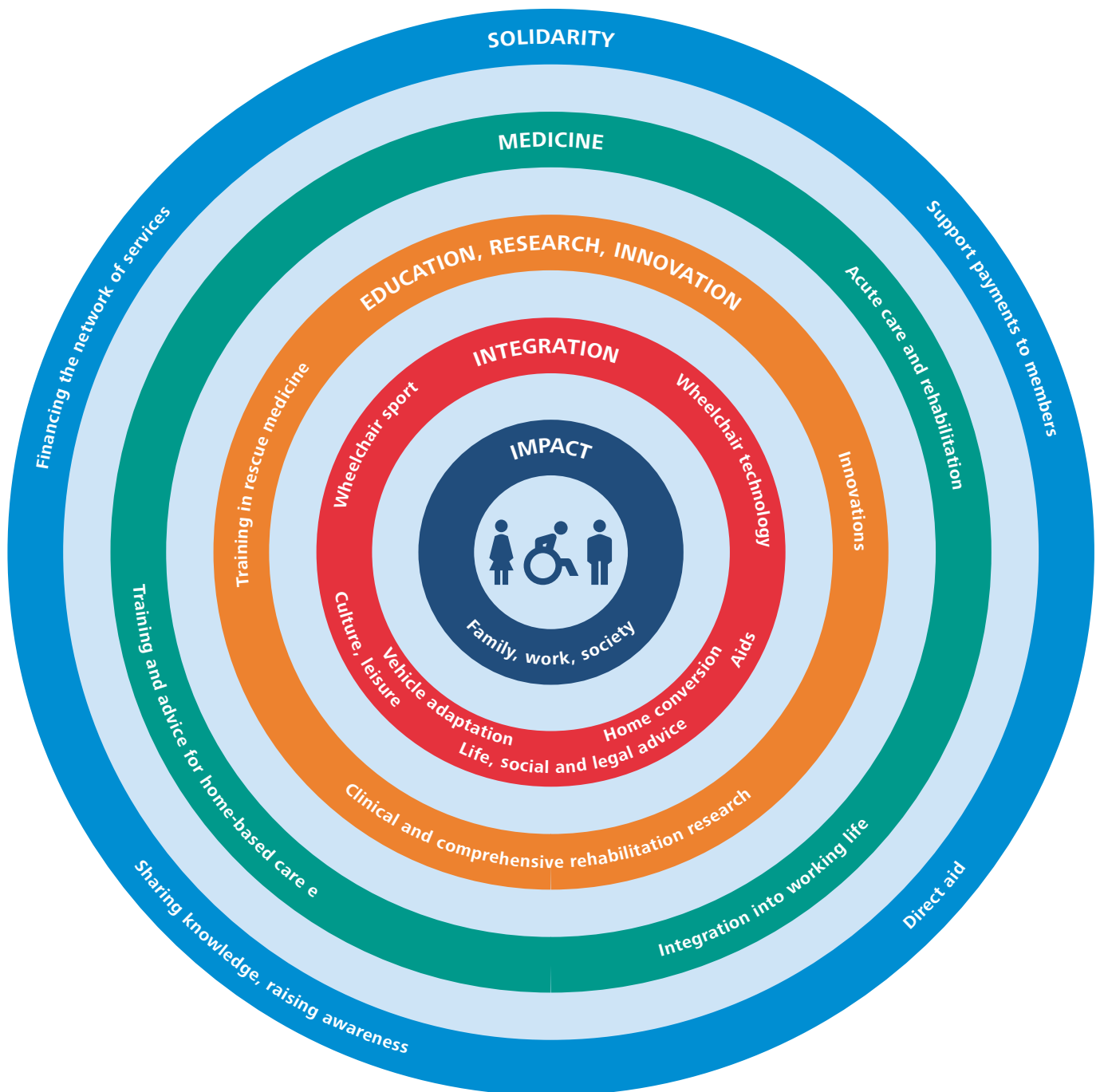


Dr. iur. Joseph Hofstetter
Director of the Swiss Paraplegic Foundation



Strategic service areas

The Swiss Paraplegic Group (SPG) provides a unique network of services for people with spinal cord injuries, from primary care through to the end of their lives. Its aim is to provide comprehensive rehabilitation and to reintegrate people affected into family, work and social life. This strategic basic objective comprises four areas of services.



■ Solidarity

- **Maintain a comprehensive approach.**
The SPG provides a comprehensive, practical range of services for people with spinal cord injury – in every area of their life, and for the rest of their lives.
- **Encourage interaction.**
The SPG intends the Nottwil Campus to be a centre of excellence for integration, assistance and lifelong learning for patients of all ages.
- **Ensure goodwill.**
The SPG makes sure that its benefactors and donors are aware of the unique network of services available and support us sustainably in the long term.
- **Encourage multidisciplinary exchanges.**
The SPG seeks to establish a strong network both nationally and internationally that will guarantee better basic conditions for people with spinal cord injury.

■ Medicine

- **Ensure comprehensive care.**
In the Swiss Paraplegic Centre in Nottwil, the SPG offers all the medical services needed to guarantee the professional acute care and rehabilitation of people with spinal cord injury. It encourages them to become involved in their therapy and to take responsibility.
- **Strengthen partnerships.**
The SPG strengthens relationships with partners in specific disciplines and local institutions for the benefit of people with spinal cord injury.
- **Play a role in defining health policies.**
The SPG is a member of specialist committees with a political influence that endeavours to ensure that highly specialised medical care for people with spinal cord injury will continue to be provided within the healthcare system.

■ Education, Research, Innovation

- **Combine research and practice.**
The SPG contributes to the sustainable improvement of the health, social integration, equal opportunities and self-determination of people with spinal cord injury by carrying out clinical and comprehensive rehabilitation research. The SPG plays a leading role in this area.
- **Exchange know-how.**
The SPG liaises closely with universities, institutions, the World Health Organisation (WHO) and patient organisations. It shares all findings promptly and in full to support their worldwide application.
- **Drive innovation.**
The SPG promotes innovation and looks for the latest findings in order to help people with spinal cord injury to become as independent as possible.
- **Provide education.**
The SPG encourages initial and further education in all its fields of activity. It trains and fosters the best talents and highly qualified new professionals in order to continue to guarantee the highest level of care for people with spinal cord injury.

■ Integration and Lifelong Assistance

- **Create networks throughout Switzerland.**
In association with its partners, the SPG establishes a network structure that helps people with spinal cord injury in Switzerland.
- **Improve integration.**
The SPG offers comprehensive services to meet people's needs in order to improve the integration into society of people with spinal cord injury.
- **Support people with spinal cord injury and their family and friends.**
The SPG helps people with spinal cord injury to lead an independent life and educates their friends and family so that they can provide the necessary support. It optimises the range of services available in the field of prevention.

Services 2018

Solidarity

1.8 million members

Almost a third of Swiss households are members of the Benefactors' Association. The 1.8 million members in 1.12 million households generated 70.8 million Swiss francs in membership fees.

11% permanent members

Growth in the number of lifelong memberships was above average, rising by 7,838 to a total of 79,452 members (11%).

25% direct aid

The Benefactors' Association paid 5.6 million Swiss francs in benefactor benefits to members who had recently had an accident. In addition, the Swiss Paraplegic Foundation approved 1,227 applications for direct aid, which amounted to 16.8 million francs in support payments. In total, the cost of this aid was 25% of all membership fees and donations received.

43% to areas of services

43% of the total amount received in membership fees and donations went indirectly to people with spinal cord injuries by means of support for the areas of services. 12% was spent on the infrastructure of the specialist clinic, and 20% was spent on benefactor support, fundraising, and administration of the Swiss Paraplegic Foundation (the average Zewo value was 21%).

10,635 visitors

140 internal guides from all areas and all levels of the hierarchy provided a total of 10,635 visitors with an insight into the specialist clinic on 432 tours.

115,801 guests

Hotel Sempachersee welcomed 115,801 guests to 5,176 conferences and seminars. 39,506 overnight stays were booked on the Nottwil Campus.

Medicine

52,628 care days

1,205 patients received 52,628 days of inpatient care. 9,103 of these days were dedicated to ventilated patients. 143 patients with spinal cord injuries completed their initial rehabilitation at the Swiss Paraplegic Centre. Another 804 were treated at Nottwil for complications or aftercare, with 26% of them admitted as emergencies.

26% sports accidents

53% of initial rehabilitation patients were affected by paraplegia, and 47% by tetraplegia. 67% of new spinal cord injury patients were male. Accidents caused 53% of spinal cord injuries, with falls (42%), sports (26%) and traffic accidents (20%) being the most frequent causes.

5.9 hours of care

93% of the 156 beds at the Swiss Paraplegic Centre were filled. On average, 5.9 hours of care were provided per patient per day.

67 clinical studies

The Swiss Paraplegic Centre is conducting 67 clinical studies, including 37 new ones.

1,231 employees

1,231 employees worked at the specialist clinic, including 155 apprentices. 74% of staff were women. Employee turnover was just 8.3%.

1,550 client visits

ParaHelp conducted 1,550 home consultations for clients. People with spinal cord injuries and their relatives had a great need for consultations on pressure ulcers and their prevention.

Education, Research, Innovation**14,521 participant days**

The Swiss Institute of Emergency Medicine Sirmed held a record number of 14,521 participant days.

10,000 participants

Since 2010, Swiss Paraplegic Research has collected and evaluated data for over 10,000 people with spinal cord injuries for its Swiss Spinal Cord Injury Cohort Study (SwiSCI), in cooperation with Switzerland's four paraplegic centres and the Swiss Paraplegics Association.

22 countries

22 countries participated in a worldwide survey by Swiss Paraplegic Research of people with spinal cord injuries. By December 2018, data had been collected from over 12,000 participants. Initial results will be available at the end of 2019.

101 publications

Swiss Paraplegic Research published 101 articles in specialist international journals and books. Six PhD theses and 24 Master's theses were successfully completed.

952,000 Swiss francs

Swiss Paraplegic Research received 952,000 francs for new and ongoing research projects from the European Commission, the Swiss National Science Foundation, and other funding agencies.

15 funded projects

The Innovation Centre for Assistive Technologies has overseen 15 funded projects concerning the provision of aids, sport and therapy, and learning technology. Five projects were completed in the year under review.

Integration and lifelong assistance**11,100 wheelchair club members**

The 27 wheelchair clubs of the Swiss Paraplegics Association have 11,100 members nationwide.

56 seats

As an umbrella organisation for people with spinal cord injuries, the Swiss Paraplegics Association represents their interests in 56 strategic and operational committees.

534 athletes

Wheelchair Sport Switzerland has assisted 534 athletes with licences to compete and supported 60 athletes in development programmes. 11 sports disciplines are supported by technical committees that promote the development of each sport and provide assistance to athletes.

471 legal dossiers

The Institute for Legal Advice has processed 471 legal dossiers for Swiss Paraplegics Association members with spinal cord injuries.

315 construction projects

The Centre for Obstacle-free Building has provided consultation services for 315 new construction projects for people with spinal cord injuries seeking to move, build, or renovate.

525 wheelchairs

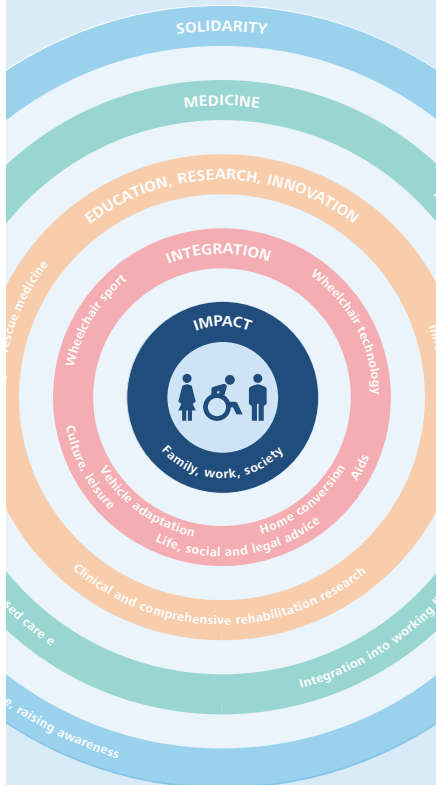
Orthotec has converted 282 vehicles for wheelchair users, provided 787 orthopaedic aids, and customised 525 new wheelchairs for people with spinal cord injuries. Over 4,400 customers have procured Orthotec products and attended consultations. 13,050 deliveries of incontinence products have been made.

24,023 consultation hours

Active Communication, which supplies electronic aids to children and adults with a disability, has provided 24,023 consultation hours.

Focussed on impact

Impact-oriented action in the network of services



Relevance of impact measurement

Services, measures, or products (output) are the preconditions for achieving an impact. Impact-oriented thinking and acting are essential when planning, implementing, and evaluating activities, projects, and programmes. Measuring the impact achieved by services, measures, and products means that lessons can be learnt from the results and output can be constantly improved.

Swiss Paraplegic Research develops a model that systematically determines the sustainable impact of group-wide services. It will now be able to show the societal dimension of the activities of the Swiss Paraplegic Foundation (SPF).

Impact-oriented action has been a basic requirement of the SPF since its inception. The comprehensive network of services for people with spinal cord injuries built up by Dr. Guido A. Zäch, the founder of the Foundation, aims to deliver precisely this. Within this network of services, funds from benefactors, donors, and the public sector should have the greatest possible impact. The SPF pursues this objective with its subsidiaries and closely related organisations. While in the past measurements have mainly been of the direct services provided for people with spinal cord injuries, since 2018, the conditions have been in place for the measurement of the long-term impact of these services as well.

Answers to key questions

In 2018, Swiss Paraplegic Research (SPR) completed the concept development of its impact measurement model. As there is no single correct system for measuring the impact of services, SPR uses a model adapted to the circumstances of the SPF, which takes account of the four areas of services provided by the network. Impact measurement is focussed on the following questions: “Does the SPF fulfil its remit?”, “Are the activities evidence-based?” and “Are the activities geared towards the needs of the target groups?”

Evidence of achievement for benefactors and donors

Using labour market integration as an example, the impact measurement will in future no longer only show the number of hours (output) spent by the ParaWork department at the Swiss Paraplegic Centre on coaching or retraining. It will also reveal how many people with spinal cord injuries have found a job as a result and how many still have that job after a number of years. The impact model will therefore measure what impact professional reintegration has on people with spinal cord injuries, on their environment, and on society. Such information will show whether the funds provided by benefactors, donors, and the public sector are invested sensibly and sustainably.

A healthcare learning system

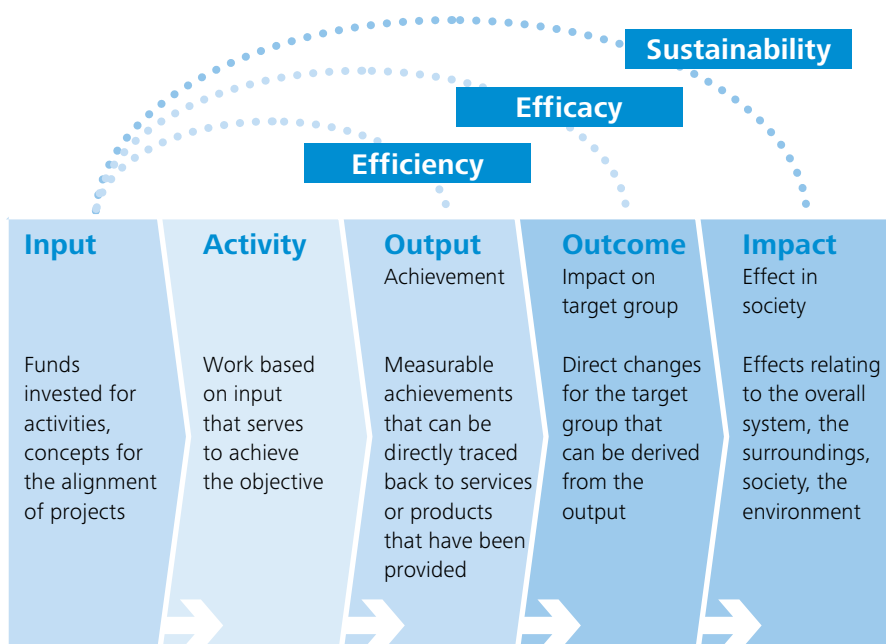
With its new approach to impact measurement and impact orientation, the SPF is introducing a healthcare “learning system” for people with spinal cord injuries in Switzerland. In this process, SPR will help to evaluate and determine whether the SPF, its subsidiaries, and closely related organisations are doing the right things, doing things correctly, and how they can constantly improve. In 2019, SPR will issue its first impact report on group-wide activities.

Real-world challenges

While, in an ideal world, it would be possible to provide evidence of the impact of services, measures, or products (output), it is difficult for a company like the SPF to make statements on the impact of its numerous services and projects from the whole group, or to demonstrate the positive macroeconomic and societal effects of its activities. In order to explain the connections and processes comprehensively, quantitative methods of measurement would need to be applied and supplemented by qualitative methods. In reality, it is only possible to meet these high requirements in part.

Major contribution to quality of life

Direct evidence of links between the funds invested (input) and the impact in society is seldom possible. However, the new impact model will allow the SPF to show very plausibly that its impact makes a major contribution to improving the quality of life of people with spinal cord injuries in Switzerland and beyond.



Impact of members' contributions and donations. The impact model determines the immediate impact (outcome) that the SPF triggers through its services (output) for the target groups, as well as the longer-term impact on society.

Basis of the impact model

The concept of the World Health Organisation (WHO) International Classification of Functioning, Disability and Health (ICF) serves as the framework for impact measurement. In addition to mortality and morbidity, functioning is a key indicator in the rehabilitation of, and lifelong assistance and support for, people with spinal cord injuries.

The 2013 WHO "International Perspectives on Spinal Cord Injury (IPSCI)" report presents all the relevant fields of action required as the basis for an impact model. The four areas of services of the Swiss Paraplegic Foundation (SPF) illustrate these fields of action.

The concept developed by Swiss Paraplegic Research (SPR) is an impact model with a 360-degree outlook. The impact model is based on:

- Data from the Swiss Spinal Cord Injury Cohort Study (SwiSCI) as the long-term monitoring system
- Comparative data from the International Spinal Cord Injury Survey (InSCI), which provides a systemic perspective for 22 countries
- Social system indicators for Switzerland based on the UN Convention on the Rights of Persons with Disabilities
- Quality management data from the SPF



Extension to the clinic on the Nottwil Campus



New visitor centre



Active Communication aids

The Swiss Paraplegic Foundation (SPF) puts new buildings into operation as planned and starts building a visitor centre. Donations play a key role in making the construction projects a success. The Swiss people attest to the innovation and efficacy of the SPF.

The ground-breaking ceremony in October 2015 marked the start of one of the most important construction projects since the Swiss Paraplegic Centre (SPC) opened in 1990. The expansion and modernisation of the specialist clinic have equipped it for the rising demand for its specialised services. As the owner of the buildings, the SPF was able to put the first of the new buildings into operation in the year under review. It is envisaged that the overall project will be completed in autumn 2020.

Earmarked funds invested

From February 2018, a new north wing has added 15,000 square metres to the surface area of the SPC. It includes the acute medicine department with intensive care medicine and its Intensive Care Unit. The north wing also houses two additional acute medicine wards, where patients with spinal cord injuries and, when there is available capacity, patients with back conditions who do not have spinal cord injuries can be admitted. The building of the extension to the SPC, which does not receive public subsidies, has largely been funded by donations. 95 % of the donations allocated to the whole construction project since 2015 had already been invested for this specific purpose by the end of 2018.

State-of-the-art technology thanks to donations

The north-west wing with the new operating theatres is also up and running. In October 2018, specialists in spinal surgery and orthopaedics performed the first procedure, using inter alia a 3D navigation system (O-arm), which allows conservative surgery of all areas of the spine with navigation to the precise millimetre. The O-arm is one of the instruments that was bought with the help of donations. 174,002 benefactors supported the investment in new medical technology and infrastructure to the tune of almost 7 million francs.

Benefactors help to raise awareness

February 2018 saw the start of excavation for the construction of a visitor centre. On 400 square metres, the "ParaForum" will use multimedia and interactive features to provide visitors with in-depth knowledge of the diagnosis of spinal cord injuries and life with paraplegia and tetraplegia. Thanks to the support of benefactors, it was possible to fund the building and exhibition through donations amounting to a total of 8 million Swiss francs. In autumn 2019, the "ParaForum" will celebrate its opening.

Becoming more internet-friendly

The SPF has overhauled and optimised its website at paraplegie.ch. Clear navigation allows visitors on all devices to rapidly access the desired information. A newsletter launched at the end of 2018 also keeps benefactors and other interested parties up to date with the latest topics from the Nottwil Campus.

Expanded range of aids

On 1 January 2018, Active Communication Ltd, based in Steinhausen in Canton Zug, became a non-profit wholly owned subsidiary of the SPF. Since 1999, the company has supplied people with disabilities or neurological disease with electronic and didactic aids for enhanced participation and self-determination in everyday life.

Employer award

In September 2018, the best employers were presented with the Swiss Employer Award. The Swiss Paraplegic Group came an outstanding fourth in the category of large companies with over 1,000 employees. More than 46,000 employees from 140 companies rated their work situation and environment.

Excellent reputation and efficacy certified

Every year, the GfK Business Reflector ranking identifies the Swiss companies with the strongest reputation. In 2018, the 15 best-known non-profit organisations were included for the first time. The SPF ranked third behind the Swiss Air-Rescue Rega and the Red Cross. In addition, market research by Swissfundraising found that the SPF is considered to be the most impressive Swiss aid organisation in terms of innovation and efficacy. It is rated the most competent organisation in the "People with a Disability" category.

Security and solidarity the most important motives for joining

In the year under review, the Benefactors' Association of the Swiss Paraplegic Foundation asked a representative sample of its members why they had renewed their membership. Constant awareness of being affected by a spinal cord injury and being able to count on the comprehensive expertise available in Nottwil was identified as a strong motive. The need to support people with spinal cord injuries, in particular in terms of rehabilitation at the SPC, returning to work and life-long assistance, as well as financial direct aid in cases of hardship was an equally strong motive. The measurable results will be incorporated into future marketing and communication measures.

Use of earmarked donations in 2018

Total CHF 15.5 million



42 %

New visitor centre building



33 %

Infrastructure: Intensive Care Unit and operating theatres



10 %

Renovation and extension work at SPC Nottwil



8 %

Direct aid to people with spinal cord injuries



4 %

Development of aids for people with spinal cord injuries



1 %

Occupational integration



1 %

Youth rehabilitation holiday weeks



1 %

Medical assistance for young people with spinal cord injuries



Intensive Care Unit with an atmosphere that promotes healing



Highly functional operating theatre



Spinal surgery unit celebrates anniversary

After two years of construction, the Swiss Paraplegic Centre (SPC) opens a modern Intensive Care Unit and new operating theatres. The clinic's classification as a special centre for traumatology has been confirmed. The clinic also celebrated the tenth anniversary of its spinal centre of excellence.

The intensive care unit on the new north wing has opened. Patients with life-threatening conditions can be cared for in single rooms equipped with state-of-the-art medical technology, and patients with mechanical ventilation can be supported as they are weaned off the ventilator. An interdisciplinary team ensures the specific service chain for the individual patient. As the average length of stay for patients with spinal cord injuries is considerably longer, the design of the intensive care unit assumes an important role. The new concept envisages an atmosphere that promotes healing, which is designed to lessen delirium to the greatest degree possible or prevent it altogether. This includes furnishings with coloured accents, reduced noise and odour emissions, large windows to let in daylight and allow the patient to look out at nature, and biodynamic lighting for better orientation.

Point of contact for emergency patients

A new point of contact ensures that paraplegic and tetraplegic emergency patients can be admitted and cared for 24 hours a day. From November 2018 onwards, the Intensive Care Unit and the Interventional Medicine department have had the relevant infrastructure, are designed for real-time diagnosis, and can ensure constant monitoring of emergency patients by specialist staff.

Spinal medicine as a competency

Two operating theatres and the central sterile goods store have been operational in the new north-west wing since October 2018. A third highly functional operating theatre will be up and running in summer 2019. Experts in neurosurgery and orthopaedics work hand in hand to give patients with and without spinal cord injuries the best possible care. All back conditions are treated, from common slipped discs to serious spinal cord injuries. Ten years ago, the SPC and the Lucerne Cantonal Hospital founded a unique centre of excellence that was run at the Nottwil and Lucerne sites for this purpose. To coincide with its anniversary in July 2018, it received its own logo and the new designation of "Swiss Centre for Back and Spine". In addition to spinal surgery, non-surgical outpatient treatment programmes were set up in the year under review offering optimally coordinated solutions for patients with back pain.

Recertified as a trauma centre

In 2015, the highly specialised acute care department at the SPC was certified as a specialist centre for traumatology within the trauma network of central Switzerland. This means that it performs supraregional and national tasks in the care of

patients with serious spine injuries and helps to improve the quality of medical care and its coordination. In its first audit for recertification in November 2018, the centre's classification as a local trauma centre was fully confirmed.

Tetrahand World Congress in Nottwil

The Tetrahand World Congress, which is held every three years, took place in Nottwil from 28 to 31 August 2018. Participants travelled from over 30 countries from all continents in what are thought to be record numbers. The SPC is one of the few clinics in Europe that performs challenging operations to improve the hand function of people with high degrees of paralysis. The World Congress comprises state-of-the-art symposiums, debates about treatment strategies, review lectures on defined topics, workshops, and ten blocks of submitted talks of a high academic standard. Networking among spinal cord injury specialists is of great importance in order to co-ordinate further training and research, and to make the latest treatment opportunities accessible worldwide to people with spinal cord injuries.

Outpatient programmes for occupational integration

Close co-operation is required between the Social and Occupational Integration department and the interprofessional therapy teams to best prepare a patient for discharge after initial rehabilitation. While returning home becomes a reality for many people, additional outpatient occupational rehabilitation is often needed for successful occupational reintegration. The ParaWork section of the Social and Occupational Integration department offers professional support with its outpatient programmes for "work-oriented integration".

Radiology of the future

Philips Medical Systems and the radiology department at the SPC have conducted initial studies for their co-operative "Advanced Imaging" project, which, among other things, have resulted in new diagnostic possibilities using artificial intelligence. A further study as part of the cooperative project is examining metabolic changes on the injured spinal cord, from which prognostic parameters for successful training can be derived. The results have been submitted as an abstract for the 2019 annual meeting of the International Society of Magnetic Resonance in Medicine (ISMRM).

Training programmes launched for employees

A personnel development initiative has started with two training programmes at a higher education level: the "CAS Leadership DUAL" programme supports management in a targeted manner, while the "CAS Ich in der Arbeitswelt 4.0" programme is open to all employees. It enables participants to make better use of the new opportunities afforded by networking and technological developments.



Tetrahand World Congress well attended



Support for occupational reintegration



CAS training event on the Nottwil Campus



New wheelchair workshop



Certified welding processes



Orthotec equipment used in film

In the last of a series of moves, **Orthotec** relocates rehabilitation technology department to the planned premises. The technological opportunities there have resulted in the centralisation of the services provided nationwide.

The extension and modernisation of the clinic has provided the orthopaedic aids specialist Orthotec with state-of-the-art facilities with more space, capacity, and avant-garde technology on the Nottwil Campus. In September, the rehabilitation technology department commenced operations in the new wheelchair workshop. The mechanics supply over 500 customised adaptive, electric, and sports wheelchairs for paraplegics and tetraplegics each year. 5,000 service and repair orders are also executed. With the wheelchair specialists located in the Swiss Paraplegic Centre and therefore close to therapists and customers, the best advice is always rapidly available.

Concentrated in Nottwil

To make best use of the additional resources, Orthotec has once again concentrated all its manufacturing capacities (rehabilitation technology) in Nottwil, and has moved out of the Zurich site in Kilchberg. Brunner Orthopädie GmbH took over the Orthotec site in Kilchberg from 1 July. A close partnership between Brunner Orthopädie and Orthotec ensures that customers with spinal cord injuries in the Zurich region will continue to receive good care.

Welding processes certified

After successful initial certification in 2017 (ISO9001:2008), Orthotec passed a re-certification audit (ISO9001:2015) in the year under review. The auditors acknowledged the significant progress made thanks to substantially revised processes. Consequently, all welding processes (welding procedure qualifications) and welders (welding qualification tests) have been certified for the first time. Additionally, management of test and measurement equipment, and maintenance planning for key machinery, have been implemented.

Orthotec supports feature film

In April, Orthotec showcased itself in the business programme *Perspektiven* on Tele 1 on primetime central Swiss TV and received a great deal of positive feedback. In November, Orthotec was in the media spotlight again when Swiss television broadcast the feature film *Weglaufen geht nicht* in a primetime slot. Orthotec enthusiastically supported the major SRF production by supplying equipment such as racing wheelchairs and by training the able-bodied lead actor in how to handle the equipment. Orthotec was rewarded with a prominent presence in the film for its exceptional efforts. The film was watched by 504,000 viewers. The lead actress was awarded the special prize by judges at Solothurn Film Festival for her performance.

ParaHelp initiates a variety of new services for people with spinal cord injuries.

Individual tetraplegic respite weeks have been on offer at the Tertianum Al Lido in Locarno since 2018. These holiday weeks for people with a high level of paralysis who are unable to take part in group trips organised by the Swiss Paraplegics Association, also offer respite to relatives who provide care. With a prospective “residential community for rehabilitation project” ParaHelp has launched a feasibility study to examine the proposal for a managed residential community for young adults to help them fly the nest and become independent. The pilot project “Guided Care” of the Swiss Paraplegic Foundation has been launched in French-speaking and eastern Switzerland in cooperation with ParaHelp. It is examining how targeted case management can foster integrated care of people with spinal cord injuries in challenging health situations.

Great appreciation for services

“Growing older with spinal cord injuries”, an information event arranged jointly with ParaHelp, was held at the Spinal Cord Injury Centre of Balgrist University Hospital. With 65 people attending, this event for senior citizens was sold out. In a second anonymous survey, around 100 clients from all regions of the country expressed a very high level of satisfaction with the services provided by ParaHelp.

Active Communication experiences increased demand for its services for people with disabilities.

The range of services offered by Active Communication cover advice and orthopaedic aids, from preliminary checks to user training and aftercare, as well as almost 3,900 electronic aids. The sharp increase in demand in the year under review resulted in waiting times for customers. Despite additional consultant resources, it was impossible to reduce waiting times significantly owing to the long familiarisation period required for the specialised work. In addition, the website has been completely overhauled and integrated into the new website of the Swiss Paraplegic Group. It effectively expresses the mission of Active Communication and provides an overview of the variety of competencies within the company.

Business relationships expanded

Active Communication started collaborating with the German publishing company Ariadne and, from 2018 onwards, became its official and sole distribution partner for Switzerland. This means that, in addition to existing customers, mainstream schools and kindergartens will in future be able to procure around 5,000 didactic teaching materials via a Swiss contact. As an expert in electronic aids, Active Communication also presented its product portfolio and educational and information work at trade fairs and exhibitions in central and south-eastern Europe in order to expand its business relationships.



Holiday for people with a high degree of paralysis



Sold-out information event for senior citizens in a wheelchair



User training for electronic aids



Tailored support for athletes



Life Guidance services for wheelchair users in demand



New look for members' magazine

The Swiss Paraplegics Association (SPA) dedevelops new, tailored solutions to support athletes. The national umbrella organisation for people with spinal cord injuries is also active on social media platforms.

Athlete support requires coordinated development with the best possible personal surroundings, ideal training conditions, state-of-the-art medicine, performance analysis, as well as performance and technical support. This was previously managed by the athletes themselves or their personal trainer. In some careers, this definitely led to success, but support for the majority of athletes was not tailored to their needs. In cooperation with Sports Medicine Nottwil at the Swiss Paraplegic Centre, Wheelchair Sport Switzerland (a department of the SPA) analysed the situation and has created a new solution: on 1 January 2018, the National Performance Centre for Wheelchair Sport opened with an in-house team of experts to support athletes and trainers and to answer any questions concerning athlete development, from athlete evaluation to individual development plans.

Cruise proves popular

Members with spinal cord injuries had repeatedly expressed a wish to the Culture and Leisure department for a cruise. After a great deal of organisation, this wish was granted in the year under review. The SPA's travel agency advertised its first Mediterranean cruise for tetraplegics, which sold out within a very short time. In addition, over 20 people were put on a waiting list, including numerous paraplegics who would also have liked to book a cruise.

Cross-disciplinary social advice

The knowledge of employees in the Life Guidance business unit has always been in high demand, and in 2018, this increasing demand was met with additional guidance resources. As there are often legal questions that need to be resolved, close co-operation between Life Guidance and the Institute for Legal Advice of the SPA is of great importance. At the same time, it can be seen in many regions how indispensable a good partnership is with specialist organisations, such as Pro Infirmis.

Enhanced digitisation

The SPA has initiated an extensive digitisation project to enhance its membership offer. It has also extended activities on its social media channels, in particular Facebook. The content and design of the members' magazine Paracontact, the holiday catalogue, and the Annual Report have all been overhauled in terms of content and design in enable cross-media integration on Facebook, Instagram and Twitter in the future.

The Swiss Institute of Emergency Medicine Sirmed has significantly more space with state-of-the-art infrastructure available for training events.

In September 2018, it began operations in its extension, with the opening of a medical simulation centre. The facility offers innovative opportunities for training in emergency scenarios, as well as their analysis, using audio-video technology. The new simulation centre has also been able to improve customer benefits and the quality of the course, as can be seen in the consistently positive feedback. The Society for Simulation in Europe (SESAM) has accredited Sirmed as a medical simulation centre, just the fourth such institution in Europe to achieve this. Besides the excellent technical infrastructure, SESAM recognises in particular the quality of the content, the simulation structures, and the commitment of Sirmed beyond the operational framework.

Involvement in vocational training

Companies from all Swiss regions commission Sirmed to run first aid courses for their employees. 898 seminars in three languages were booked in the year under review. They are led by rescue professionals with educational qualifications. In November 2018, Sirmed hosted the higher vocational training conference, Luzerner Konferenz Höhere Berufsbildung, for the cantonal education department. The conference is an excellent networking event that aims to foster exchanges between directors of Colleges of Professional Education and Training.

Hotel Sempachersee stands out for its high level of customer satisfaction. Its open-air cinema in Nottwil remains a cultural attraction.

Hotel Sempachersee on the Nottwil Campus has once again delivered a very high level of customer satisfaction. It achieved a customer satisfaction rating of 91.6% on the TrustYou hotel rating platform, thereby being promoted from a "Swiss quality value hotel" to a "Swiss quality superior hotel" in the Swiss quality segment.

Cinema as an audience magnet

The Nottwil open-air cinema, run by Hotel Sempachersee, has become such a cultural attraction in the Sempachersee region that it is hard to imagine life without it. On 27 July 2018, the organisers celebrated the cinema's 20th anniversary with 849 guests, enjoying perfect summer weather and a total eclipse of the moon. 17 cinema evenings were held, entertaining 8,387 visitors. The film *Draussen in meinem Kopf* even brought lead actor Samuel Koch, who has a spinal cord injury himself, to Nottwil.



Emergency training in the simulation centre



Bar and lobby at Hotel Sempachersee



Film culture on the Nottwil Campus

“Digitisation enables radically new models of care”



Dr. med. Hans Peter Gmünder,
Director of the Swiss Paraplegic Centre

“Artificial intelligence, machine learning, and deep learning enable radically new models of care for people with spinal cord injuries.”

The Swiss Paraplegic Centre (SPC) and Swiss Paraplegic Research (SPR) are working intensively on the digital future. Their directors explain why they back digitisation and which projects they are currently pushing ahead with.

What role does digital technology play in your work?

Hans Peter Gmünder: It has always played a very important one. Even 30 years ago when everything started on the Nottwil Campus, Dr. Guido A. Zäch attached importance to modern technology. Back then, the SPC was the first ever hospital in Switzerland to introduce electronic health records and use them productively. We are currently gradually putting the latest generation of what is known as the clinical information system into operation. Electronic health records help us to coordinate cross-departmental treatment processes in the best possible way and makes all existing patient data available to the treatment team at any time. Moreover, the structured database that covers all patients offers interesting opportunities to extend the benefits of acquired data to other areas, e.g. research. In the near future, medical data and ultimately entire medical histories will be stored on users’ smart phones, once again placing completely new requirements on our new clinical information systems.

Gerold Stucki: Digitisation is changing our work in a variety of ways. As we know, SPF runs the national research platform SwiSCI for people with spinal cord injuries. SwiSCI is in contact with approximately 3,000 of people with spinal cord injuries in Switzerland and has provided them with the option of participating in the study online from the outset. However, the development of digital technology offers very interesting new possibilities for interaction between researchers and people with spinal cord injuries. Apps are a good example of this, as they support direct contact and a very detailed record of the needs and problems of people with spinal cord injuries at a particular time and in real time. Apps allow personalised feedback systems to be set up for study and treatment results, e.g. to assess new biological procedures and technologies. Such findings and data allow a refined forecast of the course of a treatment in relation to health, functionality, and quality of life, and thereby the evaluation of new medicines and technology. Machine learning techniques and artificial intelligence are key technologies for digitisation, in addition to existing methods.

What is the potential of digitisation for your environment?

Hans Peter Gmünder: Artificial intelligence, machine learning, and deep learning enable radical new models of care for people with spinal cord injuries. At the moment, an internal working group is developing a possible digitised patient pathway using outpatients' annual check-ups as an example. In the next step, existing data will be combined with completely new data sources and databases, and compiled in a structured manner. These data collections are analysed using self-learning algorithms and by including artificial neuronal networks to identify patterns and structures. This will create a new symbiosis of doctors and machines, and allow medicine to be much more tailored to each individual. As a result, any emerging medical problems should be identified considerably earlier and tackled preventively.

Gerold Stucki: In rehabilitation research machine learning can be the basis for working out courses of treatment or prognoses for possible complications. The precondition for machine learning is sufficient data. It is crucial that we are able to record everyday situations in order to be able to improve the situation of people with spinal cord injuries. This has primarily been done by means of surveys up until now. In future, we want to gather important data using what is known as real-life data. This will involve the generation of comprehensive data using sensors and of digitally produced information, thus enabling a precise analysis of the situation of people with a spinal cord injury, e. g. in relation to health, accessibility in everyday life. And in all other areas of life. As a result of the structured analyses, targeted corrective measures can be taken. Data protection, anonymity and the agreement of each person are all taken into account when collecting and storing such data.

How do you ensure that medicine and research keep pace with digital developments?

Hans Peter Gmünder: Digital developments play an important role in dictating the pace. Being up to date in this respect means investing large amounts of time and money, and it needs the right partners. For example, our radiologists have reached important milestones in the past 12 months in a collaborative project with Philips Medical Systems called "Advanced Imaging". These include setting up the hardware and completing software development. The algorithms of "Advanced Imaging" are able to automatically segment the spinal cord in the cervical spine using artificial intelligence and to calculate the extent of the spinal cord injury. In terms of



Prof. Dr. med. Gerold Stucki,
Director of Swiss Paraplegic Research

“Digital technology offers very interesting forms of interaction between researchers and people with a spinal cord injury.”

diagnostics, this opens up completely new possibilities and a level of precision that has never previously been achieved. A further study within the framework of the collaborative project with Philips is examining metabolic changes on the injured spinal cord. Prognostic parameters for successful training and new therapy approaches can be derived from it.

Gerold Stucki: Research will not get anywhere either without partnerships. New approaches for the evaluation of innovative biological and technological developments only become possible in cooperation with domestic and foreign universities, as well as with the two Swiss Federal Institutes of Technology EPFL Lausanne and ETHZ Zurich. In the benchmarking controlled trials, for example, we are examining whether employing new technologies makes the process and result better than existing treatments, thereby improving functionality for patients.

Which digitisation project is especially close to your heart?

Hans Peter Gmünder: The digital transformation of outpatient care: it is automated, individualised and radically new, which means quality and comfort for our patients.

Gerold Stucki: I am very pleased with how the online platform community, paraplegie.ch, which launched in June 2017, has developed. It is part of the digital innovation strategy of the Swiss Paraplegic Foundation. The programme for technology-based, interactive health communication and services complements and expands the comprehensive services for people with spinal cord injuries, in particular in respect of continuity of care. The online community supports the process of translating and sharing knowledge in real time and focusses on the interests and needs of people with spinal cord injuries, as well as of their families and friends. Close interaction between research, clinic, and people with a spinal cord injury is becoming possible thanks to digital technology, including within the framework of this community. The community allows contact between people with a spinal cord injury and conveys findings from research directly to people with spinal cord injuries. Every month, our online platform is used by more than 10,000 people from all over the world. This is a resounding success.

SwiSCI Study

The Swiss Spinal Cord Injury Cohort Study (SwiSCI) is the largest integrated study of people with spinal cord injuries in Switzerland. The study includes elements such as causes of spinal cord injury, degree of severity, health problems, health-related behaviour, care, participation in society, labour market integration, and prevention measures for healthy ageing.



Objectives and tasks in 2019

The **Swiss Paraplegic Foundation** adopts the 2021–2024 Group strategy. ■ The visitor centre opens on time, and its operational concept is implemented. ■ Innovative concepts make the Nottwil Campus a place of active encounters between people with a spinal cord injury and people without a spinal cord injury. ■ Membership marketing develops sustainable strategies for member recruitment and member retention. ■ A care model for case management across Switzerland using the network of services of the Swiss Paraplegic Group is established in the pilot study.

Guests at **Hotel Sempachersee** will be impressed by its quality and enhanced creativity. ■ Sustainable action through efficient processes and increased cost awareness will counteract food waste. ■ 120 employees in all areas, guided by clear structures and transparent objectives, will contribute to the company's success.

The **Swiss Paraplegic Centre** will separate acute medicine and rehabilitation to concentrate on providing the high-quality care in each field. ■ The clinic's processes will consistently focus on the core topics of spinal cord injury – back – ventilation. ■ Outpatient care will be specifically enhanced in the area of interprofessional back medicine. ■ Implementation of the personnel development strategy will strengthen the effectiveness of the SPC as a magnet hospital. ■ Clinical research will increasingly help improve treatment quality.

ParaHelp will strengthen consultation support for clients requiring mechanical ventilation in line with rising demand. ■ The "Guided Care" pilot project will be launched in French-speaking and eastern Switzerland to ensure integrated care of people with spinal cord injuries after initial rehabilitation. ■ The Old Age and Accommodation department will arrange respite services for relatives in several regions of Switzerland.

Swiss Paraplegic Research will conduct its first impact assessment for the Swiss Paraplegic Foundation and its institutions. The analysis will focus on the health and quality of life of people with spinal cord injuries in Switzerland. ■ The Swiss Spinal Cord Injury Cohort Study (SwiSCI) and data from the Swiss Paraplegic Group will provide the basis for this. ■ Results of the worldwide survey in 22 countries will allow additional comparisons and findings.

The Swiss Institute of Emergency Medicine Sirmed will intensify training of first aiders. ■ Working jointly with Rega, the range of courses will be expanded across all areas. ■ A new digital co-operation tool linking everyone at the training site will strengthen vocational training. ■ Evaluation and development of the range of courses will improve to achieve the best possible customer benefit. ■ Simulated patients will make training even more effective.

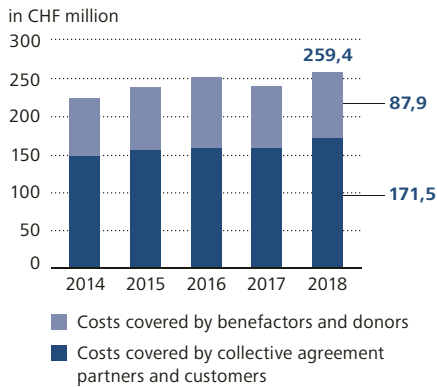
The **Swiss Paraplegics Association** will extend its Life Guidance services, mainly in western Switzerland. ■ The Centre for Obstacle-free Building will record its building highlights of the last ten years in reference lists. ■ New elections to the Central Board of the Swiss Paraplegics Association will be held. ■ Leadership of the umbrella organisation has been handed over to the new director.

Orthotec will implement a new business model that does justice to all aspects of non-profit organisations. ■ Orthotec will position itself as a centre of excellence recognised nationwide for the comprehensive provision of orthopaedic aids for people with spinal cord injuries, and as a centre of excellence for wheelchair sport.

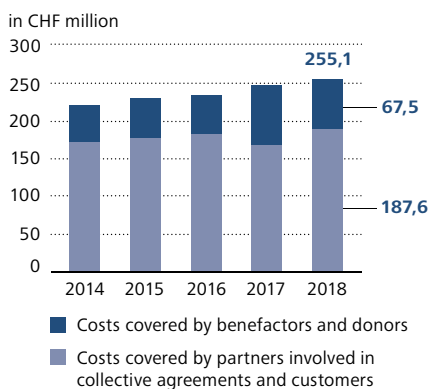
Active Communication will step up customer care, with six more employees joining the consultant team. ■ The website will be available in French, and a new web shop will be launched. ■ An international "Digital Assistive Technology Forum" is being arranged for the firm's 20th anniversary. ■ Standardisation and improvement in care quality will be further advanced.

2018 annual financial statements

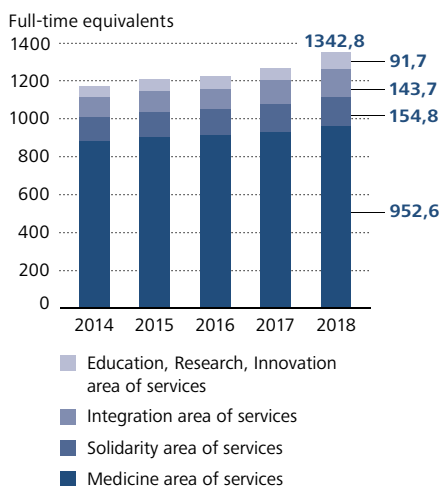
Development of the operating costs of the Swiss Paraplegic Group



Development of operational costs of the Swiss Paraplegic Foundation



Development in employees of the Swiss Paraplegic Foundation



Improved performance record

Demand for Swiss Paraplegic Group (SPG) services and products rose and was able to be met, despite significant restrictions owing to the building work taking place on the Nottwil Campus. In addition to this increased demand, SPG fundraising work was also a success. Both the number of permanent memberships and income from donations and legacies grew. Operating profit increased by 7.1% in total.

Good fundraising results

Income from donations was around 5.7 million Swiss francs higher than in the previous year. This income mainly benefitted people with spinal cord injuries directly, but was also invested in the medical infrastructure specialist clinic and in the building of a new visitor centre.

Fundraising efficiency

According to the calculation scheme of the Zewo Foundation, SPG fundraising and administration costs amounted to 10.8% of its total operating expenses.

Higher operating costs

Operating expenses went up by 2.8% in total. The majority of the increase can be attributed to increased spending on material and services as well as higher staff costs (+77.7 jobs). Nearly half of the job growth is for the Medicine area of services, followed by the Integration and Lifelong Assistance area of services. There were significantly reduced depreciation requirements compared with the previous year. While the intensive construction activity led to the destruction of assets in 2017, this occurred to a far lesser extent in the year under review.

Financial performance data of the Swiss Paraplegic Group

in CHF million	2018		2017	
Operational performance	259.4	100 %	242.2	100 %
Ordinary result	3.6	1.4 %	- 3.4	- 1.4 %
Net result	2.2	0.9 %	- 3.5	- 1.4 %

i The detailed situation and performance report are available to read at paraplegie.ch/jahresberichte

Group companies



Swiss
Paraplegic
Foundation



Swiss
Paraplegic
Foundation

Benefactors' Association



Swiss
Paraplegic
Centre



Swiss
Paraplegics
Association



Swiss
Paraplegic
Research



Swiss
Institute of
Emergency Medicine



Orthotec



we integrate. active.



Swiss Paraplegic Foundation

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Hotel Sempachersee Ltd

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Awono Ltd, obstacle-free homes to suit the elderly in Nottwil

3

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1 Subsidiaries, 2 Closely related organisations, 3 Participation by the Foundation,
4 Partnership with Lucerne Cantonal Hospital.

