

# Rega in numbers



458

employees devote themselves to serving our patients, our patrons and our organisation with passion, commitment and expertise.



14

Rega helicopter bases are distributed throughout the country in such a way that the crews can reach any location in Switzerland within 15 minutes' flying time.



14,207

patients were transported by Rega on board its ambulance jets and rescue helicopters in 2022.



1,292

missions were organised by the Rega Operations Centre in 2022 to help patients abroad.



20,992

missions were coordinated by the Rega Operations Centre last year.



400

different airports all over the world are flown to by Rega's ambulance jets every year.



3,679,000

patrons keep Rega in the air with their financial contributions.



16,256

helicopter missions were organised by Rega's Operations Centre in Switzerland in 2022.



3,179

missions were performed by the helicopter crews after darkness had fallen. Contents | Annual Report 2022 | Editorial

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# The very best for our patients





Michael Hohmeier

Ernst Kohler

Back in 1953, Rega flew just six missions. Last year, our Operations Centre organised 21,000 missions and the Rega crews were able to bring medical assistance by air to more than 14,000 people in distress.

These figures clearly show that Rega is needed and forms an integral part of the Swiss healthcare system. However, we do not want to just maintain the status quo, but to constantly improve air rescue services throughout Switzerland. By investing in our infrastructure, for instance. Thus from 2024, we will be deploying state-of-the-art rescue helicopters with an innovative five-bladed rotor. In addition, last year we expanded our network of helicopter bases: we have completely taken over our long-standing partner base in Geneva and also established a new base in Sion. As always, we resolutely focus on ensuring that in the event of a medical emergency, people can always rely on the nearest and most suitable rescue helicopter being called out, wherever they may be.

We are aware that our endeavours to further develop air rescue in Switzerland do not always meet with approval. But Rega wants the very best for its patients. And the welfare of the Swiss population must always be accorded higher priority than economic interests.

Consequently, Rega will continue to consistently pursue its chosen path in the future. Our commitment is only possible thanks to our more than 3.6 million patrons. We would like to thank the Swiss population for their ever-increasing support and will continue to work tirelessly to provide modern, countrywide and patient-oriented air rescue services in Switzerland.

Michael Hobmeier

Chairman of the Foundation Board

CWW

Ernst Kohler

CEO/Chairman of the Management Board



# Indispensable specialists in the background

To ensure that the Rega fleet is ready for action around the clock, 365 days a year, it must be in top working order. The maintenance of the aircraft is carried out by more than 50 specialists at the in-house maintenance facility at the Rega Centre at Zurich Airport. Thanks to their tireless efforts and expertise, Rega crews can take off whenever they are needed.

For every hour a Rega ambulance jet is in the air, around two hours of maintenance work is required. In the case of the rescue helicopters, as many as three to five hours of maintenance is performed for every flight hour. Rega's three ambulance jets and 20 rescue helicopters are looked after by the jet and helicopter mechanics in accordance with the regulations prescribed by the relevant authorities and the manufacturers' maintenance programmes: these describe every single repair, check and test right down to the

smallest detail. Rega's maintenance activities are essential for the safe operation of the fleet, for without the expertise and conscientious work of the licensed helicopter and jet mechanics, aircraft plumbers and avionics specialists, the Rega fleet would not be able to take off.

#### Maintenance at the Rega Centre

The regulations governing maintenance work are detailed and subject to the stringent requirements laid



In-house expertise: helicopter mechanics prepare a check flight together with the works pilot.

down by the European Union Aviation Safety Agency (EASA) and the Federal Office of Civil Aviation (FOCA). FOCA checks whether EASA's framework conditions are being implemented. The aircraft manufacturers specify what maintenance tasks should be carried out, at which intervals and after how many flying hours. A complex undertaking: every screw, every rivet and virtually every hand movement is precisely defined and must be accurately performed and recorded. The maintenance documentation for the aircraft comprises several manuals and numerous instructions. The jet engine, for example, must be subjected to an in-depth inspection after six months, while the landing gear is required to be mechanically checked and lubricated every three months. For the rotor blades and engine of the Da Vinci helicopter the intervals are 200 flight hours, for the H145 including the engine every 400 flight hours. The rescue hoist is inspected and subjected to a function test after every three hours of use or at least once a month.

The expertise for this responsible work exists in-house: Rega's highly qualified staff have the necessary licences and specialist training so that Rega can carry out the extensive maintenance work itself.

#### **Proven specialists**

Rega employs a total of five jet mechanics, 21 helicopter mechanics, five avionics technicians, nine work planning (AVOR) specialists and three trainee helicopter mechanics. The training has little in common with a "normal" apprenticeship. For aircraft mechanics are proven specialists, whose training lasts seven to eight years. The basic requirement is a completed four-year apprenticeship in a technical profession such as poly-, car or machinery mechanic. This is followed by three years of specialised training as a helicopter or jet mechanic and certification for the corresponding helicopter or jet type. Rega is also a training enterprise and trains one helicopter mechanic per year.



Checking, repairing and maintaining according to the specifications: every six months, the jet mechanics devote themselves to the engine of the ambulance jet.

#### Keeping a close eye on the fleet

Meticulous planning of the maintenance and inspection work is required to ensure that the detailed specifications for the maintenance of the jets and helicopters are complied with at all times, but that the fleet still remains fully operational. The primary objective is to keep

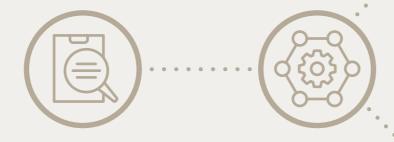
the downtimes in the hangar to an absolute minimum while at the same time ensuring maximum safety and quality, so that the rescue helicopters and ambulance jets can take off again on a mission as soon as possible. The Nominated Person Continuing Airworthiness (NPCA) is responsible for guaranteeing this operational readiness (see box on page 8).

# How maintenance is performed:

#### Meticulous checks

These maintenance activities also involve a great deal of administrative work. For each maintenance event, all the necessary paperwork needs to be meticulously completed, each step logged, and on completion everything checked and signed by a supervisor. Supervisors are helicopter or jet mechanics who continually check the maintenance and repairs and carry out the final inspection of the aircraft. They ensure that all the work steps are recorded accurately and that the necessary documents are filled out correctly. They also check all the papers for completeness. If this is the case and the rescue helicopter or ambulance jet passes the final inspection, the supervisor releases the aircraft for return to service. Only then is it ready to be deployed again.

Whether in the hangar on the aircraft or in the office on the computer – all the staff at the maintenance facility pursue the same goal: to work together to ensure that Rega's fleet remains airworthy at all times. For without state-of-the-art, well-maintained helicopters and ambulance jets, the Rega crews would not be able to come to the aid of a single casualty or patient.



#### Draw up an annual plan

The two Nominated Persons Continuing Airworthiness each draw up an annual plan containing all the scheduled maintenance tasks for Rega's 20 helicopters and three ambulance jets. On paper, the time sequence is clear: maintenance is prescribed after a certain number of flying hours or months. With the Airbus Helicopters H145 helicopters, for example, this is the case after every 400 flying hours or 12 months, and with the Agusta-Westland Da Vinci helicopters every 200 flying hours or 6 months. The specifications must be strictly complied with. If Rega flies many missions, the maintenance intervals are reached more quickly and the planning schedule needs to be adjusted. It must also take into account crew training and unexpected events for instance, due to defects. A minor periodic inspection on the Da Vinci, for instance, takes around seven days, on the jet about five days. In contrast, a complex check, such as that conducted on the Rega jets every four years, lasts one to two months.

#### Draw up a work package

Based on this plan, the responsible fleet manager from the work planning (AVOR) department draws up a socalled work package, comprising the work orders with all the detailed information relating to the aircraft maintenance. A specialist then prepares these documents for the technical staff. This work package is created about three weeks before the maintenance event, so that the logisticians in the warehouse can provide the required material. The AVOR specialist passes the work package on to the supervisor. This mechanic is responsible for the entire maintenance process, checks the worksheets and the material, and assigns the various tasks.

For the jet mechanics, the Nominated Person Continuing Airworthiness Jet prepares the work packages and gives them to the supervisor three weeks before the scheduled maintenance



#### Jet maintenance

The Rega ambulance jets return to the hangar at the Rega Centre after every mission. The jet mechanics therefore see them almost every day and so are very familiar with the condition of the aircraft. They are also in regular contact with the jet pilots. Consequently, they are always well informed and can rectify problems or faults immediately.



#### Check

After the mechanics have maintained and inspected the aircraft as specified in the work package, the supervisor scrutinises the work. In the case of the helicopter, this is followed by a ground run and a technical check flight. During this flight, the helicopter mechanic flies with the Rega works pilot and together they check all the systems or re-adjust the rotor system to minimise vibrations. The rescue hoist is also regularly checked as part of this procedure.

The jet mechanics can conduct the ground run themselves. This means that they start the engines themselves, power up the systems and check them. This does not require a pilot, but the mechanics do need an additional licence for this task.

#### Completion

Once the work and all the necessary checks have been successfully completed, a supervisor releases the helicopter or jet for return to service. The aircraft is now ready to be deployed again and can take off on missions once more.



#### Helicopter maintenance

The rescue helicopters make their way to the hangar at the Rega Centre less frequently. When they are flown from a helicopter base to the Rega Centre for maintenance, the mechanics perform an incoming check after landing. During a ground run, they check all the systems including the engines, record the parameters and visually inspect the helicopter for damage. Any deviations are rectified as quickly as possible.



## Instructors from within our own ranks

In the highly regulated fields of aviation and medicine, the training requirements for crews are high. In order to be ready for action at all times, Rega therefore needs not only a sufficient number of airworthy aircraft, but also highly trained crews.

> Regardless of their occupation, Rega's crew members are subject to many rules and regulations when out on a mission. Patient care is governed by medical standards and legal requirements. In addition, various operational procedures are regulated by the European Union Aviation Safety Agency (EASA) or the Federal Office of Civil Aviation (FOCA).

> The necessary professional skills – whether aeronautical, medical or operational – are regularly trained to

ensure that every movement is just right and that patients receive the best possible care at all times. Rega attaches great importance to an in-depth introduction to the job, as well as to top-quality basic and further training. In-house instructors determine the focal points of the content and plan and carry out the training sessions.

A rescue helicopter crew generally comprises a pilot, a paramedic and an emergency flight physician. Each crew member is a specialist in their field and What is the procedure for using a rescue hoist on a mission with the rescue helicopter? Instructors teach new emergency flight physicians the basics in the hangar.

has their own area of responsibility and competence during a mission.

#### Training for emergency flight physicians

When emergency flight physicians start work at Rega, they must have at least a specialist qualification (Facharzt) in anaesthesia or intensive care medicine and extensive work experience in a hospital. The task of the instructors – who are also doctors themselves – is to prepare the new emergency flight physicians for the specific requirements of their everyday work. This includes knowing how to behave in and around a rescue helicopter, procedures for a rescue hoist mission or specialised knowledge on how to care for patients in the open terrain: this differs from medical care at a hospital, particularly as Rega emergency flight physicians are often on their own with the patient and exposed to the adverse weather.

This specialised expertise is initially taught in the form of a standardised basic training programme. Over the course of a week, the new emergency flight physicians train and consolidate techniques, behaviour and standard procedures together with experienced instructors – and also with pilots and paramedics, as teamwork is a decisive factor when it comes to providing patients with the best possible care. After the basic training, the new emergency flight physicians are accompanied by a work colleague as an instructor on their first missions.

# Standard procedures as an important basis

Paramedics join Rega as trained professionals – a three-year training course leading to a Höhere Fachschule HF diploma is a prerequisite – with experience in ground-based rescue services. They first complete a two-and-a-half-month programme, in which they are prepared for Regaspecific requirements. They assist the pilot with navigation and help the emergency flight physician to attend to the patient. If the helicopter cannot land next to the casualty, they operate the rescue hoist. Precisely because the tasks of this occu-

pational group are very complex and of central importance to the missions, standard procedures play a key role. Instructors help develop such procedures and record them in manuals. The advantage of using standard procedures on missions is that a paramedic from Zurich, for example, can perform a mission with an emergency flight physician and pilot from Basel without a problem — for they all work according to the same predefined procedures.

The paramedics practise such standard procedures during regular "check weeks" at the Rega training base in Grenchen (Canton Solothurn) or at the Rega bases, together with all the other occupational groups from various helicopter bases and the rescue specialists from the Swiss Alpine Club SAC.

# Operational training to become a Rega helicopter pilot

Experienced helicopter pilots who come to work for Rega first complete training units in both theory and practice for the type rating; this entitles them to operate a specific type of helicopter and concludes with a flight test accompanied by a FOCA expert. The operational introduction to the rescue activities of a helicopter pilot takes place after a comprehensive training programme and is accompanied by a flight instructor. Subsequently, the types of missions – such as missions with the rescue hoist, cable car evacuations, a search for missing persons or the use of night vision goggles - are trained. Emergency procedures are practised regularly and in an environmentally friendly manner in Rega's own flight simulator. The simulator scenarios replicate a real-life rescue mission. In their function as a HEMS crew member, the pilot is also assisted in working through the emergency checklist by the paramedic.

#### Jet training programme

The jet crews are on standby day and night and fly seriously ill or injured patients from all over the world back home to Switzerland. A jet crew always comprises at least two pilots, a flight



Training in the field, accompanied by experienced crew members.

physician and an intensive care nurse. The repatriation process is often complex, with each crew member performing very specific tasks.

Regular training is therefore essential.

New intensive care nurses and flight physicians attend an introductory course at the Rega Centre, which lasts several days and is led by work colleagues. Subsequently, they complete at least two missions with the ambulance jet accompanied by an instructor. The focus of the basic programme is on the peculiarities of Rega missions. Even if the new crew members are proven specialists in their field, they first need to familiarise themselves with how to care for patients in the ambulance jet cabin.

#### Training as an ongoing process

Expert-led training sessions at the beginning of a new job are indispensable. Faced with ever growing demands, new processes and methods, and state-of-the-art equipment, ongoing training also plays an important role. This takes the form, for instance, of medical simulation training at the Swiss Institute of Rescue Medicine (SIRMED).

On both helicopter and jet missions, a culture of continual learning is practised by means of so-called line or standard checks: individual crew members are observed and coached during missions by experienced work colleagues. A cockpit crew, for example, is accompanied on a mission by the "check pilot". The check pilot scrutinises and evaluates the crew members during the flight preparation on the ground, and then from take-off right through to landing at the accident site. In addition, they verify that all the procedures are being followed precisely. The communication and collaboration with the medical crew are also evaluated. After the mission, feedback is given from both sides – as well as a mission assessment, which is based on the various regulations and also identifies any potential for improvement.

## Training day in Zweisimmen

A training day at a helicopter base marks the end of the standardised basic training for new Rega emergency flight physicians. Early in the morning, a group of new emergency flight physicians and experienced instructors convene at the Zweisimmen base. How to behave in and around the rescue helicopter is first briefly explained in the theory room, then trained as a dry run in the hangar and subsequently extensively on site with the helicopter rotor turning. The team of instructors is supplemented by an experienced paramedic so that the content can be taught as comprehensively and realistically as possible.



## Even more flexible in use

Thanks to the patient isolation unit (PIU), Rega can transport highly contagious patients efficiently and safely. Drawing on the experience gained from many missions, a project team developed ideas on how the tried-and-tested protection system could be further optimised – for crews and patients alike.



The PIU and protection concept have proved themselves in hundreds of missions. Now they are being further developed.

They are demanding missions and part of the everyday work of the Rega crews: repatriating patients with highly contagious diseases on board the ambulance jets or flying them by rescue helicopter to a central hospital for further treatment. Thanks to Rega's strong innovative drive, the crews can conduct transports of this kind efficiently and safely for all concerned.

How it all started: the outbreak of Ebola in West Africa in 2014 made it only too apparent that there were as good as no safe concepts for transporting highly contagious patients. This gave Rega the impetus to work together with partners to design a so-called patient isolation unit (PIU) for airborne transport and an accompanying transport concept. The objective was to be able to transport contagious patients safely with a minimum of personnel – not only in regards to

the Ebola virus, but also to highly contagious diseases in general. It was a complex new development, because isolation needed to be guaranteed not just during the flight, but also throughout the entire transport, i.e. from hospital bed to hospital bed. Already in February 2015, Rega was in the position to evacuate a patient from the Ebola region in the PIU.

#### Well protected and cared for

Since then, this special protective device has proved its worth. As the PIU is a closed system, the medical crew are not required to wear protective clothing during the flight. Thanks to the ingenious design, they have indirect access to the patient in the PIU at all times and can provide them with the necessary medical care (see illustration on the right). After the Ebola epidemic ended, Rega crews performed three or four PIU transports a year – such as for patients with open tuberculosis. So when Covid-19 rapidly spread at the beginning of 2020, Rega was able to draw on this experience and has since repatriated several hundred Covid patients in the PIU.

#### Drawing on a wealth of experience

The desire to further optimise even the tried-and-tested is in Rega's DNA. The experience gained in practice should be used to further improve the PIU. This was the task of a project team composed of various specialists: Rega Medical Director Roland Albrecht, representatives from the Jet Medical Care Service and the Helicopter Rescue Service, and the in-house Design and Development Centre. Their aim was to enable crews to use the PIU in a more flexible and also modular way – and in both the ambulance jets and the rescue helicopters.

The Rega engineers succeeded in making the PIU even lighter and more compact, a great advantage given the limited space available in the cabin. The dome-shaped shell, for example, now features carbon support rods, which are light yet extremely stable. The bed offers more space for patients, while the stretcher is also more lightweight and can be used by the crew in a modular fashion, in other words, also without the shell if it is not needed after all. No detail is too small for



improvement: the zipper enclosing the PIU now has less resistance when pulled, which minimises the wear and tear on the material.

#### More usage options

Another innovation opens up brand new possibilities in terms of usage. Before, the high-performance particulate filter at the foot end of the PIU converted contaminated air from inside the unit into clean air and then released it into the environment. Now a second filter is mounted at the head end. The two filters are powered by a motor that draws the air through the unit, which means that germ-free air is also guaranteed inside the PIU. As a result, in future, crews will also be able to use the PIU to transport immunocompromised persons – patients who are dependent on absolutely germ-free air before or after an organ transplantation.

#### Self-testing and certification

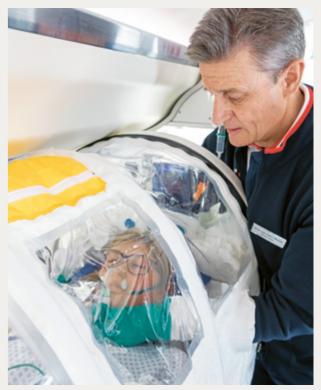
In the field of aviation, everything that is carried on board an aircraft must comply with the strictest requirements and pass inspection by an independent body. The new PIU, too, is being subjected to a stringent testing procedure. The great advantage of Rega's in-house development facility is that it is accredited by the European Union Aviation Safety Agency (EASA) and can approve modifications such as those made to the PIU itself. This means that the new improved PIU will already be ready for its first missions to help patients in summer 2023.

# "Learning from our experiences to come up with new medical possibilities"

Before the Ebola outbreak in 2014, there was next to no reliable concept for the airborne transport of highly contagious patients. Consequently, the PIU was developed under the leadership of Rega Medical Director, PD Dr. med. Roland Albrecht.

#### What makes the PIU unique?

Roland Albrecht: Our in-house development aims to achieve "closed isolation": the patient is placed in the PIU before being taken on board the jet or helicopter and does not leave it until they are at the destination hospital. A key element here is the accompanying transport concept, which precisely defines the procedure for missions of this kind. During the flight, the PIU remains airtight even if there is a sudden drop in pressure in the jet cabin. We can transport patients safely in the PIU with a minimum of personnel. After a PIU mission, the jet or helicopter does not need to be specially disinfected, but is immediately ready for the next mission. The PIU has proved its worth right from the start. This was confirmed once again during the coronavirus pandemic: we were prepared and were able to fly patients infected with Covid on a daily basis. In total, we have transported around 450 Covid patients since the outbreak of the pandemic.



Thanks to the integrated gloves, Medical Director Roland Albrecht can attend to the patient in the PIU.

#### So why is further development necessary?

Roland Albrecht: We want the very best for our patients and are continually investing in expanding the medical possibilities on board our aircraft. We learn from the experience gained on our many missions and this gives rise to new ideas. One example: if no germs can escape from the PIU to the outside, we can also ensure that germs from the outside are not able to penetrate inside. This means that in future we can transport not only highly contagious but also immunosuppressed patients. Close collaboration with our Design and Development Centre is essential. The specialists there take our ideas, develop concepts, and then implement them together with external partners.

#### Is there further room for improvement?

Roland Albrecht: We are constantly analysing things further – after all, we are gaining new experiences every day and it is not Rega's practice to stand still. We will continue to address the many challenges in the future and, together with our operation partners, ensure that our patients benefit from the advances in medicine and technology. On doing so, the focus is always on guaranteeing the safety of the crews and third parties, as well as providing the best possible medical care to our patients.



AWARD-WINNING

## **Scientific study**

For many years, Rega, under the leadership of its Medical Director, PD Dr. med. Roland Albrecht, has also been addressing scientific issues relating to emergency medicine. One of several studies published in 2022 entitled "Stability of drugs stored in helicopters for use by emergency medical services" even made it into the world's highest-ranked emergency medicine journal, "Annals of Emergency Medicine".

The aim of the study was to analyse whether temperature fluctuations and vibrations have an impact on the chemical stability of regularly used emergency drugs stored in the emergency flight physician's medical backpack in the rescue helicopter. The Rega bases selected to perform trials were St. Gallen, a typical lowland base, and Samedan, which is located

at Europe's highest-altitude airport. The test drugs were continuously stored in the helicopter over a period of a year.

The evaluation showed that even after twelve months, none of the tested medications showed any undesirable chemical reactions, and no loss of active ingredient could be detected compared to a reference ampoule, even well after the expiry date. These surprising results may now open the door for possibly extending the expiry dates – further investigations and publications are to follow.

The study was awarded the Martin Kirschner Prize in February 2023. This is considered one of the most prestigious prizes in Germany and is awarded every two years for scientific achievements in the field of emergency medicine.



One aspect of the scientific study: what impact do low temperatures have on emergency drugs?

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PUBLIC EVENTS

## Celebrating Rega's 70th anniversary together



In August 2022, visitors flocked to the Rega base in Berne.

On 2 May 2022, Rega celebrated its 70th anniversary in the presence of the President of the Swiss Confederation, Ignazio Cassis, together with guests from the fields of politics, business and healthcare and operation partners. In his address, President Cassis spoke about the significance of Rega for the Swiss healthcare system.

Rega's over 3.6 million patrons keep it in the air with their annual contributions. During its anniversary year, Rega expressed its thanks for this support by inviting the general public to take a look behind the scenes at the air rescue organisation in the course of various events. As a result, in 2022, Open Days were held at the helicopter bases in Berne, Locarno und Sion. These events attracted a total of 30,000 visitors, who took the opportunity to find out more about Rega's activities and its employees.

**GENEVA BASE** 

# Investing in Western Switzerland

A new agreement between Canton Geneva, Geneva University Hospitals (HUG) and Rega marks the continuation of a decades-long partnership for the benefit of patients. Rega plans to station a new five-bladed Airbus Helicopters H145 helicopter in Geneva. In order to do so, it first needs to enlarge the existing hangar. During the conversion of the helicopter base, bedrooms for the crews will be built, so that in future they can also be present at the base at night. This increase in operational readiness after darkness has fallen will further improve medical care by air for the population in the entire region.



The Geneva crew fly around 400 missions every year.

**TECHNOLOGY** 

# Deploying rescue teams even more reliably

Rega's Helicopter Operations Centre calls out the mountain rescuers from the Swiss Alpine Club SAC whenever they are needed and coordinates their deployment. To do so, since 2021 it has been using the app-based IT solution, Alpine Rescue Mission Control (ARMC), from the Ticinobased company, DOS Group SA, which both Rega and Swiss Alpine Rescue (ARS) played a key role in developing. In order to further improve the application and ensure its long-term use, Rega and ARS have decided to take over the corresponding IT solutions from the Ticino firm. For this purpose, the company, sureVIVE



The rapid mobilisation of rescue teams and their coordination is essential for providing patients with optimal medical care.

SA, was founded under the aegis of Rega's subsidiary, Airmed AG. With this involvement, Rega aims to make a further contribution towards ensuring that emergency response teams can be called out even more reliably, simply and quickly in future.



Even more user-friendly: raising the alarm via the Rega app saves valuable time in an emergency.

RAISING THE ALARM

# New version of the Rega app

Innovation for the benefit of people in distress: Rega has further improved its emergency app and developed a new updated version. Since April 2022, the tried-and-tested app is even more intuitive to use. With this latest version of the app, Rega is also laying the technical foundations for future upgrades.

The Rega app was launched back in 2011 and was the first emergency app in Switzerland that could be used to transmit location data to an emergency call centre. Since then, it has been downloaded more than 1.6 million times and has proved its worth in thousands of rescue missions. When raising the alarm via the Rega app, the caller's coordinates are automatically transmitted to Rega's Operations Centre. A phone connection is set up with the Operations Centre and the location of the accident site is displayed on a map – which saves valuable time in an emergency.

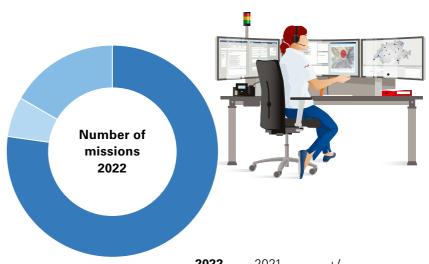
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# Activities 2022



## More missions than ever before

In 2022, Rega recorded the busiest year in its history to date: the Operations Centre organised a total of around 21,000 missions, more than ever before. This corresponds to an average of 58 missions per 24-hour period and 16.5 percent more than in the previous year. Both its 20 helicopters and three ambulance jets were in the air more frequently than ever.



|                             | 2022   | 2021   | +/-      |
|-----------------------------|--------|--------|----------|
| Total missions              | 20,992 | 18,017 | +16.5 %  |
| Helicopters                 | 16,256 | 14,330 | +13.4 %  |
| Jets/Scheduled aircraft     | 1,292  | 980    | +31.8%   |
| Other missions <sup>1</sup> | 3,444  | 2,707  | + 27.2 % |

<sup>&</sup>lt;sup>1</sup> Transports by ambulance, missions on behalf of the Swiss Alpine Club SAC, Spéléo-Secours, Redog, etc.

Activities 2022 | Annual Report 2022 | Activities 2022 | Activities 2022

## **Helicopter missions**

The helicopter flight coordinators at Rega's national air rescue coordination centre organise the missions carried out by the 14 Rega bases countrywide, as well as those flown by its partner organisations. Last year, they coordinated a total of 16,256 helicopter missions (+13.4%). Registering an increase were both the rescue missions by the helicopter crews at the incident site (9,813, +16.2%) and the number of transfer flights from smaller hospitals to central ones (3,057, +7.1%). The Rega helicopters were also in the air more often at night than in the previous year (3,179, +15.8%), which corresponds to every fourth mission performed by a Rega helicopter. The amount of contadino missions organised by Rega's Operations Centre rose to 1,534 (+5.1%). These transports of injured or dead livestock for mountain farmers are carried out by commercial helicopter transport firms on Rega's behalf.

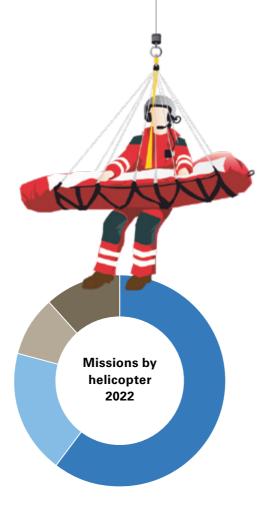
|  | 2022            | 2021  | +/-                         |
|--|-----------------|-------|-----------------------------|
| Total missions by helicopter of which are performed at night   | 16,256<br>3,179 | •     | + 13.4 %<br>+ 15.8 %        |
| <ul> <li>Primary missions<sup>1</sup></li> <li>Secondary missions<sup>2</sup></li> <li>Assistance to mountain farmers</li> </ul> | 9,813<br>3,057  | 2,854 | +16.2 %<br>+7.1 %<br>+5.1 % |
| Special missions <sup>3</sup>  | 1,852           | ,     | +17.8 %                     |

<sup>&</sup>lt;sup>1</sup> Emergency missions directly at the scene of the incident

<sup>3</sup> Non-medical Rega missions (search, route securing and reconnaissance flights on behalf of operation partners) and missions performed by other helicopters



Rega is in operation as



Rega is in operation around the clock, 365 days a year, for the Swiss population.

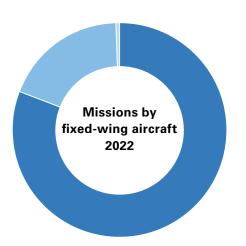


Rega flies patients back home to Switzerland with its three ambulance jets, which are equipped as flying intensive care units.

## **Fixed-wing aircraft missions**

Last year, the Rega crews repatriated significantly more patients from abroad than in 2021 (1,278,  $\pm$  31.8%). Rega's three ambulance jets took off on 1,045 missions and flew the same number of patients back home ( $\pm$  21.7%). The three Rega jets spent longer in the air than in the previous year: the number of flight hours (4,925,  $\pm$  6.3%) was the highest recorded to date.

Rega repatriated 233 patients on board commercial aircraft (+108.0 %). This cost-effective and ecological alternative to the ambulance jet is employed provided that the patient's medical condition is sufficiently stable, that this form of transport is not expected to have a negative impact on other passengers, and that there are enough seats available on board the plane. In total, 69 patients (+155.6 %) were repatriated on scheduled flights escorted by a Rega flight physician or intensive care nurse. The amount of unaccompanied repatriations totalled 164 (+92.9 %). In such cases, the Rega Operations Centre organises the return journey for patients who are able to travel home without a medical escort.



|   | 2022         | 2021       | +/-                 |
|---|--------------|------------|---------------------|
| Total missions  | 1,292        | 980        | +31.8%              |
| <ul><li>Ambulance jets</li><li>Scheduled aircraft</li></ul> | 1,045<br>240 | 859<br>116 | +21.7 %<br>+106.9 % |
| Chartered aircraft  | 7            | 5          | +40.0%              |

<sup>&</sup>lt;sup>2</sup> Inter-hospital transfers, neonatology, organ transports

Activities 2022 | Annual Report 2022 Annual Report 2022 | Activities 2022

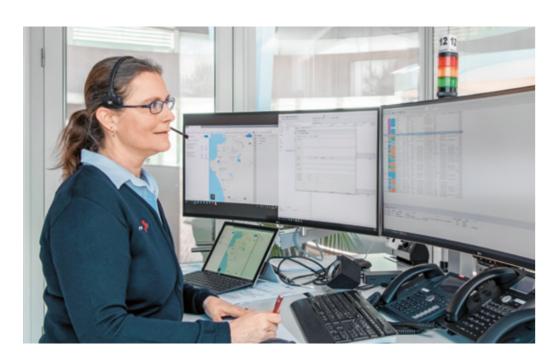
## Medical advice and assistance by Rega physicians

Prior to each repatriation mission, extensive medical clarifications are carried out by one of Rega's medical consultants. In liaison with the Operations Centre, the physician on duty

| decides whether repatriation of the patient is necessary and sensible, and if so, what form it should take. As with the flight coordinators, Rega's medical consultants work in shifts around the clock. Last year, the latter provided a total of 1,088 people (+ 29.7 %) suffering from medical problems abroad with competent advice. In 1,278 cases, the medical clarifications led to the patient being repatriated on board a Rega ambulance jet or a commercial airline. Individual insurance companies also ask Rega's medical consultants to clarify the medical condition of their policy holders who have become seriously injured or ill abroad, even if they are not Rega patrons. Rega makes a recommendation as to whether from a medical point of view |
|--|
| or ill abroad, even if they are not Rega patrons. Rega makes   |
|  |

|   | 2022  | 2021  | +/-     |
|---|-------|-------|---------|
| Total patients                                    | 2,366 | 1,809 | +30.8%  |
| ■ Medical advice                                  | 1,088 | 839   | +29.7%  |
| Repatriation by Rega ambulance jet                | 1,045 | 858   | +21.8%  |
| Repatriation by scheduled aircraft, accompanied   | 69    | 27    | +155.6% |
| Repatriation by scheduled aircraft, unaccompanied | 164   | 85    | +92.9%  |

Medical emergencies abroad 2022



The medical consultants provide people suffering from medical problems abroad with advice over the phone and decide whether repatriation by ambulance jet or on board a commercial

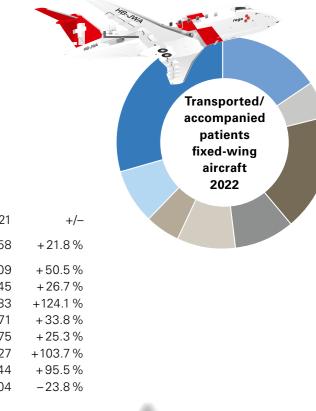
## **Transported** patients

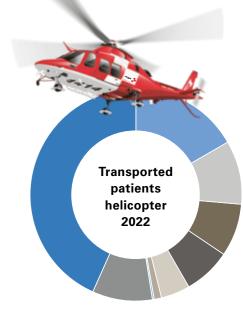
In 2022, the Rega crews transported a total of 14,207 patients (+15.7%) on board their aircraft. They thus came to the assistance of on average 39 people per day.

|                           | 2022  | 2021 | +/-      |
|---------------------------|-------|------|----------|
| Total patients            | 1,045 | 858  | +21.8%   |
| Limb injuries             | 164   | 109  | +50.5%   |
| Craniocerebral trauma     | 57    | 45   | +26.7 %  |
| Other injuries            | 186   | 83   | +124.1 % |
| Cardiovascular diseases   | 95    | 71   | +33.8%   |
| Strokes                   | 94    | 75   | +25.3 %  |
| Gastrointestinal diseases | 55    | 27   | +103.7 % |
| Malignant tumours         | 86    | 44   | +95.5%   |
| Other illnesses           | 308   | 404  | -23.8 %  |

#### Fluctuation in mission and patient numbers

The number of transported patients and missions do not always concur, because either several patients are transported at the same time or flights are performed without any patients at all - for example, if a search flight conducted by a Rega helicopter proves unsuccessful. The mission statistics relating to the Rega helicopters are subject to natural fluctuations and reflect the meteorological conditions, as well as the leisure activities and travel behaviour of both the Swiss population and foreign tourists in Switzerland. According to the MeteoSchweiz weather service, 2022 was the sunniest and hottest year since records began, which was one reason for the higher number of missions, particularly during the summer months. The number of repatriations also fluctuates, and the deployment of the Rega jets varies depending on the travel- and workrelated activities of Swiss people abroad. The rise in the amount of Rega missions abroad last year reflects the resumption of international travel on the part of the Swiss population, which had declined significantly during the coronavirus pandemic.





|                        | 2022   | 2021   | +/-      |
|------------------------|--------|--------|----------|
| Total patients         | 12,929 | 11,314 | + 14.3 % |
| Winter sport accidents | 2,152  | 1,715  | + 25.5 % |
| Occupational accidents | 1,297  | 1,179  | +10.0 %  |
| Road accidents         | 1,040  | 882    | +17.9 %  |
| Alpine accidents       | 917    | 860    | +6.6%    |
| Sports accidents       | 567    | 572    | -0.9%    |
| Aviation accidents     | 166    | 125    | +32.8%   |
| Avalanche accidents    | 43     | 62     | -30.6 %  |
| Other causes           | 1,174  | 834    | +40.8%   |
| Illnesses              | 5,573  | 5,085  | +9.6%    |

Activities 2022 | Annual Report 2022 | Activities 2022



Powerful, spacious and extremely precise: a single helicopter type for all of Rega's helicopter bases.

# Modernisation of the helicopter fleet

Rega provides primary medical assistance by air around the clock in Switzerland. To achieve this, the reliability of its fleet is a decisive factor. For this reason, as from 2024, the AgustaWestland Da Vinci mountain helicopters purchased in 2009, which have more than proved themselves in practice, will be replaced by the state-of-the-art, high-performance Airbus Helicopters H145 with a five-bladed main rotor. The new H145 is a technically sophisticated, extremely powerful helicopter, which is ideally suited to missions in high mountain regions. In addition, it features a spacious cabin with sufficient room for medical equipment as well as medical interventions, which is particularly important on transfer flights for intensive care patients. Rega is investing a total of over CHF 200 million, which includes the costs of medical equipment, training and spare parts. By creating a single-type fleet, all the helicopter bases will operate the same helicopter type in future. This simplifies servicing and maintenance, saves money in terms of the procurement and management of spare parts, and reduces crew training time and expenditure.



On 17 December 2022, the new Rega helicopter with the registration number HB-ZQO commenced operations at the helicopter base in Sion.

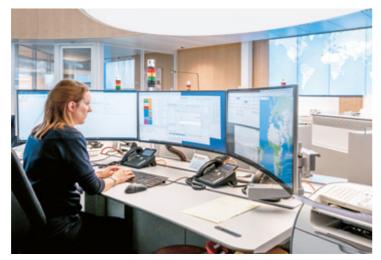
# New H145 stationed at the Sion base

Rega operates a countrywide network of 14 helicopter bases with 20 rescue helicopters – including a base at Sion Airport. Since December 2022, Rega's first Airbus Helicopters H145 rescue helicopter with a five-bladed main rotor has been stationed in the hangar of the helicopter firm, Héli-Alpes SA, in order to provide medical assistance to people in distress.

In March 2022, Canton Valais announced that the mandates for air rescue would be allocated in a tendering procedure. As Rega also want to offer its air rescue services to the inhabitants of Valais, it submitted the corresponding application to the responsible authority, the Valais Cantonal Rescue Organisation (KWRO). Rega applied to provide its services from its existing helicopter bases to supplement the Valais air rescue organisations. However, at the end of November 2022, the KWRO decided that Air-Glaciers and Air Zermatt should perform air rescue missions in Canton Valais as before. Rega subsequently lodged an appeal. The decision of the Valais Council of State is still pending.

# Rega supports Swiss authorities

As during the coronavirus pandemic, Rega also supported the Swiss authorities in 2022: since September last year, it has been acting on behalf of the Coordinated Medical Services (CMS) as the national coordination office for the acceptance of civilians from Ukraine in need of medical treatment. The national coordination office keeps a dossier on the patients proposed by the Ukrainian Ministry of Health and maintains the flow of information between the Ukrainian authorities, the Medical Board set up for this purpose, the Swiss destination hospitals and the organisations involved in the transport. Rega assists the Medical Board in an advisory capacity relating to the medical assessment of the patients' fitness to travel. By the



The ambulance flights are organised in the Jet Operations Centre.

middle of March 2023, Rega had flown 24 patients to Switzerland on board its ambulance jets in the course of nine flights. In each case, the transports were performed from an airport in Poland.

# Closer cooperation

In February 2022, representatives from the cantons of Appenzell Innerrhoden and Appenzell Ausserrhoden signed a performance agreement with Rega for a cooperation in the field of air rescue and preclinical emergency medicine. This formalises the existing cooperation and encompasses all air rescue missions and transfer flights to and from hospitals. Rega provides air rescue services in both cantons 365 days a year and coordinates all the air rescue resources. Around 39,000 people in the two cantons support Rega with their patronage contributions



From I. to r.: Roland Albrecht (Medical Director, Rega), Philipp Simmen (Head of Helicopter Operations, Rega), Ernst Kohler (CEO, Rega), Monika Rüegg Bless (Head of the Department of Health and Social Affairs AI), Yves Noël Balmer (Head of the Department of Health and Social Affairs AR), Thomas Holderegger (member of the Foundation Board, Rega)

Annual Report 2022 | Annual Report 2022

### Low Flight Network undergoes further expansion



Instrument flight routes improve the provision of medical care in Switzerland.

Thanks to instrument flight rules, the Rega crews are able to fly blind to individual Swiss central hospitals on predefined flight routes in the poorest visibility and cross the Alps on flight paths belonging to the Low Flight Network (LFN). This means that they can fly casualties to central hospitals in weather conditions that just a few years ago would have made an approach flight impossible.

As the Swiss Parliament has designated the LFN as a critical national infrastructure, the Federal Government has been responsible for its further expansion since August 2021. In 2022, the Federal Office of Civil Aviation (FOCA) approved instrument flight procedures to the cantonal hospitals in Lucerne and St. Gallen, the Children's Hospital of Eastern Switzerland, and the Breitfeld military airport in St. Gallen. In December 2022, Rega submitted the applications for approach and departure procedures at Geneva University Hospitals (HUG) and Lausanne University Hospital (CHUV). Still pending with FOCA are the applications already submitted in 2021 for the use of the existing IFR infrastructure at Locarno Airport during operating hours and at Les Éplatures Airport outside operating hours, as well as the joint use of the military procedures at the Frauenfeld military base/ Cantonal Hospital. The use of the airfield outside operating hours is very important for Rega because rescue missions pay no heed to the time of day. In the interests of patients, Rega therefore advocates the unrestricted use of the IFR infrastructure outside the normal operating hours of airports and airfields - for example, at night.



Rega will continue to pursue its vision of all-weather air rescue in future.

## Purchase agreement for "Icebird" terminated

In September 2022, Rega and Italian helicopter manufacturer Leonardo terminated the agreement to purchase three new AW169-FIPS rescue helicopters with a Full Ice Protection System. Delivery of the three rescue helicopters had been scheduled for 2023. All payments already made by Rega will be refunded in full. This step resulted from the fact that it was not possible to develop the new helicopter in accordance with the contractually agreed specifications. The evaluations of several series of test flights showed that while the newly designed anti-icing system fundamentally worked, a helicopter fitted with it no longer met the agreed high-performance requirements laid down by Rega.

From the outset, Rega and Leonardo were aware that this was a pioneering project, with no guarantee of it being implemented. Despite and precisely because of the technological limitations that still remain, Rega will continue to pursue its vision of all-weather air rescue in order to help even more people in distress in future.

## **New hospital helipads**

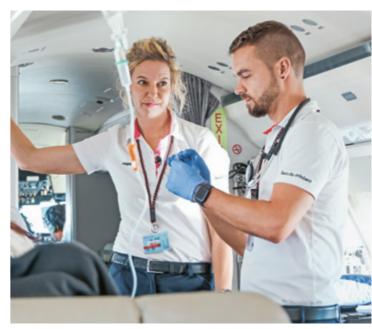
In order to further increase the safety of patients and crews, Rega is implementing measures to modernise hospital helipads in Switzerland. It advises and supports the hospitals in construction or renovation projects and also contributes towards some of the costs. In the past year, several modernised hospital helipads were put into operation that were realised with the involvement of Rega, namely at Uri Cantonal Hospital and the hospitals in Ilanz and La Chaux-de-Fonds. These helipads now meet the current requirements in terms of size, maximum load, lighting and other safety-related factors.



The new helipad on the roof of the hospital in La Chaux-de-Fonds.

# Renewal of CAMTS accreditation

In August 2022, Rega's accredited status was renewed by the Commission on Accreditation of Medical Transport Systems (CAMTS). Rega has received accreditation for both its air rescue services using rescue helicopters and ambulance jets and its medically escorted repatriations. It is the only European organisation to comply with the corresponding standards laid down by CAMTS. This renewed certification was based on an assessment procedure lasting several weeks. CAMTS is an independent, international, non-profit organisation that audits and accredits medical transport services according to a set of regularly updated, scientifically based criteria.



Providing high-quality air rescue services for patients and continuously improving in the process.

Key figures | Annual Report 2022 | Key figures

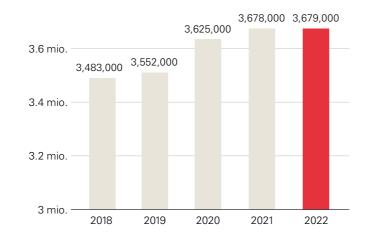
# **Key figures 2022**

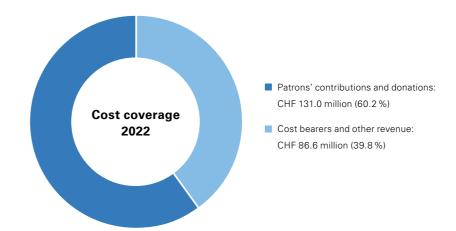
Rega is an autonomous, privately run, non-profit foundation. With its 3,679,000 patrons, it is deeply rooted in the Swiss population. Rega operates independently of political interests and is not subsidised by the State. It is an integral part of primary healthcare in Switzerland and with its work contributes towards improving the quality of life, the economy and tourism in this country.

# **Development in the number of patrons**

Thanks to the solidarity contributions by its patrons, Rega is able to provide nationwide medical assistance by air – without receiving any subsidies from the State. These contributions allow Switzerland to benefit from an air rescue service that sets standards and is held in great esteem all over the world. In the year under review, Rega once again registered a growth in support: as of 31 December 2022, a total of 3,679,000 patrons were recorded on Rega's computer system. Last year, a total of 121,693 persons registered as a Rega patron. This represents a net increase of 1,301 patrons compared to 2021.

According to its Conditions of Patronage, in grateful acknowledgement of patrons' support, Rega can waive or reduce the costs of any emergency services that it has provided or organised on their behalf in the event that insurance companies are not liable to pay.





## Financial development and investments

In the 2022 business year, Rega's operating income totalled CHF 213.2 million, while the operating expenses came to CHF 177.6 million. This resulted in a positive operating result of CHF 35.6 million. The annual result amounted to CHF 16.0 million. In 2022, Rega's patrons supported Rega with annual contributions, donations and bequests totalling CHF 131.0 million, thus bearing around 60.2 percent of the overall costs. The remaining 39.8 percent is mainly covered by cost bearers, such as health, accident or travel insurers, in the form of payments for the rescue services provided. In line with its strategic goals, Rega is almost 100 percent self-financed and does not need outside capital to finance its investments.

# The key figures for 2022 at a glance

| Total number of missions organised                  | 20,992 |
|---|--------|
| Helicopter missions                                 | 16,256 |
| Fixed-wing aircraft missions                        | 1,292  |
| Other missions <sup>1</sup>                         | 3,444  |
|   |        |
| Patronage contributions and donations (CHF million) | 131.0  |
| No. of patrons (in millions)                        | 3.679  |
| No. of employees <sup>2</sup>                       | 407    |
| Operating revenue (CHF million)                     | 213.2  |
| Operating expenditure (CHF million)                 | 177.6  |
| Operating result (CHF million)                      | 35.6   |
| Balance sheet total (CHF million)                   | 645.0  |

<sup>&</sup>lt;sup>1</sup> Other missions: transports by ambulance, missions on behalf of the Swiss Alpine Club SAC, Spéléo-Secours, Redog, etc.



You can find the Financial Statements 2022 (in D/F/I) at report.rega.ch/2022

<sup>&</sup>lt;sup>2</sup> Equivalent to no. of full-time positions as of the end of December

Foundation Board | Annual Report 2022 Annual Report 2022 | Management Board

# **Foundation Board**



















Franz Stämpfli





Markus Furrei



Thomas von Wyl



Petra Gössi



Gabriele Casso



Richard Brogle

#### Foundation Board of Swiss Air-Rescue Rega

Michael Hobmeier, Bäch, since 2007 Chairman and Member of the Executive Committee

Christian Kern, Prof. Dr. med., Geneva, since 2009, Vice-Chairman and Member of the Executive Committee

Patrizia Pesenti, Zollikon, since 2009 Member of the Executive Committee

Paul Hälg, Dr. sc. techn., Wollerau, since 2019, Member of the Executive Committee

Josef Meier, Wettingen, since 2013 Member of the Executive Committee

Heidi Hanselmann, Walenstadt, since 2010 Thomas P. Emmerich, Riehen, since 2011

Adrian Amstutz, Schwanden, since 2013

Franz Stämpfli, Innertkirchen, since 2015

Thomas Holderegger, Waldstatt, since 2015

Markus Furrer, Prof. Dr. med., Felsberg, since 2019

Thomas von Wyl, Dr. med., Unterseen, since 2021

Petra Gössi, Küssnacht am Rigi, since 2023

Gabriele Casso, PD Dr. med., Sorengo, since 2023

Richard Brogle, Dr. sc. techn., Kilchberg, since 2023

#### Resigned as of 31 December 2022

Marco Maggiorini, Prof. Dr. med., Schindellegi, 2011-2022

Gabi Huber, Dr. iur., Altdorf, 2015-2022, Member of the Executive Committee Gerold Biner, Zermatt, 2015-2022

#### **Medical Commission**

Christian Kern, Prof. Dr. med., Chairman Gabriele Casso, PD Dr. med.

Markus Furrer, Prof. Dr. med. Thomas von Wyl, Dr. med.

#### **Finance Commission**

Josef Meier, Chairman Michael Hobmeier Paul Hälg, Dr. sc. techn.

#### **Advisory Committee Partner** Organisations

Franz Stämpfli. Member of the Rega Foundation Board, Chairman

Thomas P. Emmerich, Member of the Rega Foundation Board

Stefan Goerre, Dr. med., Swiss Alpine Rescue representative

Stephan Zeller, Canton Valais representative

Andy Scheurer, Spéléo-Secours representative

Markus Denzler, police commanders

Marc Ziegler, Swiss Cable Cars Association representative

Sibylle Frey, Swiss Air Force representative

Roman Burkart, Medical Emergency Call Centres 144 representative

Renato Belloli, Swiss Helicopter Association (SHA) representative

Daniel Weisskopf, Swiss Fire Service Coordination (FKS) representative

#### Auditors

KPMG AG, Zurich

# **Management Board**



From left: Heinz Leibundgut, Andreas Lüthi, Ernst Kohler, Philipp Simmen, Daniel Landert (designated Head of Jet Operations from 1 June 2023), Roland Albrecht, David Müller. Missing from the picture is Urs Nagel

Organigram as of 1 January 2023

#### **FOUNDATION BOARD Foundation Board Executive Committee of the Foundation Board** COMMISSIONS **Medical Commission Finance Commission MANAGEMENT BOARD** CEO/Chairman of the Management Board Ernst Kohler Medicine **Communication and Patronage** Roland Albrecht David Müller **DEPARTMENT** Safety and Quality Stefan Isler **Helicopter Procedures Jet Operations Helicopter Operations** Services and Training Philipp Simmen Andreas Lüthi Urs Nagel Heinz Leibundgut

as of 1 January 2023



#### Our purpose

We provide an around-the-clock service offering swift, expert assistance by air. In particular, we transport medical care to the casualty and help in emergency situations.

This assistance also takes the form of medical advice and the use of our infrastructure.

Our operations are characterised by our highly qualified, professional members of staff and the very best equipment available in the fields of rescue, medical and flight technology.

#### Our fundamental concept

We are a non-profit organisation that is funded by its patrons. Our services are primarily geared towards the needs of the Swiss population. We are financed by means of private funding. This enables us to operate independently in the service of our patients.

In the interest of the patient, we take an active stand against the commercialisation of air rescue.

Emergency missions and other operations carried out on behalf of the general public are not conditional upon whether or not the ensuing costs are covered.

Our rescue activities are based on the Fundamental Principles of the Red Cross.

#### **Our patrons**

Thanks to their annual contributions, our patrons enable us to build up and operate a suitable infrastructure to perform air rescue operations on behalf of the Swiss population.

The services rendered by Rega to its patrons are not of a contractual nature and are therefore not deemed to be insurance benefits.

#### **Our partners**

We are fully aware of the importance of working in close collaboration with our partner organisations, and actively foster a successful working relationship with them.

We act as a fair and reliable partner.

We focus our activities on the fields of air rescue, air-ambulance repatriation services and medical advice.

In order to maintain and further improve the top level of expertise of our medical staff, we also perform medically indicated flights on behalf of international clients.

#### Our staff

Our members of staff play a decisive role in fulfilling our purpose. The following factors are of particular importance in this respect:

- personal identification with the organisation and its purpose;
- independence and responsibility;
   willingness to perform, flexibility
- willingness to perform, flexibility and motivation.

We aim to achieve this by means of:

- on-going training appropriate to the various hierarchical levels;
- progressive working conditions;
- appropriate salaries and attractive social benefits.

We foster a style of behaviour among our staff that is open, cooperative and characterised by mutual respect.

#### **Our values**

We strive to provide around-theclock services of first-class quality and safety, as well as to cultivate a conscious, structured manner of dealing with risks.

Our organisational structures are characterised by a clear-cut delineation of tasks, competences and responsibilities. These are implemented and respected at all hierarchical levels, from ordinary employees right up to the members of the Foundation Board.

We act and communicate in an open and transparent way, both within our organisation and towards the outside.

We are conscious of a potential conflict between performing our work and protecting the environment, and take this into account in everything we do.



The purpose of the Swiss Air-Rescue Rega Foundation is above all to help people in distress and in need of assistance, in accordance with the Fundamental Principles of the Red Cross. It provides its services without discrimination as to person, financial circumstances, social status, nationality, race, religious beliefs or political opinions.

Rega is fully committed to conducting its business according to the principles of good corporate governance. It upholds the guiding principles of non-profit governance: checks and balances, responsibility and efficiency, transparency, and safeguarding the interests of patrons and donors. Rega's guiding principles relating to corporate governance are embedded in its Foundation Deed and Regulations, its organisation and management regulations, its Mission Statement and its Code of Conduct. The Foundation Board monitors these principles on a regular basis.

#### **Foundation Board**

The Foundation Board is Rega's supreme body. It lays down the guiding principles of the organisation in accordance with the Foundation Deed. It draws up the Mission Statement and pertinent regulations, and adopts the strategy and the budget. It approves the Annual Report and the annual financial statements.

It defines the supervision and monitoring of the business activities. It also authorises the principles relating to the remuneration of the members of the Foundation Board and the Management Board.

The Foundation Board comprises a maximum of 15 members. The term of office is four years. Members are eligible for re-election up to their 70th birthday. There is no limitation on the length of service of the members of the Foundation Board. The Foundation Board elects from among its members a Chairman, as well as the five members of the Executive Committee, and also defines the Committee's tasks and competences.

# Executive Committee of the Foundation Board

The Executive Committee comprises five members of the Foundation Board: the Chairman, the Vice-Chairman, the Chairman of the Medical Commission, the Chairman of the Finance Commission, and one other member of the Foundation Board.

The Executive Committee of the Foundation Board is responsible for carrying out the tasks delegated to it. It coordinates the permanent commissions of the Foundation Board. Furthermore, on behalf of the Foundation Board, it supervises

Governance and compliance | Annual Report 2022 | Governance and compliance

and monitors the Management Board and issues it with the necessary instructions.

The members of the Executive Committee also serve on the Board of Directors of the subsidiaries, Swiss Air Ambulance Ltd. and Airmed AG.

#### **Management Board**

The Chairman of the Management Board is charged with managing the operative business, implementing the resolutions adopted by the Foundation Board and the Executive Committee, and delegating the various tasks and competences within the organisation.

# Tasks and procedures of the permanent commissions and the Advisory Committee

Each specialist body is governed by a set of regulations specifying its various tasks and competences, and is headed by a chairperson elected by the Foundation Board. The commissions meet on a regular basis to discuss specialist matters, which are specified by the relevant chairperson.

Prior to the meeting, the commission members receive the relevant documents so that they can prepare for the various items on the agenda.

#### **Medical Commission**

The Medical Commission comprises the Chairman, Prof. Dr. med. Christian Kern, and three physicians, all of whom are members of the Foundation Board.

The meetings are also attended by the Chairman of the Management Board, the Medical Director and, where necessary, other specialists, who are present in an advisory capacity and have the right to propose motions.

The Medical Commission is an advisory body to the Foundation Board and the Medical Director. It deals with and considers specialist matters relating to emergency and rescue medicine that fall within the competence of the Foundation Board, prior to the latter taking any decisions. When drawing up medical guidelines and quality controls, the Commission is assisted by Rega's Medical Service.

#### **Finance Commission**

The Finance Commission comprises its Chairman, Josef Meier, and other members of the Foundation Board. The meetings are also attended by the Chairman of the Management Board, the Chief Financial Officer and, where necessary, other specialists, who are present in an advisory capacity and have the right to propose motions.

The Finance Commission is an advisory body to the Foundation Board. It deals with matters relating to financial planning, budgeting, investment policy and the internal control system, and periodically examines the form and scope of financial reporting.

# Advisory Committee Partner Organisations

Under the chairmanship of Franz Stämpfli, the Advisory Committee comprises members of Rega's Foundation Board together with representatives from the following partner organisations: Swiss Alpine Rescue, commercial helicopter firms, the Canton of Valais Air-Rescue Service, the Swiss Air Force, the Swiss Cable Cars Association, police commanders, Spéléo-Secours Switzerland, Swiss Fire Service Coordination (FKS) and the Medical Emergency Call Centres 144.

The Advisory Committee is concerned with tasks relating to the collaboration between the partner organisations and promotes the exchange of information between the various network members.

#### Accounting and auditing

The financial statements of the Swiss Air-Rescue Rega Foundation

and its subsidiaries are prepared in accordance with the principles of Swiss GAAP FER accounting and reporting recommendations (in particular, GAAP FER 21), and give a true and fair view of its net assets, financial position and earnings performance.

At Rega, the "four eyes" principle is applied. This means that fundamentally two joint signatures are required at all levels. The Foundation Board has drawn up a set of regulations governing competences and signatory rights. Both internal and external control bodies periodically check that these regulations are being complied with.

# Risk Management – Internal Control System

The highly complex nature of emergency medical rescue, coupled with the strict requirements of aviation law and the demands of the Code of Obligations, make it necessary to take a structured approach to risks. Rega has combined demands from the Internal Control System and Safety and Quality Management to create integrated risk management in order to identify and view risks holistically and make use of available synergies.

As Rega's supreme body, the Foundation Board is responsible for risk management at Rega and all its subsidiaries. The key risks are systematically identified and evaluated every year, and appropriate risk control measures are taken. The identified risks are additionally monitored on an ongoing basis.

#### Rega's interests

Rega has interests in various companies domiciled in Switzerland. Strategic interests in companies and foundations in which Swiss Air-Rescue Rega directly or indirectly holds more than 50 percent of the voting rights or which are controlled by the Foundation Board are consolidated in the annual financial statements. An overview of these interests is provided in Rega's consolidated annual financial statements.

Rega further holds operative and functional minority interests in helicopter companies, airfield companies and cooperatives, and partner companies. This portfolio is maintained in order to fulfil the purpose of the Foundation.

Rega also has interests/investments which are managed by external asset managers according to a portfolio management agreement.

#### Foundation Board compensation

Compensation of the Foundation Board is based on the set of regulations approved by the Swiss Federal Supervisory Board for Foundations. Compensation (fixed sums, attendance fees and expenses) covers part of the expenses of Foundation Board members for preparing meetings, reviewing documents and attending meetings of the Foundation Board, Foundation Board Committee, specialist and ad hoc committees, Advisory Committee, partner organisations, pension foundations and other companies in which Rega has an interest. All compensation made to the Foundation Board and its Chairman is reported in detail in Rega's consolidated annual financial statements.

#### Foundation supervisory authority

As a non-profit foundation, Rega is subject to the supervision of the Swiss Federal Supervisory Board for Foundations in Berne, to which it is required to submit a management report each year. The last assessment and review by the Federal Supervisory Board was conducted on 18 October 2022; no objections of any kind were raised.

# Milestones in Rega's history



Swiss Air-Rescue is founded as a sub-section of the Swiss rescue association, Schweizerische Lebensrettungsgesellschaft (SLRG), in the Hotel Bären in Twann.



Swiss Air-Rescue is ready to start operations

On 25 December, Dr Rudolf Bucher, the head of Swiss Air-Rescue, announces over Radio Beromünster that the parachutists and helicopters are ready for action.



The first helicopter of its own

A countrywide collection by the Association of Swiss Consumers' Cooperative Societies (now Coop) produces sufficient funds to purchase a Bell 47J

First repatriation

For its first repatriation mission, the private Piaggio 166 aircraft owned by Dr Armin Meyer flies a patient from France back home to Switzerland.

An autonomous organisation

Swiss Air-Rescue breaks away

from its parent organisation,

appointed Technical Director.

the SLRG Fritz Rühler is

under Fritz Bühler



1971

First direct rescue from the Eiger north face

What until now had been deemed impossible, suddenly becomes reality: using a rescue hoist, the crew from the Gsteigwile base lift two climbers directly off the rock face.



First Alouette III

The Alouette III SE 316 HB-XDF is Rega's first heliconter to be financed by patrons' contributions. The picture shows it n operation at the Engadin Ski Marathon in 1972.



Rega becomes a non-profit foundation

The Association sets up a Foundation. Fritz Bühler is appointed the first Chairman of the Foundation Board. In 1981, Rega also becomes a Corporate member of the Swiss Red Cross.



Rega is the first non-military

organisation in the world to equip all of its helicopters with night vision goggles, thus increasing the safety of night

Helicopters with night

vision goggles



The first round the world

In a mission lasting 43 hours, the Challenger CL-601 transports three patients in consecutive legs, a journey that takes it all the way round the world for the first time.



Three new Challenge CL-604 iets

Three identical aircraft from the Canadian manufacturer, Bombardier, replace the 15-year-old air ambulance fleet.



Five Eurocopter EC 145 helicopters

Rega purchases five spacious rescue helicopters from helicopter manufacturer Eurocopter for use at its lowland bases. This is followed by a sixth.



The AgustaWestland Da Vinci is Rega's new mountain helicopter Rega purchases from

helicopter manufacturer AgustaWestland 11 rescue helicopters for use at its mountain bases.



Mobile heart-lung machine on board

For the first time, critically-ill patients can be hooked up to a heart-lung machine in the Rega helicopters and jets.



new standards in pilot training Instrument flight and emergency scenarios can now be practised realistically and efficiently in safety and without harming the environment.



Premiere for Rega's new transport incubator,

which can be used in both the jets and the helicopters and provides premature or newborn babies with the best possible medical care.



Precise flight weather data 60 new or enhanced measuring stations and weather cameras now continually supply Rega's elicopter pilots with up-to-date

meteorological information -



Authorisation for **Low Flight Network** 

Rega receives special authorisation to use key intersections of the nationwide network of IFR flight routes on missions virtually around the clock.



The Rega drone, which i to be used to search for missing or injured persons is presented for the first time. The newly developed drone system aims to supplement Rega's scope of operations



Support for Switzerland Rega supports the Confeder ation, the cantons and the Swiss population in their efforts to deal with the coronavirus

pandemic with its expertise

and infrastructure.



New night vision goggles Rega also brings medical assistance by air in the dark. To do this, it uses night vision goggles that have been specially developed for Rega



Emergency assistance in the USA

After a plane accident, Swiss Air-Rescue pioneers recover the bodies of 128 persons from an inaccessible area in the Grand Canyon region.



The first rescue parachutists

In winter 1953, Swiss Air-Rescue parachutists are used on a rescue mission for the first time



1968

Bell 206A, the first turbinepowered helicopter

The Jet Ranger HB-XCU has a turbine, but no rescue hoist. n mountainous areas where the helicopter is unable to land. rescue is only possible using the fixed rope



1966

Self-help by means of patronage

No funds from the Swiss government. However, a nationwide appeal for help proves successful. 25,000 patrons save Swiss Air-Rescue from financial ruin.



Twin-engine helicopter

The introduction of the Bölkow BO-105C - depicted here on the roof of the University Children's Hospital in Zurich - marks

engine helicopters at Rega.

the beginning of the era of twin-



Operations abroad with its own aircraft

Rega's Learjet 24D HB-VCY is the first civilian ambulance jet in the world. It is fully equipped with medical apparatus and is on stand-by around the clock.



The new fleet is made up of Agustas

On 14 August, the Untervaz base in Canton Graubünden puts the first of the 15 new twin-engine Agusta A 109 K2 helicopters into operation.

You can find a comprehensive history of Rega



at rega.ch/history

Long-haul ambulance jet The Challenger CL-600 HB-VFW is equipped to perform longhaul operations with several patients on board. In Geneva, it is christened "Fritz Bühler"



New Rega Centre at Zurich-Kloten

For the first time, Rega's hangar, Operations Centre, maintenance works, logistics operations, Patronage Centre and Administration Department are all united under one roof.



27 July: thanks to satellite based navigation, Rega flies to the Inselspital University Hospital in Berne despite poor visibility. using the GPS-assisted

Flying "blind" to the

approach procedure.

Inselspital



2004

Tsunami in Southeast Asia Rega is pushed to the limit.

Over a period of ten days, 16 medical teams are in oper ation. Within the space of a week, more than 60 casualties are repatriated to Switzerland.



Rescue despite poor visibility thanks to IFR flight route network

In December, two routes of the Low Flight Network for helicopters, which is based on satellite navigation, are certified for daytime use.



Three new ambulance jets The new Challenger 650 jets

from Bombardier fly patients from all over the world back to Switzerland. The Rega jets replace the three CL-604s that have been in operation since 2002



**New generation Rega** helicopters The first two H145 helicopters

from Airbus Helicopters are stationed at the Berne and Basel bases as high-performance successors of the EC 145 fleet, which repatriated over 60,000 patients



456 Covid-19 patients are transported on board Rega's aircraft during the coronavirus pandemic 316 of them by rescue helicopter and 140 in an ambulance jet.



at the Rega bases in Mollis and Erstfeld enable the

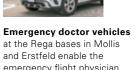
not fly due to bad weather.



Decision in favour of a single-type fleet

In March, Rega purchases nine H145 helicopters with an innovative five-bladed rotor and in December, an agreement is signed to procure a further 12 helicopters of this type. They are to replace the tried-and-tested Da Vinci fleet and will commence

operations in 2024.



emergency flight physician and the paramedic to also be called out if for example the rescue helicopter can-

## You can also find our Annual Report 2022 online at

## report.rega.ch/2022

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