



**Rega 2019**  
with Annual Report 2018



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## Rega 2019

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# “With the support of our patrons, we are further improving air rescue services”



**Michael Hobmeier**



**Ernst Kohler**

When, in the early 1960s, the running costs of performing rescues by helicopter gradually exceeded the resources of the fledgling Swiss Air-Rescue and the Swiss government rejected his application for support from public funds, Rega Director Fritz Bühler appealed to the public for help. The principle of the patronage system was born and enabled Rega to continue to come to the aid of people in distress.

In essence, not much has changed since then. The support of the general public has never been greater than in the past year and the importance of our patronage system for the future of Rega has also not diminished in any way. We and all of Rega's employees are extremely pleased that in 2018 our ever-growing family of patrons increased by some 47,000 new patrons. More than 3,483,000 people now support Swiss Air-Rescue. With their annual patronage contributions and donations, they cover over 60 percent of the total costs.

It is this solid foundation that makes it possible in the first place to continually invest in further developing Rega and air-rescue services in Switzerland. In recent years, besides large-scale infrastructure and IT projects, our main focus has been on modernising our aircraft fleet and pursuing our vision of all-weather rescue. With the three new ambulance jets and two of the total of seven new lowland rescue helicopters now in operation, in 2018 we successfully brought to a close two major acquisition projects that had been in the making for several years. However, in terms of the Rega vision and the related expansion of instrument flight routes and the corresponding approach flights for hospitals, in the past year, too, we were continually confronted with bureaucratic hurdles, which made it impossible to achieve our goal.

The fact that Rega's vision significantly benefits our patients is clearly demonstrated by the statistics: in 2018, thanks to instrument flight procedures, we were able to provide more than 300 people with swift medical assistance that otherwise would have not arrived until much later, or even not at all. Last year, the Rega Operations Centre organised more than 17,000 missions – more than ever before in the air-rescue organisation's 66-year-old history. The Rega ambulance jets spent around 4,700 hours in the air in order to fly seriously ill or injured people from countries abroad back home to Switzerland. The Rega helicopters, meanwhile, delivered urgently needed medical help by air in over 10,000 cases.

These figures show that Rega is needed, and they strengthen our resolve to continue to follow our current path – by always putting people at the centre of everything we do and continuing to invest in air rescue in future.

You can read more about what this means in concrete terms on page 10: we tell you about our newly developed Rega drone, which in future will fly autonomously and without visual contact with the drone operator and supplement our operational resources for searching for missing persons.

A handwritten signature in black ink, appearing to read 'M. Hobmeier'.

**Michael Hobmeier**  
Chairman of the Foundation Board

A handwritten signature in black ink, appearing to read 'E. Kohler'.

**Ernst Kohler**  
CEO/Chairman of the Management Board

# The flying intensive care unit

**Rega's crews take off on so-called secondary missions around 3,000 times a year, transporting patients from one hospital to another. As a swift and gentle link between hospitals, the Rega helicopters play an important role in the provision of healthcare in Switzerland. They connect peripheral regions with central hospitals offering the appropriate treatment centres and highly specialised medicine.**

The cantons have been working closely together in the field of highly specialised medicine since 2009. They have signed an intercantonal agreement on the nationwide planning and allocation of highly specialised medical services. This means that instead of 26 individual cantonal solutions, there is one country-wide plan that is supported by everyone. This makes sense in terms of both quality and cost-effectiveness – as in Switzerland, there are too few cases for many of the highly specialised medical interventions and treatments to be provided at all the hospitals with the necessary level of quality and profitability. Consequently, organ transplants, neurosurgical procedures and similarly complex medical treatments are only performed in a few specially equipped main hospitals.

The rescue helicopter is often the most suitable means of transporting critically ill or injured persons quickly and safely from peripheral regions to central hospitals with the appropriate infrastructure. As a result, for many years Rega has been focusing on broadening the possibilities by using advances in technology and medicine to provide optimal patient care. One of the objectives of Rega's medical experts is that whatever is medically possible on the ground – that is, in hospital or in an ambulance – should also be possible in the air.

## Cardiovascular support devices

Every year, Rega transports over 2,000 patients suffering from cardiovascular diseases on board its rescue helicopters and ambulance jets, including critically ill patients who

are dependent on cardiovascular support devices. For many years, the Rega medics responsible have been driving forward measures to extend the possibilities of transports with mobile intensive care equipment and techniques, such as, for example, an extracorporeal membrane oxygenation (ECMO) machine and an intra-aortic balloon pump (IABP).

ECMO is an intensive care procedure whereby a machine assumes some or all of the patient's respiratory and/or cardiac functions. The IABP, on the other hand, is a mechanical device used in emergency medicine to counteract inadequate cardiac output – such as after a heart attack – with the aim of improving the blood flow and thus the supply of oxygen to the heart muscle.

Rega purchased an IABP already back in 2008, followed one year later by two ECMO machines. In 2010, Rega celebrated a world first: it carried out the very first transatlantic flight at a normal flight altitude with a patient on board who was attached to an ECMO device. The world's longest ECMO transport was also conducted with a Rega jet: at the beginning of 2019, a Rega crew flew a patient from London to Kaohsiung in Taiwan. To this day, Rega is the only air rescue organisation in Switzerland that is capable of carrying out transports with an IABP or an ECMO device. In 2018 alone, Rega performed 41 such missions.

## Getting life off to a good start

Rega pays particular attention to methods of transporting its tiniest patients. Around 230 times a year, it flies premature and newborn babies in a mobile incubator from smaller-sized hospitals to central hospitals with a specialised neonatology department. In the first hours of their life, babies that have been born preterm often have difficulty breathing because their lungs are not yet fully developed. The mobile incubator not only ensures that the baby is constantly ventilated during transfer between hospitals, but also stabilises their body temperature. As the availability of these machines in Switzerland is very limited, in 2014, Rega invested



in its own transport incubator. This incubator is suitable for use in both the rescue helicopters and the ambulance jets.

## In-house development centre

One major challenge that arises when designing high-tech medical equipment such as ECMO machines, IABPs or transport incubators for use in aircraft are the numerous regulations that need to be complied with. In a helicopter, for example, a medical device and its fixtures must be able to withstand up to 20 times the force of gravity. The



**On the helipad at Lausanne University Hospital: unloading a patient who is attached to a mobile heart-lung machine.**

engineers and designers at Rega's in-house development centre devise and construct the necessary modifications to the Rega aircraft so that the medical equipment is permitted to be deployed in the Rega helicopters and ambulance jets. The development centre, which employs five staff, is authorised by the European Aviation Safety Agency EASA to carry out such alterations and with its work ensures that critically ill patients receive optimal medical care while they are being flown to a central hospital.

### **Transfer flights in all weathers**

From a medical perspective, Rega's modern-day aircraft are "flying intensive care units" and are perfectly geared towards the needs of patients and crew. Therefore, any restrictions that arise are mainly due to the weather. For instance, poor visibility can hinder a rescue helicopter from carrying out a mission and thus also a medically necessary transfer flight. As a result, for many years, Rega has been pursuing its vision of all-weather air rescue and is investing, among other things, in establishing and expanding the so-called

Low Flight Network (see the bottom of page 9). In future, this countrywide network of instrument flight routes is intended to link airports, airfields, Rega bases and hospitals with each other. Then, just like on a motorway, the helicopter will be able to follow a flight route stored in the on-board computer even in the poorest of visibility by flying under instrument flight rules (IFR).

Similar to a motorway system, the LFN also needs intersections at which the Rega helicopters can join and leave the route network. Up to now, mainly military airfields like the one in Emmen

have served as “access routes”, because they already have authorised IFR approaches. However, Rega would like to use hospitals and Rega bases as points of entry and exit to and from the network, so that in an emergency, patients can be flown to a central hospital quickly and safely without detours. Exactly how this works is demonstrated by a project at the Inselspital University Hospital in Berne. Since 2011, the Rega crews have also been able to fly directly to and from this hospital in minimal visibility as it has its own IFR procedure.

The system that has proved its worth in Berne and already helped hundreds of patients is now to be deployed elsewhere, too. Rega has submitted to the Federal Office of Civil Aviation (FOCA) all the documents required

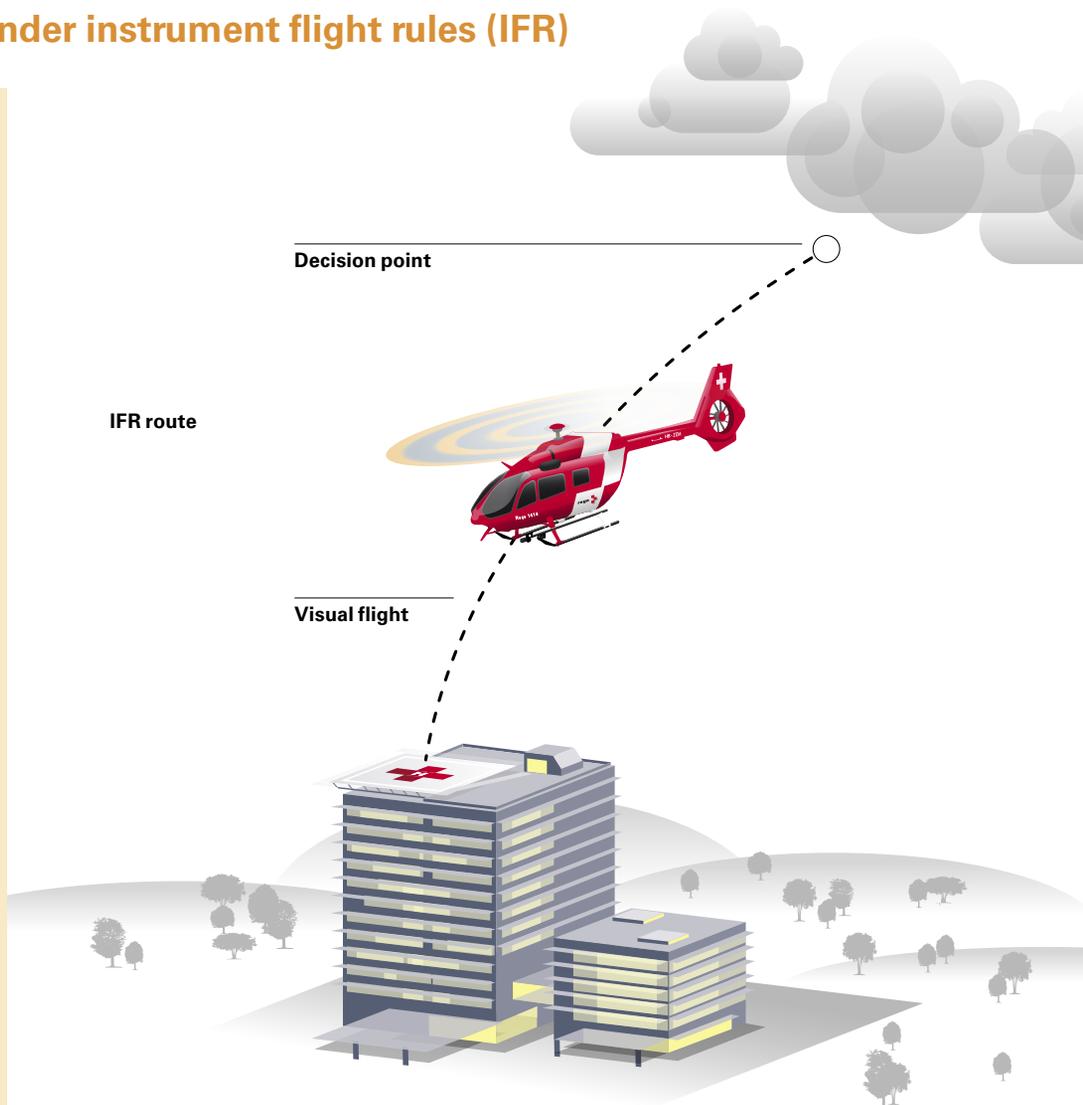
for the approval of IFR approach flights to the Swiss Paraplegic Centre in Nottwil, the University Hospital Zurich, Lucerne Cantonal Hospital and Winterthur Cantonal Hospital; at the beginning of 2019, certification was granted for the IFR approach flights to the University Hospital Zurich and Winterthur Cantonal Hospital. Additional hospital approaches under instrument flight rules that have been developed by Rega still need to be certified. In combination with the three all-weather AW169-FIPS rescue helicopters that will join the Rega fleet in 2021, and with further IFR approaches, Rega intends to broaden the scope of possibilities for secondary transports between hospitals, and on doing so to further improve primary medical care in Switzerland.

**Close partnership with central hospitals for our patients’ benefit**

Rega is just a part of a well-functioning system in which a wide variety of partners work closely together: rescue services on the ground, hospitals, authorities, highly specialised clinics and competence centres. This is also demonstrated by Rega’s special intensive care transports, where the Rega crews are assisted by specialists from the central hospitals. With missions using a mobile heart-lung machine (ECMO), the Rega crew are joined on board the rescue helicopter by a cardiac perfusionist and, if necessary, a heart surgeon. Rega also relies on the expertise of the appropriate specialists when transporting its tiniest patients: a neonatology team accompanies every flight with a premature or newborn

**Hospital approach flight under instrument flight rules (IFR)**

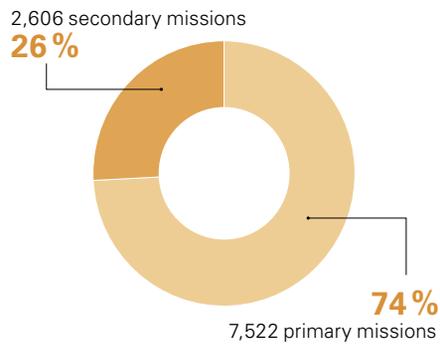
The Rega helicopter glides as if on a track through the high-lying fog towards the hospital. The visibility from the cockpit is no more than a few metres. The autopilot navigates the helicopter with great accuracy along a predefined route under instrument flight rules (IFR). During this procedure, pilots do not use their surroundings for reference like on a visual flight, but monitor with the instruments in the cockpit whether the helicopter is following the route stored on the computer. Thanks to high-precision navigation instruments and cutting-edge satellite navigation systems, the helicopter “knows” where it is in three-dimensional space at any given time. It then arrives at the so-called decision point of the approach flight. This is the defined point at which pilots must decide whether they can deactivate the autopilot and make the approach to land under visual flight rules because the hospital’s helipad is visible – or whether they are forced to continue in instrument flight on the predefined route to an alternative landing site.



baby in a transport incubator. In order to continue to be able to provide its patients with the best possible medical care in future, Rega, together with its partners, is working on safely carrying out intensive care transports with its rescue helicopters – around the clock and in all weathers – as part of primary medical care in Switzerland.

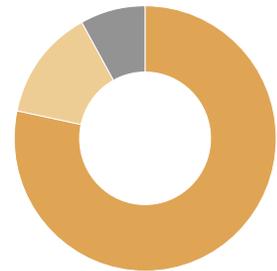
## Helicopter missions 2018

### Primary v. secondary missions



- Secondary missions: inter-hospital transfer flights
- Primary missions: emergency missions directly to the site of the incident

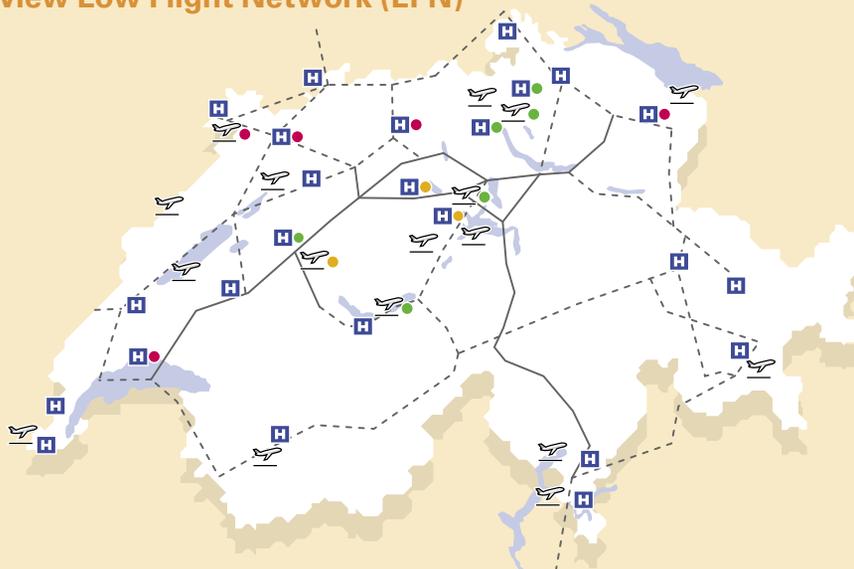
### Special intensive care transports



- Neonatal transports **235**
- Special transports ECMO/IABP **41**
- Organ transports **24**



## Overview Low Flight Network (LFN)



### Current status IFR approach flight

- Operational
- Authorisation pending
- In preparation
- Hospital
- ✈ Airfield

### Current status LFN routes

- Operational
- - - In preparation

# The Rega drone is ready for operation

**It autonomously scans large search areas and is equipped with various sensors, such as a thermal camera: the newly developed Rega drone unites cutting-edge technology with Rega's decades of experience in conducting search missions for missing, ill or injured persons. As a result, in future, Rega will have at its disposal an additional device to help it search for people in distress.**

A Rega vehicle is parked next to the mountain pass road, away from the edge on the gravel. Wisps of fog are winding their way up from the valley. It is already dark, only a chink of light is visible from inside the truck. Two people are sitting in the back of the vehicle, staring at brightly lit screens. They are responsible for the current mission using Rega's latest technological aid: a high-tech drone system that has been specially designed for large area searches from the air for lost persons who are in urgent need of help. These two specialists – the drone operator and the drone pilot – are searching for a missing female hiker with the Rega drone two kilometres away (see illustration).

## **Automated flight in the search area**

The drone operator analyses the images from the infrared camera that are being relayed to him by the drone. He is in contact with the Rega Operations Centre, the police and the mountain rescuers from the Swiss Alpine Club SAC, who are searching the area on foot. The drone pilot is sitting at the second workplace. He monitors the flight parameters of the autonomously flying drone and checks that it is correctly scanning the predefined flight plan: first following the hiking path up the mountainside and 100 metres to the left and right, as far as the mountain hut that the hiker never reached. Then the drone covers a wider search corridor back down to the starting point where the hiker was last seen. Suddenly a warning signal sounds out in the truck: the software algorithm has picked up something on the images that could be a person. On the high-resolution camera pictures, the

operator identifies a person 60 metres below the hiking path. He transmits the precise coordinates electronically to the Rega Operations Centre. The flight coordinator there immediately calls out the helicopter crew from the nearest Rega base, who subsequently provide the hiker with medical assistance and fly her to hospital.

## **Intensive tests with a prototype**

This mission is a fictive one – but this is soon to change. Over the last year and a half, Rega has been working assiduously on its own drone project. The first, fully equipped Rega drone is currently undergoing rigorous testing. It is expected that it will be possible to deploy the Rega drone for search flights for lost persons from spring 2020. According to Sascha Hardegger, Head of Helicopter Operations and project leader, the idea of a Rega drone arose several years ago: “We observed the development of drone technology from an early stage and were always convinced that drones could further extend Rega's scope of operations. Eighteen months ago, we felt that the time was ripe to launch a concrete project.”

Currently the greatest potential for this technology is seen to lie in the aerial search for missing persons. Here Rega can draw on decades of experience gathered in the course of countless search missions. After all, situations continually arise where the Rega Operations Centre has reason to assume that a person is in trouble in rough terrain but does not know exactly where they are – and therefore first need to be found before they can be provided with medical assistance and airlifted to safety. When developing the concept for the Rega drone, those responsible did not just benefit from the expertise of the helicopter crews and the mission coordinators, but also consulted the mountain rescuers and terrain search dog handlers from the Swiss Alpine Club SAC. Together they specified all the various things that a “search drone” should be able to do in order for a search mission to be successful.

## **Three requirements for the drones**

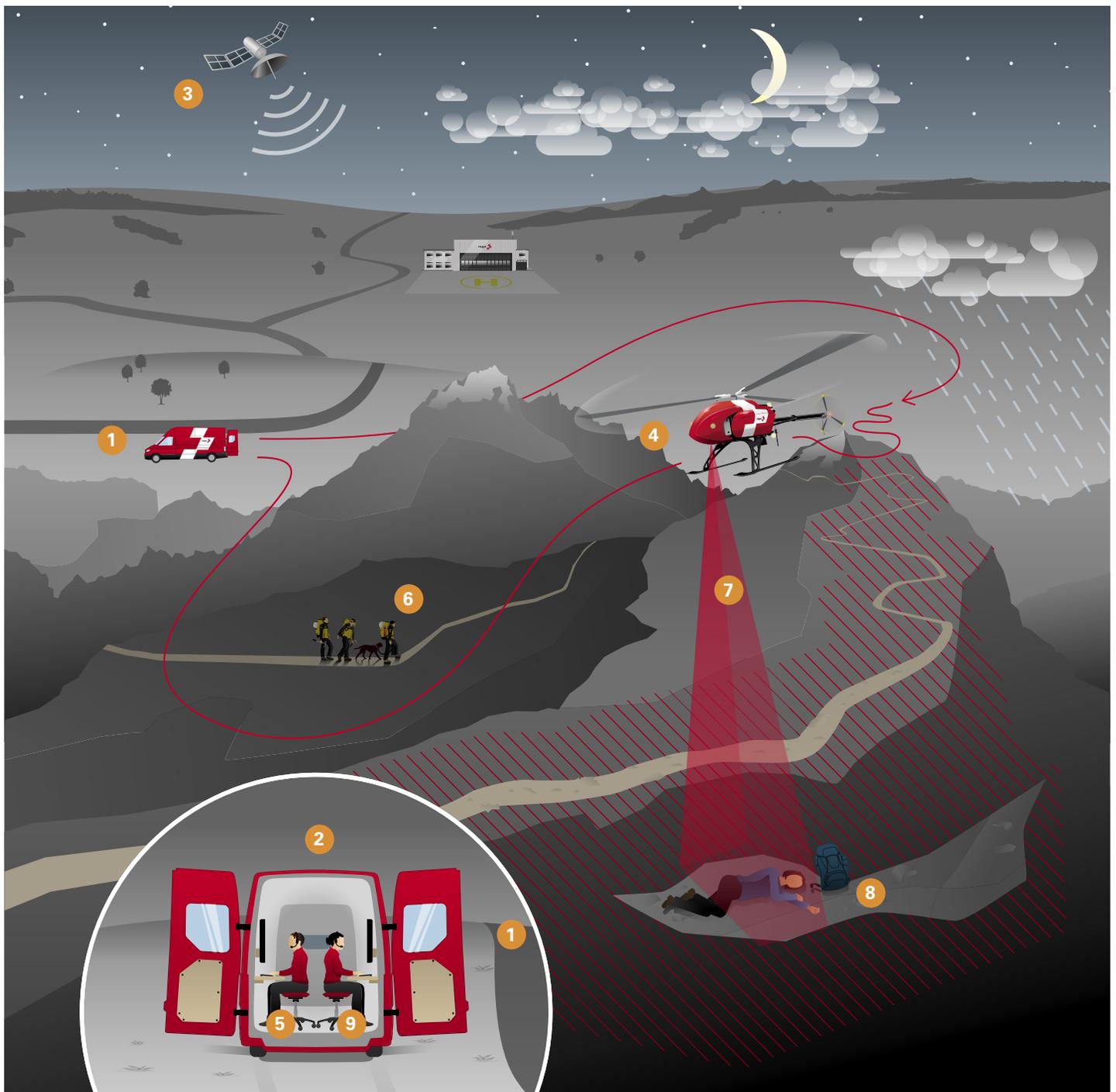
The first and foremost requirement for the Rega drone: it must be able to scour large search areas in an automated manner and without direct visual contact with the drone pilot, and also to autonomously detect and avoid other aircraft or obstacles such as cables. That in turn is conditional on a second requirement: numerous processes have to take place “directly on board” the drone – as due to the distance from the pilot, it is not always possible to guarantee uninterrupted and real-time communication with the drone. In extreme cases, the drone must be capable of continuing its assignment without a connection with the ground station – and also without compromising safety in any way.

Thirdly, the Rega drone needs to be equipped with various cameras and sensors in order to be able to detect people in rough terrain. For example, with the aid of a special receiver that can locate a switched-on mobile phone in the vicinity – an extremely efficient tool for large area searches for people in inhospitable or mountainous terrain.

## **Taking matters into our own hands**

“Currently, there is no drone system on the market that meets all our requirements,” says Hardegger. “Presumably it is not financially viable for a manufacturer to develop such a device because too few people are interested in specifically buying search drones.” In addition, military systems are not only too large and expensive, but are not even available in the first place for a civilian organisation such as Rega. Market analysis brought forth another finding, too: the various technologies and components for the Rega concept to be implemented, such as drive system, navigation and sensors, were available, but only existed for applications over short distances, in other words, with direct visual contact with the pilot. That is insufficient for Rega's needs, because only automated flights without visual contact can make missions in all weathers possible – for example, if there is fog lying between

Continue reading on page 12 ►



## How a search is conducted using the Rega drone

After being called out by the Rega Operations Centre, the drone crew, comprising an operator and a pilot, drive to the operational area in a **1 transport vehicle**. Inside the vehicle is the Rega drone and the **2 ground control station**, from which the crew operates the drone without direct visual contact and monitors the data that it transmits. Thanks to **3 satellite navigation**, the **4 Rega drone** scans the predefined search area in an automated manner and can also be used in adverse weather conditions.

The two-person drone crew share the tasks: the **5 drone operator** coordinates the use of the drone and acts as the link between the Rega Operations Centre and any other rescue teams on location or in the search field. These might be, for example, the police or **6 mountain rescuers from the Swiss Alpine Club SAC**.

Based on the information available and in liaison with all those involved, the drone operator determines the search strategy and search area and informs the drone pilot accordingly. During the search flight, he tries with the aid of the **7 camera images and other data** transmitted by the drone to locate the **8 missing, possibly injured person** or gives the drone new instructions. The **9 drone pilot** prepares the Rega drone for takeoff and performs the necessary checks. In consultation with the operator, he programmes the in-flight computer and, if required, obtains any permits for the drone flight. After everything has been cleared, he launches the drone manually and when it reaches a flight altitude of approximately 20 metres, he switches to autopilot mode. During the flight, he monitors the flight parameters of the drone, as well as the air traffic in the operational area, on the screen.

the mobile ground station and the search area. “We did not want to waste time waiting for the market to supply us with what we are looking for. So we pursued our vision ourselves in collaboration with carefully selected partners,” Sascha Hardegger explains. Rega has a wealth of experience in airborne search operations, as well as extensive expertise in the field of aviation. “Consequently, we have what it takes to put together all the pieces of the puzzle in our own project and supplement the ones that are missing by designing them ourselves.”

#### **Flying without visual contact thanks to anti-collision systems**

At the end of 2018, the time had finally come: after numerous intermediate stages – during which the newly designed flight control software was initially tested with another, smaller drone – the Rega drone system was fully functional and ready for testing. With its three rotor blades and a rotor diameter of just over two metres, the drone looks like a mini helicopter and in appearance has little in common with the commercially available multi-copters that people usually associate with the word “drone” (see illustration).

Using two high-precision GNSS receivers and satellite navigation, the drone flies autonomously on a pre-defined route with an accuracy to the metre. It follows the topography of the terrain at an altitude of around 80–100 metres above ground level. Like many aircraft in Switzerland, it is also equipped with the anti-collision warning systems, FLARM and ADS-B. If necessary, their signals are directly transposed into new steering inputs in order to avoid collisions. In the course of numerous test flights and simulations, the behaviour of the drone when faced with rapidly approaching objects was optimised so that it moves safely out of the way. In order to operate the drone without visual contact – a so-called BVLOS (Beyond Visual Line of Sight) flight – Rega requires a permit issued by the Federal Office of Civil Aviation (FOCA), which is currently under preparation.

#### **Algorithms help locate missing people from the air**

However, the drone should not just be able to scour the search area in a safe and automated manner, but also fulfil its ultimate goal – to locate missing people from the air. To achieve this, it is equipped with various sensors. The signals from the infrared and high-resolution electro-optical cameras are categorised with the aid of a self-learning algorithm, which was developed in collaboration with the ETH Zurich. The image areas in which, based on the pixel pattern, the algorithm “presumes” a person is located are relayed to the operator on the ground, who then examines this footage manually. In order to “feed” the software and thus improve the accuracy and reliability of the system, test persons are currently being recorded and categorised in rough terrain.

Rega is also planning to integrate the mobile phone tracking function, as is already being used in the Rega helicopter in collaboration with the police, into the drone system. The devices deployed in the helicopters are not suitable for this purpose, so Rega has specified the necessary modifications – in particular in terms of weight and search tactics – and, in collaboration with a manufacturer, initiated the development of a device that is suitable for use with drones. The prototype is currently being trialled in cooperation with the police. This would enable the Rega drone to locate a mobile phone from a distance of several hundred metres and thus most probably also find its owner.

#### **An unmanned aircraft still needs a crew**

The Rega drone will expand Rega’s scope of operations and optimally supplement the resources that are currently being used to locate missing people (see box). Further tests, as well as FOCA authorisation, are necessary before the drone can be put into operation. If the Rega drone system proves itself in the trials and on the initial missions, the aim in the mid-term is to be able to call out several mobile

drone teams in various locations in Switzerland around the clock to assist with search missions. Even if the drone is unmanned and can fly autonomously, it still needs a well-trained drone crew to coordinate the search with the various rescue teams, to determine the search strategy and to start the drone, says Sascha Hardegger. “The drone will always supplement, not replace, the Rega helicopter and its crew. If the search for an ill or injured person proves successful, a Rega helicopter will still be needed to fly medical assistance to the site of the incident.”

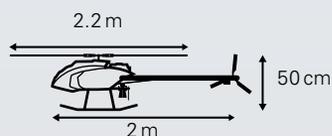
#### **Rega’s search missions**

Last year, Rega searched for missing persons from the air around 160 times. Its Operations Centre mobilised terrestrial mountain rescuers and terrain search dog handlers from the Swiss Alpine Club SAC on 130 occasions – either to assist the Rega crew or to search on foot because adverse weather conditions meant that the helicopter had to remain on the ground. The reasons for calling out Rega in connection with a missing person search are varied. What they all have in common is reasonable grounds to believe that a person needs help: for example, a hiker who has not arrived at the mountain hut at the agreed time, whereupon the hut caretaker calls out Rega. Or a man who fails to return after taking his dog out for a walk and the police asks Rega for assistance. Rega also regularly goes into action in response to swimming accidents to search for missing persons in lakes and rivers from the air.

## Equipment of the Rega drone



### Key figures



Flying time:  
3 hrs



Take-off/landing site:  
10 x 10 m



Max. payload:  
10 kg



Flying speed:  
120 km/h max.  
80 km/h during search flight



Operational altitude:  
max. 3,000 m a.s.l.



Operational temperature:  
-40°C to 40°C



Search capacity:  
16 sq. km in 2 hrs

### Four methods of searching for missing persons

If Rega is called out by the authorities or a private person and there is good reason to believe that a person has gone missing and needs help, the Rega mission coordinators have three – and soon four – different resources at their disposal, always in close collaboration with the police. The decision as to which search method is the most suitable is made based on the information available at the time the alarm is raised and the topography and weather conditions in the search area.



#### Search flight with the Rega helicopter

The Rega crews at the 12 helicopter bases throughout Switzerland are ready to go into action around the clock. If the search area is relatively limited and, for example, the planned route of a missing person is known, a search flight along the hiking path by the nearest Rega helicopter, with a Rega crew who are familiar with the area, is a sensible and swift initial measure.



#### IR/EOS multi-sensor search system

With the IR/EOS multi-sensor search system, Rega has another ultramodern device at its disposal for performing searches over large areas. The system is mounted on the Rega helicopter and comprises a highly sensitive infrared camera, optical sensors, a searchlight and a computer workstation installed in the helicopter cabin.



#### Mountain rescuers and terrain search dogs

The mountain rescuers from the Swiss Alpine Club SAC are called out if the Rega crews require assistance in rough terrain or if poor visibility renders rescue by air impossible. These rescue specialists also include teams with terrain search dogs, which can be deployed as efficient search aids. All the missions conducted by the mountain rescuers are coordinated by Rega's Operations Centre.



#### Drone system for searching for people

Rega and its operational partners will soon be able to search for missing or injured persons with the aid of a drone system. Initially this will be used above all to supplement the conventional resources – for example, if the risk for the helicopter crew is too high due to adverse weather conditions, or for a search at night at a low flying altitude in an area with an abundance of cables.

# In operation for Switzerland

**Red rescue helicopters and white ambulance jets: Rega brings medical assistance from the air around the clock and is indispensable to the Swiss healthcare system. The over 3.4 million patrons keep Rega in the air with their annual contributions and make much more possible than is commonly known.**

With its three ambulance jets and twelve helicopter bases distributed all over the country, Rega is an integral part of primary medical care in Switzerland. Last year, Rega helped more than 11,500 patients and organised over 17,000 missions. In public perception, Rega is above all associated with its red rescue helicopters and the provision of emergency medical care immediately after an accident. But Rega is much more than that.

Rega's objective is to continually improve air rescue in Switzerland. And it resolutely pursues this goal – in the last years, for example, by investing in all-weather rescue and state-of-the-art aircraft and infrastructure, as well as by training its crews and collaborating closely with its operational partners.

This overview of some of Rega's many areas of activity shows just what is possible thanks to the solidarity contributions from the well over 3.4 million patrons. They ensure that in future, too, Rega will be able to provide reliable and professional assistance to people in distress at all times – in Switzerland and all over the world.

## Rega app

Since its launch in 2011, the Rega app has been downloaded over 1.3 million times and has proved its worth in more than 3,000 missions. When the alarm is raised via the emergency app, the caller's coordinates are automatically transmitted to Rega's Operations Centre. This saves valuable time in determining the precise location of the injured or ill person – time that could make all the difference in an emergency.

## Countrywide radio network

Rega operates its own nationwide radio network of 42 stations to enable its flight coordinators to support the helicopters crews during a rescue mission. This also includes an emergency channel, which is monitored by the Operations Centre and can be used by anyone to raise the alarm in an emergency.

## All-weather rescue

In order to also bring medical help by air to people in distress in fog and snow conditions, Rega is pursuing its vision of being able to carry out rescues irrespective of the weather. It has, among other things, established a network of instrument flight routes, which is continually being expanded, and has also purchased three all-weather rescue helicopters, which will go into operation in 2021.

## The pilots of the future

Rega supports specially selected young helicopter pilots with its own youth development programme. By doing so, it promotes Switzerland's future pilots so that it will be able to continue to recruit sufficient well-trained helicopter pilots in the years to come. Rega possesses an H125 helicopter for training purposes.

## Operational partners and training

From the ambulance services, to the police and fire service, to the piste rescue service: efficient cooperation between all the links in the rescue chain is of key importance if patients are to receive optimal medical care. Emergency procedures are frequently practised: Rega regularly carries out training courses and exercises together with its operational partners.

## Weather stations

Up-to-the-minute meteorological data means increased safety for both patients and crew. For this reason, Rega has set up a nationwide network comprising some 60 weather stations and webcams. Data such as visibility, type of precipitation and altitude of the cloud cover are delivered to the pilot directly into the cockpit and, in the event of poor visibility, serve as a basis for a possible flight under instrument flight rules.

## Operations Centre

The Operations Centre is the heart of Rega. Here, the flight coordinators deal with emergency calls around the clock; in 2018, they organised more than 17,000 missions both at home and abroad. The flight coordinators not only have an overview at all times of the available rescue resources throughout Switzerland and support the crews during the mission. They also arrange for patients to be repatriated from abroad, in close contact with the various crew members, airlines and insurance companies.

## Terrestrial rescue

If the Rega crews need help in difficult terrain or if poor visibility renders rescue by air impossible, the mountain rescuers from the Swiss Alpine Club SAC are called on for assistance. These specialists belong to Swiss Alpine Rescue – a non-profit foundation that is jointly funded by Rega and the SAC. Rega's Operations Centre coordinates all of the missions carried out by the mountain rescue teams.

## Safe hospital helipads

Swift, gentle transport on board the Rega helicopter is of little use if it cannot land at the hospital safely. Rega is actively promoting safe, modern hospital helipads by advising and supporting Swiss hospitals with respect to corresponding infrastructure projects.

## Search flights with IR/EOS

Rega's multi-sensor search system comprises a highly sensitive infrared camera, optical sensors, a computer workstation installed in the helicopter cabin and a searchlight. It is deployed on missions to search for missing or injured persons.

## Intensive care medical transports

Rega is the only air rescue organisation in Switzerland that is able to carry out highly complex intensive care patient transports. For example, it flies premature babies or intensive care patients from small, peripheral hospitals to central hospitals. Rega's in-house design and development centre ensures that the necessary high-tech medical devices, such as a mobile heart-lung machine, are approved for use on board the aircraft.

## Support for mountain farmers

Every year, Rega's flight coordinators organise around 1,200 missions on behalf of mountain farmers to recover injured, trapped or dead livestock from rough terrain. Rega commissions commercial helicopter firms to perform these flights.

## Missions abroad

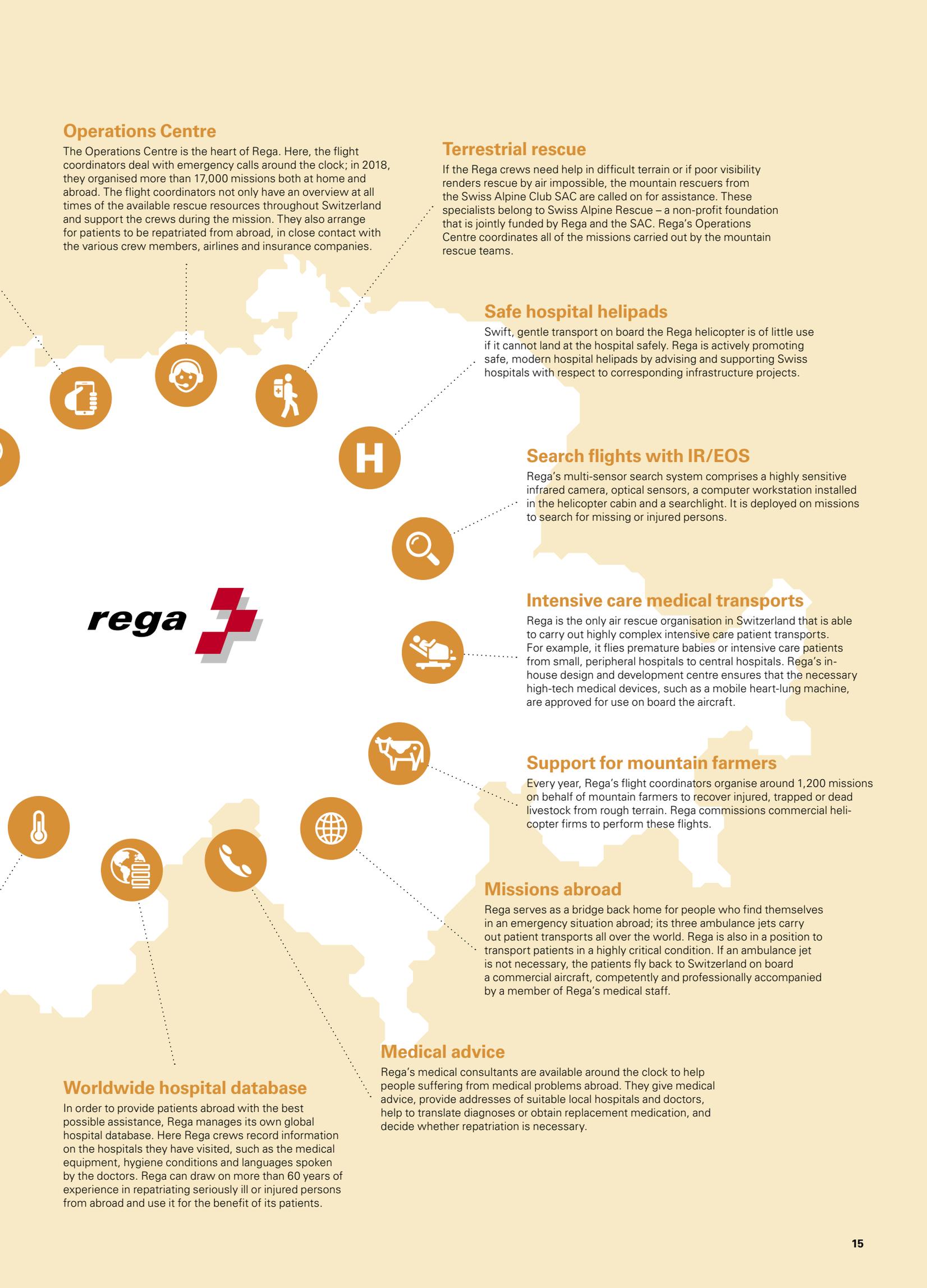
Rega serves as a bridge back home for people who find themselves in an emergency situation abroad; its three ambulance jets carry out patient transports all over the world. Rega is also in a position to transport patients in a highly critical condition. If an ambulance jet is not necessary, the patients fly back to Switzerland on board a commercial aircraft, competently and professionally accompanied by a member of Rega's medical staff.

## Medical advice

Rega's medical consultants are available around the clock to help people suffering from medical problems abroad. They give medical advice, provide addresses of suitable local hospitals and doctors, help to translate diagnoses or obtain replacement medication, and decide whether repatriation is necessary.

## Worldwide hospital database

In order to provide patients abroad with the best possible assistance, Rega manages its own global hospital database. Here Rega crews record information on the hospitals they have visited, such as the medical equipment, hygiene conditions and languages spoken by the doctors. Rega can draw on more than 60 years of experience in repatriating seriously ill or injured persons from abroad and use it for the benefit of its patients.



# Medical assistance by air

Swiss Air-Rescue Rega was founded in 1952 for the purpose of providing emergency medical assistance by air.

Thanks to wide-scale support from the Swiss people, it is able to meet the challenges posed by a country with extremely demanding topography. Rega is on call around the clock with its highly trained employees and state-of-the-art aircraft, finances the building and renovation of its dense network of helicopter bases, and constantly improves its air rescue services and procedures.

Rega provides assistance wherever a person's life or health can be preserved or protected through its intervention. Ambulance jets and rescue helicopters are swift, comfortable and efficient means of transport. Their targeted use helps reduce the subsequent costs arising from acute illnesses and accidents.

Rega is an autonomous, privately run, non-profit foundation. With its 3,483,000 patrons, it is firmly rooted within the Swiss population. Rega operates independently of political interests and is not subsidised by the State. Rega 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.

## Key figures for 2018

<b>Total number of missions organised</b>	<b>17,124</b>
Helicopter	12,573
Fixed-wing aircraft	1,371
Other missions <sup>1</sup>	3,180
Patronage contributions and donations (CHF million)	103.1
No. of patrons (in millions)	3.483
No. of employees <sup>2</sup>	375
Operating revenue (CHF million)	166
Operating expenditure (CHF million)	164
Operating result (CHF million)	2.0
Balance sheet total (CHF million)	574

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

<sup>2</sup> No. of full-time equivalent employees at the end of December





Solidarity, empathy, professionalism, competence, Swissness

You can rely on Rega.

# Locations

## Rega's helicopter bases

Rega aims to reach any location in its operational area within 15 minutes' flying time. Twelve Rega helicopter bases distributed throughout the country make this possible. They are located in Dübendorf, Basel, Berne, Lausanne, Untervaz, Locarno, St. Gallen, Erstfeld, Samedan, Wilderswil, Mollis and Zweisimmen. In addition, there is a partner base in Geneva.

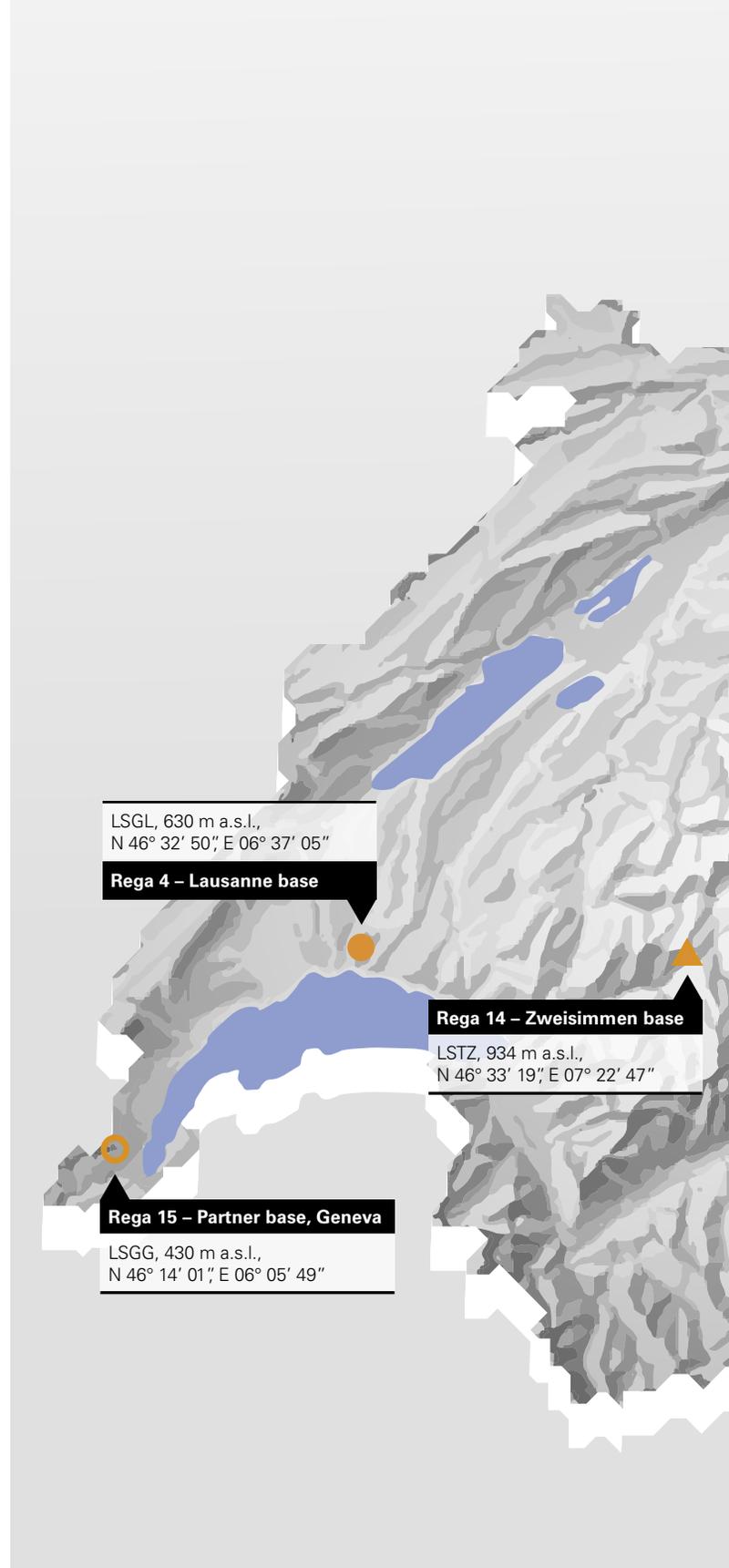
At each of the helicopter bases, a Rega crew comprising a pilot, paramedic and emergency flight physician are standing by at all times, ready to bring emergency assistance by air to people in distress as swiftly as possible.

## The Rega Centre

Rega's headquarters is located at Zurich Airport, with direct access to the take-off and landing runways. While the three ambulance jets take off from here to destinations all over the globe, the rescue helicopters only come to the Rega Centre for major maintenance work or servicing. In addition to the hangar and the maintenance works for the Rega fleet, the Rega Centre is home to the Operations Centre, the administrative offices and the large, central materials store.

## Operations Centre

The Operations Centre at the Rega Centre organises over 17,000 missions every year. It can be contacted around the clock – in Switzerland via emergency number **1414** and from abroad by calling **+41 333 333 333**.



LSGL, 630 m a.s.l.,  
N 46° 32' 50", E 06° 37' 05"

**Rega 4 – Lausanne base**

**Rega 14 – Zweisimmen base**

LSTZ, 934 m a.s.l.,  
N 46° 33' 19", E 07° 22' 47"

**Rega 15 – Partner base, Geneva**

LSGG, 430 m a.s.l.,  
N 46° 14' 01", E 06° 05' 49"

# The Rega fleet

## Helicopters, lowland bases



### Airbus Helicopters H145

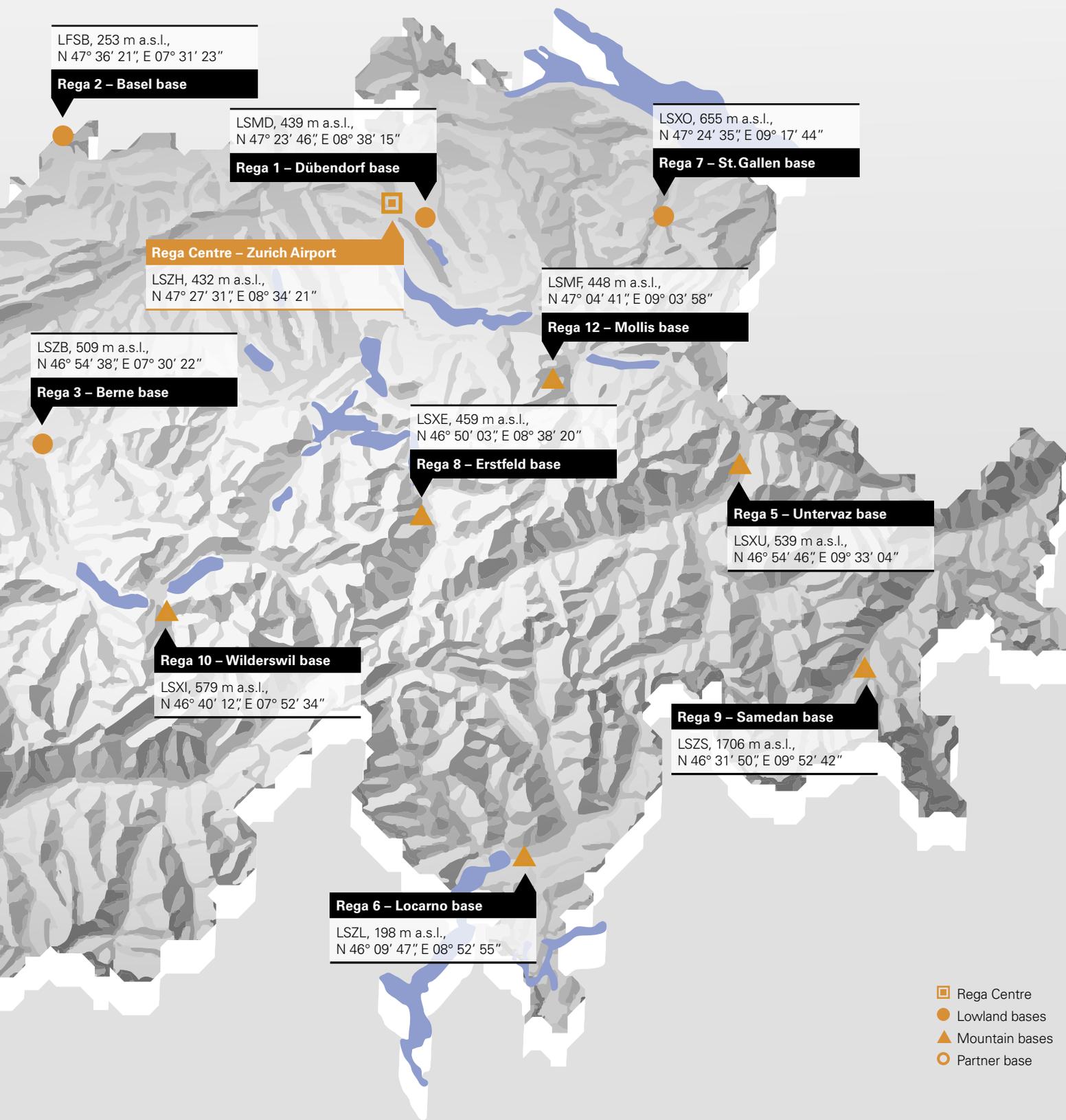
Number of helicopters:	7
Patient capacity:	1 lying, 1 sitting
Rotor diameter:	11 m
Length:	13.64 m
Height:	3.95 m
2 engines, take-off power:	Arriel 2E, 2 x 894 HP
Maximum flying speed:	230 km/h
Rescue hoist:	90 m cable length, 270 kg

## Helicopters, mountain bases



### AgustaWestland Da Vinci

Number of helicopters:	11
Patient capacity:	1 lying, 1 sitting
Rotor diameter:	10.83 m
Length:	12.96 m
Height:	3.40 m
2 engines, take-off power:	Pratt & Whitney, 2 x 778 HP
Maximum flying speed:	235 km/h
Rescue hoist:	90 m cable length, 270 kg



## Helicopter, flight school



### Airbus Helicopters H125

Number of helicopters:	1
Rotor diameter:	10.69 m
Length:	12.94 m
Height:	3.34 m
1 engine, take-off power:	Turbomeca Arriel 2D, 860 HP
Maximum flying speed:	220 km/h

## Ambulance jets



### Challenger 650

Number of aircraft:	3
Patient capacity:	4 lying
Wing span:	19.61 m
Length:	20.86 m
Height:	6.40 m
Maximum take-off weight:	21,863 kg
Maximum flying speed:	850 km/h
Maximum range:	6,500 km

Missions

# Rega in Switzerland

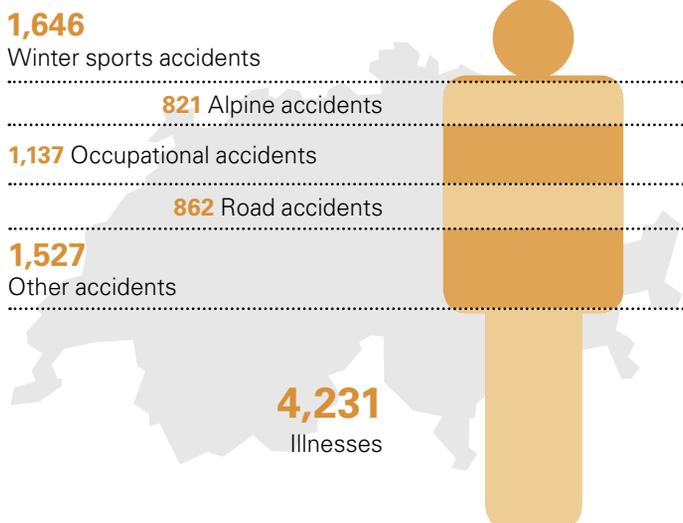


Rega's rescue helicopters are on call 24 hours a day, 365 days a year, in the service of the Swiss people. The 18 Agusta-Westland Da Vinci and Airbus Helicopters H145 helicopters transport state-of-the-art medical services directly to the casualty – not just in response to serious accidents or injuries, but also in cases of acute illness, such as cardiac problems.

The rescue helicopters are called out to deal with incidents in inaccessible mountainous terrain, as well as on motorways and in built-up areas. They are used to transport critical patients gently and reliably to the nearest suitable medical centre or to fly newborn babies to a paediatric hospital. A highly versatile and efficient means of rescue, the helicopter plays an indispensable role in the modern-day healthcare system.

Helicopter operations are divided into primary and secondary missions. Primary missions comprise rescue flights that transport emergency medical assistance directly to the scene of the incident. Secondary missions mostly involve inter-hospital transfers – for example, if a patient's condition has worsened and requires specialist attention. Almost a quarter of all Rega helicopter missions take place at night – a demanding task for the pilot, paramedic and emergency physician making up the crew.

## Primary/secondary missions by helicopter in 2018 (10,224 patients in total)



# Rega international



For people who become seriously injured or ill abroad, Rega represents a bridge to their homeland. Its three own ambulance jets are used exclusively for transporting patients. The crew always comprises at least two pilots, a physician and an intensive care nurse. Rega is equipped to transport patients who are in a very critical physical condition. However, as each transport involves a certain degree of risk, operations of this kind need to be closely supervised by experienced medical coordinators.

The use of an ambulance jet is not always necessary. Often patients are repatriated on board a scheduled aircraft – competently and professionally attended to by a member of Rega’s medical staff.

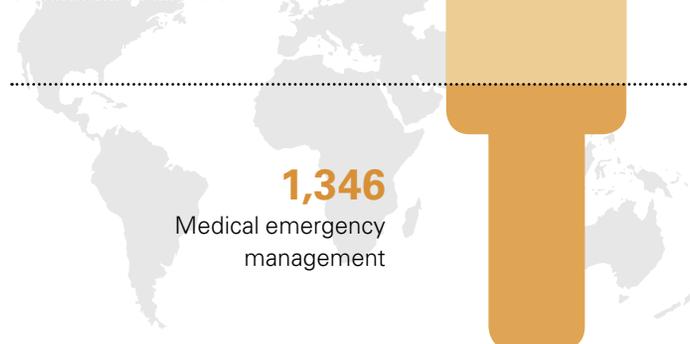
If travellers suffer serious medical problems abroad, Rega can also assist by providing them with expert medical advice by telephone as part of its emergency medical management. Medical consultants are on duty around the clock and, together with the doctors on location and the patients themselves, seek the best possible solution – such as informing them of the nearest suitable hospital.

Providing that it has capacity available, Rega also puts its knowledge and fleet at the disposal of clients abroad for patient transports. These missions help Rega crews to maintain and improve their operational and medical expertise, and also contribute towards covering costs.

## Medical emergencies abroad in 2018 (2,701 patients in total)

**1,355**

patients repatriated by ambulance jet  
or scheduled aircraft



**1,346**

Medical emergency  
management



# No patrons, no Rega

Thanks to their annual contributions, Rega's patrons enable the continued existence of the air rescue organisation. They keep Rega in the air, as a public service for the Swiss people.

Professional rescue by air around the clock, 365 days a year, with highly qualified staff, state-of-the-art rescue equipment and a dense network of helicopter bases – it would be impossible to provide all this in a cost-effective manner. When, back in the 1960s, the fledgling air rescue organisation ran into serious financial difficulties, instead of relying on public funds, it set up a privately operated patronage system. Since then, the patrons have paid Rega's "deficit" with their annual contributions. At around 60 percent, these patronage contributions, together with donations, cover more than half of the total budget. The remaining costs are principally covered by cost bearers, such as health, accident and travel insurers, in the form of payments for missions carried out on their behalf.

In the meantime, this system has more than proved its worth. It gives Rega the freedom and independence to perform its duties as it deems best and allows it to fully focus on its patients' welfare.

As a token of thanks for patrons' support, Rega can waive the cost of any of the services it performs on their behalf, provided that the person's insurance company is not liable to pay them.

You can find the Conditions of Patronage on page 38.

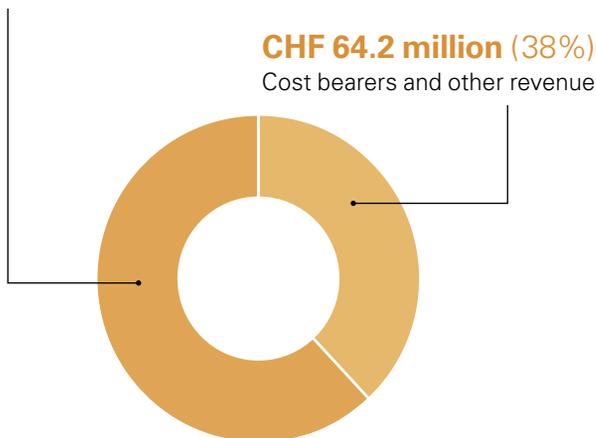
## Cost coverage in 2018

**CHF 103.1 million (62%)**

Patrons' contributions and donations

**CHF 64.2 million (38%)**

Cost bearers and other revenue





A huge thank-you to all of our  
3,483,000 patrons, whose financial  
contributions keep Rega in the air.

Become a Rega patron: [www.rega.ch](http://www.rega.ch)

# Milestones

**Swiss Air-Rescue Rega was founded in 1952 to provide emergency medical assistance by air. Since then, it has organised over 400,000 missions and rescued countless people in distress. Even back in the pioneering days, Rega's air rescuers succeeded in achieving the impossible. Rega has remained true to this credo to this day.**

> 27.4.1952



### The organisation is founded

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

> 1952



### 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.

> 1953



### The first rescue parachutists

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

> 1955



### Large-scale live demonstration

During three days in March, over 300,000 spectators watch a live demonstration in the area around Zurich's lower lake basin, held to procure funds for air-rescue services.

> 1956



### 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.

> 1957



### 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-47 J helicopter.

> 1960



### An autonomous organisation under Fritz Bühler

Swiss Air-Rescue breaks away from its parent organisation, the SLRG. Fritz Bühler is appointed Technical Director.

> 1960



### 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.

> 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.

> 1968



### Bell 206A, the first turbine-powered helicopter

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

> 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 Gsteigwiler base lift two climbers directly off the rock face.

> 1971



### First Alouette III

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

> 1973



### Twin-engine helicopter

The introduction of the Bölkow BO-105C – depicted here on the roof of the University Children's Hospital in Zurich – marks the beginning of the era of twin-engine helicopters at Rega.

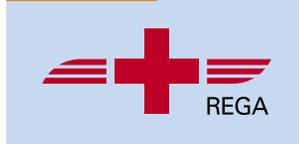
> 1973



### 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.

> 1979



### 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.

> 1980



### Fritz Bühler dies

on 23 August: the great organiser and promoter of air rescue passes away totally unexpectedly at the age of 72 during a business event.

> 1980



### The "Hitchcock" rescue

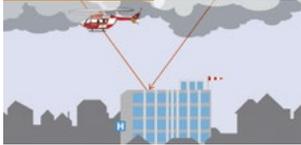
A parachutist's canopy becomes entangled in the aircraft's tail wheel. The helicopter flies above the plane so that the rescuer suspended at the end of a rescue hoist can cut the parachutist free.

> 1984



### Long-haul ambulance jet

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

<p>1987</p> 	<p><b>Helicopters with night vision goggles</b> 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 missions.</p>	<p>2011</p> 	<p><b>Flying "blind" to the Inselspital</b> 27 July: thanks to satellite-based navigation, Rega flies to the Inselspital University Hospital in Berne despite poor visibility, using the GPS-assisted approach procedure.</p>
<p>1987</p> 	<p><b>The Hawker 800 jets commence services</b> Two new ambulance jets replace the pair of Learjet 35 aircraft. The larger cabin and longer range improve the services for patients.</p>	<p>2012</p> 	<p><b>State-of-the-art dispatch system</b> The new interlinked systems allow alarm procedures to be largely digitalised and rescues to be coordinated more efficiently than ever.</p>
<p>1992</p> 	<p><b>The new fleet is made up of Agustas</b> 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.</p>	<p>2013</p> 	<p><b>The flight simulator for the AW Da Vinci sets new standards</b> in pilot training. Instrument flight and emergency scenarios can now be practised realistically and efficiently – in safety and without harming the environment.</p>
<p>1996</p> 	<p><b>The first round the world flight</b> In a mission lasting 43 hours, the Challenger CL-600 transports three patients in consecutive legs, a journey that takes it all the way round the world for the first time.</p>	<p>2014</p> 	<p><b>Premiere for Rega's new transport incubator</b>, which can be used in both the jets and the helicopters and provides premature or newborn babies with the best possible medical care.</p>
<p>1997</p> 	<p><b>New Rega Centre at Zurich-Kloten</b> For the first time, Rega's hangar, Operations Centre, maintenance works, logistics operations, Patronage Centre and Administration Department are all united under one roof.</p>	<p>2015</p> 	<p><b>Rega orders three all-weather AW169-FIPS helicopters</b> from Leonardo (formerly AgustaWestland), which are equipped with an anti-icing system and will go into operation in 2021.</p>
<p>2002</p> 	<p><b>Three new Challenger CL-604 jets</b> Three identical aircraft from the Canadian manufacturer, Bombardier, replace the 15-year-old air ambulance fleet.</p>	<p>2016</p> 	<p><b>Rescue despite poor visibility thanks to IFR flight route network</b> In December, two routes of the Low Flight Network for helicopters, which is based on satellite navigation, are certified for daytime use.</p>
<p>2002</p> 	<p><b>Five Eurocopter EC 145 helicopters</b> Rega purchases five spacious rescue helicopters from helicopter manufacturer Eurocopter for use at its lowland bases. This is followed by a sixth.</p>	<p>2017</p> 	<p><b>Precise flight weather data</b> 60 new or enhanced measuring stations and weather cameras now continually supply Rega's helicopter pilots with up-to-date meteorological information – a key prerequisite for IFR flights.</p>
<p>2004</p> 	<p><b>Tsunami in Southeast Asia</b> Rega is pushed to the limit. Over a period of ten days, 16 medical teams are in operation. Within the space of a week, more than 60 casualties are repatriated to Switzerland.</p>	<p>2017</p> 	<p><b>Authorisation for Low Flight Network</b> Rega receives special authorisation to use key intersections of the nationwide network of IFR flight routes on missions virtually around the clock.</p>
<p>2009</p> 	<p><b>The AgustaWestland Da Vinci is Rega's new mountain helicopter</b> Rega purchases from helicopter manufacturer AgustaWestland 11 rescue helicopters for use at its mountain bases.</p>	<p>2018</p> 	<p><b>Three new ambulance jets</b> 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.</p>
<p>2009</p> 	<p><b>Mobile heart-lung machine on board</b> For the first time, critically-ill patients can be hooked up to a heart-lung machine in the Rega helicopters and jets.</p>	<p>2018</p> 	<p><b>New generation Rega helicopters</b> 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.</p>



Rega



A

REMOVE BEFORE FLIGHT

5502

Rega



## Annual Report 2018

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# Activities in 2018

In the past year, Rega came to the aid of more people than ever before: the Rega crews transported 11,579 patients (+7.3 %) on board its rescue helicopters and ambulance jets. That is equivalent to an average of 32 patients per day. Correspondingly, Rega's Operations Centre was extremely busy; with a total of 17,124 missions (+7.3 %), it organised on average one mission every 31 minutes.

## Helicopters

In 2018, the helicopters were in the air more frequently than in the previous year (12,573, +6.8 %). While the number of secondary missions fell marginally (2,606, -2.0 %), the amount of primary missions rose (7,522, +10.9 %). Both the helicopters from the lowland bases (+2.5 %) and those stationed at the mountain bases (+9.9 %) flew more missions. The Rega helicopters were also in the air more

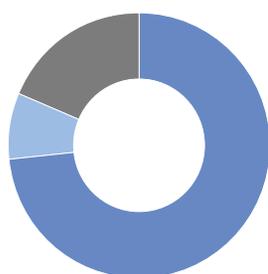
often after dark (2,332, +1.6 %): in 2018, every fourth helicopter mission performed by Rega was flown at night. The amount of "Contadino" missions organised by Rega's Operations Centre also increased marginally (1,301, +1.1 %): commercial helicopter transport firms are commissioned by Rega to carry out these transports to recover injured or dead cattle on behalf of mountain farmers.

## Fixed-wing aircraft

During the past year, Rega repatriated more patients from countries abroad than in 2017 (1,355, +8.5 %). Its three ambulance jets took off on missions more frequently (980, +10.6 %) and flew more patients back home to Switzerland (981, +8.9 %). In comparison with the previous year, there were also more long-haul flights (374, +7.5 %) in 2018. Correspondingly, this gave rise to an increase in the

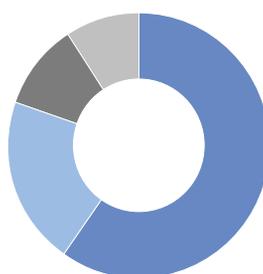
number of flight hours: Rega's ambulance jets spent a total of 4,690 hours in the air, which represents a rise of 8.8 % compared to 2017 (4,310). An increase was also registered in the number of patients repatriated on board scheduled aircraft (374, +7.5 %). This economically and environmentally sound 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 the patient or other passengers, and that enough seats are available on board the plane. Due to natural fluctuations, fewer patients (122, -6.2 %) were repatriated on scheduled flights accompanied by a Rega flight physician or intensive care flight nurse. The amount of unaccompanied repatriations (252, +15.6 %), on the other hand, recorded an increase: in such cases, the Rega Operations Centre organises the

### Number of missions



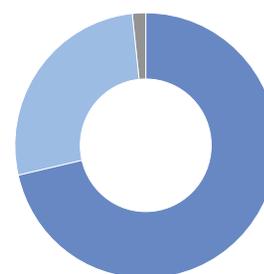
	2018	2017	+/-
Total missions	<b>17,124</b>	15,958	<b>7.3 %</b>
■ Helicopters	<b>12,573</b>	11,774	6.8 %
■ Jets/Scheduled aircraft	<b>1,371</b>	1,281	7.0 %
■ Other missions <sup>1</sup>	<b>3,180</b>	2,903	9.5 %

### Missions by helicopter



	2018	2017	+/-
Total missions	<b>12,573</b>	11,774	<b>6.8 %</b>
of which are performed at night	<b>2,332</b>	2,296	<b>1.6 %</b>
■ Primary missions <sup>2</sup>	<b>7,522</b>	6,781	10.9 %
■ Secondary missions <sup>3</sup>	<b>2,606</b>	2,659	-2.0 %
■ Assistance to mountain farmers	<b>1,301</b>	1,287	1.1 %
■ Special missions <sup>4</sup>	<b>1,144</b>	1,047	9.3 %

### Missions by fixed-wing aircraft



	2018	2017	+/-
Total missions	<b>1,371</b>	1,281	<b>7.0 %</b>
■ Ambulance jets	<b>980</b>	886	10.6 %
■ Scheduled aircraft	<b>369</b>	352	4.8 %
■ Chartered aircraft	<b>22</b>	43	-48.8 %

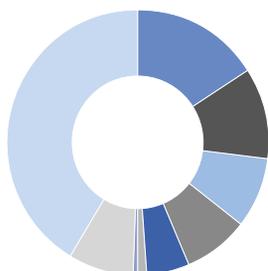
<sup>1</sup> Other missions: transports by ambulance, missions on behalf of the Swiss Alpine Club SAC, Spéléo-Secours, Redog, etc.

<sup>2</sup> Primary missions: emergency missions directly at the scene of the incident

<sup>3</sup> Secondary missions: inter-hospital transfers, neonatology, organ transports

<sup>4</sup> Special missions: non-medical Rega missions (search, route securing and reconnaissance flights on behalf of operation partners) and missions performed by other helicopters

### Transported patients – primary/secondary missions by helicopter



	2018	2017	+/-
Total patients	<b>10,224</b>	9,539	<b>7.2%</b>
Winter sports accidents	<b>1,646</b>	1,659	-0.8%
Occupational accidents	<b>1,137</b>	974	16.7%
Road accidents	<b>862</b>	780	10.5%
Alpine accidents	<b>821</b>	671	22.4%
Sports accidents	<b>534</b>	392	36.2%
Aviation accidents	<b>137</b>	122	12.3%
Avalanche accidents	<b>33</b>	23	43.5%
Other causes	<b>823</b>	711	15.8%
Illnesses	<b>4,231</b>	4,207	0.6%

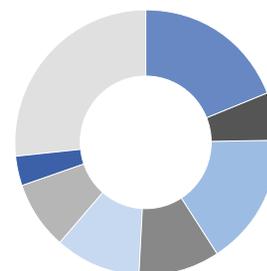
### Medical emergencies abroad

	2018	2017	+/-
Total patients	<b>2,701</b>	2,571	<b>5.1%</b>
Medical advice	<b>1,346</b>	1,322	1.8%
Repatriation	<b>1,355</b>	1,249	8.5%

### Repatriations

	2018	2017	+/-
Total patients	<b>1,355</b>	1,249	<b>8.5%</b>
Rega ambulance jets	<b>981</b>	901	8.9%
Scheduled airlines accompanied	<b>122</b>	130	-6.2%
Scheduled airlines unaccompanied	<b>252</b>	218	15.6%

### Transported/accompanied patients – missions by fixed-wing aircraft



	2018	2017	+/-
Total patients	<b>1,103</b>	1,031	<b>7.0%</b>
Limb injuries	<b>210</b>		
Cranio-cerebral trauma	<b>65</b>		
Other injuries	<b>177</b>		
Cardiovascular diseases	<b>110</b>		
Strokes	<b>118</b>		
Gastrointestinal diseases	<b>91</b>		
Malignant tumours	<b>39</b>		
Other illnesses	<b>293</b>		

return journey for patients who are able to travel without a medical escort.

### Medical advice and assistance by Rega doctors

Prior to each repatriation mission, thorough 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 is necessary and sensible, and if so, how and when it should take place. As with the flight coordinators, the medical consultants work in shifts around the clock. Last year, Rega's medical consultants provided a total of 2,701 patients (+5.1%) suffering medical problems abroad with competent advice. In 1,355 cases, the medical clarifications led to the patient being repatriated on board a Rega ambulance jet or a commercial airline. Individual insurance companies ask Rega's physicians to clarify the medical condition of their policy holders who

have become seriously injured or ill abroad, even if they are not Rega patrons. In such cases, Rega makes a recommendation as to whether from a medical point of view the patient needs or is fit enough to be transported, and the insurance company then decides if and how repatriation should take place.

### Fluctuation in mission and patient numbers

The number of patients and missions do not always concur, as either several patients are transported at the same time or flights are performed without any patients at all – for example, if a search flight proves unsuccessful. Generally speaking, the helicopter mission statistics reflect the meteorological conditions, as well as the leisure activities and travel patterns of both the Swiss population and foreign tourists in Switzerland. The figures are therefore subject to natural fluctuation. The increase in the number of heli-

copter missions in 2018 was partly attributable to the sustained periods of fine weather in the spring and summer. According to the MeteoSchweiz weather service, the summer of 2018 went down in history as the third hottest summer since records began in 1864.

### Financial development and investments

In the 2018 business year, Rega's operating revenue totalled CHF 166.2 million, while the operating expenditure came to CHF 164.1 million. This gave in a positive operating result of CHF 2.0 million. The annual result amounted to CHF 2.8 million. Rega basically funds itself through two channels: 62 percent of the budget is covered by Rega patrons through their patronage contributions and donations, while the remaining 38 percent comprises payments by cost bearers for services rendered.

In the past year, the majority of investments were made in modernising the Rega fleet and in large-scale IT projects. In line with its strategic goals, Rega is almost 100 percent self-financed and does not need outside capital to finance its investments.

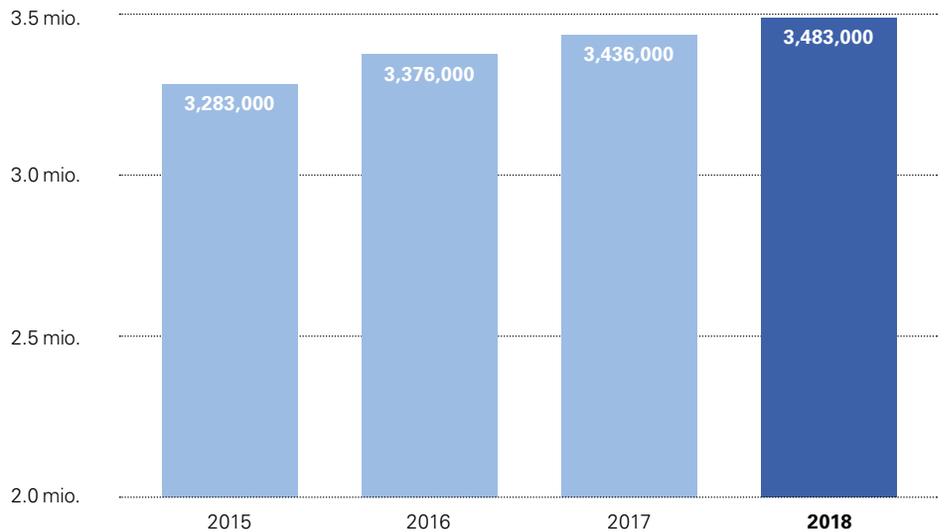
**Continued growth in support**

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. This support enables Switzerland to benefit from air rescue services that set standards and enjoy recognition all over the world. In 2018, patrons supported Rega with annual contributions, donations and bequests totalling CHF 103.1 million (+2.1 %), corresponding to over 62 percent of the overall costs. In the year under review, Rega once again registered a growth in this support: as of 31 December 2018, a total of 3,483,000 patrons were recorded on the computer system. This represents around 47,000 additional patronages or a 1.4 percent increase compared to the previous year. According to its Conditions of Patronage, Rega can waive the cost of part or all of its mission costs if these are not covered by the patrons’ own insurance policies, as a token of thanks for their invaluable support.

**Rega’s three new ambulance jets in operation worldwide**

On 17 December, Rega took delivery of its third new Bombardier Challenger 650 jet, thus successfully bringing the project to modernise its fleet of ambulance jets to a close on schedule and within budget. The three new ambulance jets replace Rega’s three CL-604 aircraft, which had been in operation in the service of the Swiss population for 16 years – longer than any other ambulance jet fleet in Rega’s history. Patients can benefit from further optimised medical equipment in the cabin, as well as from cutting-edge technology in the cockpit. Thanks to the latest navigation and communication instruments, the pilots are now able, for example, to use higher altitude

**Development in the number of patrons**



flight routes across the Atlantic. Due to the lower air resistance at higher altitudes, the new jet uses less fuel on these routes, which in turn means fewer refuelling stops on long-haul flights. A new weather radar increases safety during missions, while an infrared camera makes it possible to fly to airports in more adverse weather conditions than before. As part of the fleet renewal programme, not only the jet pilots, but also the medical crews and staff at Rega’s in-house maintenance works had to be retrained to work with the new ambulance jets.

**New rescue helicopters of the latest generation**

Rega has purchased a total of seven H145 helicopters to replace the lowland fleet of Airbus Helicopters EC 145 rescue helicopters, which have been in operation since 2003 and have transported over 60,000 patients. The H145 represents a quantum leap for both crews and patients. It is considerably more powerful than its predecessor, thus further increasing safety during missions. The twin-engine H145 features cutting-edge avionics and navigation technology, is equipped with a four-axis autopilot, and can also perform satellite-based approach flights with extreme precision. Its spacious

cabin means that the new Rega helicopter is ideally suited for special intensive care patient transports, such as with a heart-lung machine or a mobile incubator for premature babies. The H145 is already in operation at the lowland bases in Berne, Basel, Zurich und Lausanne; the St. Gallen base will also be equipped with the new Rega helicopter by summer 2019.

**Development of the medical equipment in the new aircraft**

A rescue helicopter or ambulance jet that meets Rega’s stringent demands needs to be specially designed and cannot simply be bought “off-the-peg”. When considering ways to optimise the interior, particular attention was paid to the medical fit-out on board the new Rega Challenger 650 and Airbus H145 aircraft. Drawing on the operational experience gained in recent years, Rega’s medical crews further optimised the equipment and fittings in the new aircraft in collaboration with internal and external engineers.

The demands made of the interior of Rega’s new H145 helicopter were highly complex: the equipment and fixtures needed to be as light as possible yet extremely stable in order to meet the requirement of the European Aviation Safety Agency EASA to be

able to withstand up to 20 times the force of gravity in an emergency. In addition, the crew had to be able to install specialised equipment, such as the mobile incubator for transporting premature babies, very quickly and without the use of tools. By arranging the equipment in a different way, the emergency flight physician and paramedic now have even more room in the cabin, which makes it easier to attend to the patient. Another Rega-specific development concerned the lights in the cabin of the rescue helicopter. Every fourth Rega mission takes place at night and the pilots wear night-vision goggles. In order for the emergency flight physician to have good lighting conditions while caring for the patient in the cabin but without the light source disturbing the pilot, the cabin lighting was redesigned and can now be dimmed at the touch of a switch.

The cabin interior and medical equipment of the new Rega Challenger 650 ambulance jet have also been customised. For example, patients benefit from wider, multifunctional high-tech mattresses, the firmness of which can be adjusted to the patient's weight. In addition, the so-called anti-decubitus function reduces the risk of pressure sores by means of undulating movements in the mattress core; this also improves blood circulation and, particularly on long flights, prevents thrombosis from occurring.

#### **For all-weather air rescue: the Low Flight Network**

For many years, Rega has been pursuing its vision of all-weather air rescue. Together with the Swiss Air Force and the Skyguide air navigation service, Rega has been working on setting up and operating the so-called Low Flight Network (LFN), a countrywide network of instrument flight routes that link airports, hospitals and Rega bases with each other. Some of the LFN routes are already in operation and actively being used: in 2018, more than 300 patients benefited from Rega pilots being able to fly despite poor visibility using instrument flight rules (IFR).

Something else that has proved itself in practice is the special authorisation granted to Rega by the Federal Office of Civil Aviation (FOCA) at the end of 2017. This allows Rega pilots to also fly according to instrument flight rules to the military airfield in Emmen outside the official operating times. In order for it to be possible to fly directly to hospitals, too, IFR procedures are also needed for hospital helipads and for Rega helicopter bases. Rega has now completed the measures required and submitted to the Federal Office of Civil Aviation the necessary documentation for the certification of the hospital approach flights in Zurich, Lucerne, Winterthur and Nottwil. (Note: IFR approach flights to the hospitals in Zurich and Winterthur have been approved as from 31 January 2019, see page 8.)

#### **IR/EOS multi-sensor search system successfully in operation**

The search for missing or injured persons has belonged to Rega's core competences since the very beginning. With the IR/EOS multi-sensor search system, which was put into operation in 2018, Rega now has an additional aid when searching for missing persons. Before a search flight, the system is installed on and in the Rega helicopter and subsequently operated by a specially trained person in the cabin. The high-tech system comprises a highly sensitive infrared camera, optical sensors, a computer workstation in the cabin and a connected searchlight. This makes it possible to perform searches efficiently and over large areas both during the day and at night and thus rescue people in distress as swiftly as possible.

#### **Cooperation with SIRMED**

In order to be able to use synergies in the field of education and training in emergency and rescue medicine, Rega looked for a suitable strategic partnership and found it in the form of a close collaboration with the Swiss Institute of Emergency Medicine SIRMED. As of 1 January 2019, Rega will acquire 50 percent of the shares of SIRMED,

a subsidiary of the Swiss Paraplegic Foundation. This means that in future, SIRMED will be equally funded by Switzerland's two largest benefactor organisations. For the Swiss Paraplegic Foundation and Rega, this joint funding structure is the logical continuation of many years of successful cooperation. Through its involvement, Rega will promote education and training at all levels of rescue medicine, which will improve the quality of collaboration at the accident site. This, in turn, benefits the patients.

#### **Rega exhibition at the Swiss Museum of Transport in Lucerne**

The Museum of Transport and Rega enjoy a long-standing partnership, which is continued in the new, interactive exhibition, "Medical help from the air". On 27 April 2018 – on the occasion of Rega's 66th birthday – Transport Museum director Martin Bütikofer and Rega CEO Ernst Kohler opened the fascinating new exhibition in the Aviation Hall. Rega's presentation focuses on its everyday work in the 21st century. An Agusta rescue helicopter stands on a specially built landing platform identical to those mounted on hospital roofs. The newest attraction is the oldest serving Bombardier Challenger CL-604 ambulance jet, which Rega has handed over to the Transport Museum and will go on show as part of the Rega exhibition from 16 April 2019.

# Mission Statement

## 1 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.

## 2 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.

## 3 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.

## 4 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.

## 5 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 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.

## 6 Our values

We strive to provide around-the-clock 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.

# Foundation Board

## 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

Gabi Huber, Dr. iur., Altdorf, since 2015, 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

Marco Maggiorini, Prof. Dr. med., Schindellegi, since 2011

Adrian Amstutz, Sigriswil, since 2013

Franz Stämpfli, Innertkirchen, since 2015

Gerold Biner, Zermatt, since 2015

Thomas Holderegger, Waldstatt, since 2015

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

Paul Hälgl, Dr. sc. techn., Wollerau, from 2019

Anna Brunello, Dr. med., Haldenstein, from 2019

## Resigned as of 31 December 2018

Ulrich Graf, Bäch, 2001–2018

Adrian Frutiger, PD Dr. med., Trimmis, 1998–2018

Andreas Berger, Dr. med., Greppen, 2007–2018

## Medical Commission

Christian Kern, Prof. Dr. med., Chairman

Marco Maggiorini, Prof. Dr. med.

Markus Furrer, Prof. Dr. med.

Anna Brunello, Dr. med.

## Finance Commission

Josef Meier, Chairman

Michael Hobmeier

Paul Hälgl, 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

Françoise Jaquet, Dr. sc. nat., Swiss Alpine Rescue representative

Philipp Perren, Dr. iur., Canton Valais representative

Andy Scheurer, Spéléo-Secours representative

Markus Denzler, police commanders representative

Marc Ziegler, Swiss Cable Cars Association representative

Sibylle Frey, Swiss Air Force representative

Günter Bildstein, 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

as of 1 January 2019

**From left: Gabi Huber, Franz Stämpfli, Thomas Holderegger, Marco Maggiorini, Anna Brunello, Michael Hobmeier, Markus Furrer, Heidi Hanselmann, Josef Meier, Patrizia Pesenti, Thomas P. Emmerich, Christian Kern. Missing from the picture: Adrian Amstutz, Gerold Biner, Paul Hälgl**



# Governance and Compliance

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, safeguarding the interests of patrons, and safeguarding the interests of 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 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, IKS**

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 over 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 of up to 25 percent in helicopter companies, airfield companies and associations and assistance companies in Switzerland. 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.

### **Federal Supervisory Board for Foundations**

As a non-profit foundation, Rega and its Foundation bodies are 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 12 September 2018, and no objections of any kind were raised.

# Rega in 2018

**17 April:** Coinciding with Rega's Annual Media Conference, the new Rega Challenger 650 ambulance jet from Canadian manufacturer Bombardier lands at Zurich Airport and is greeted with a traditional water salute by the airport fire service. The jet with the registration number HB-JWA is the first of a total of three new ambulance jets that will join the Rega fleet by the end of 2018 in replacement of the CL-604 fleet.

**25 April:** The European Emergency Number Association (EENA) presents Rega with its Outstanding Rescue Service Award. The EENA unites more than 1,300 emergency call centres worldwide and each year honours organisations for their services in the field of public safety. The jury particularly highlighted the work of Rega's Operations Centre and its central role in the coordination of rescue missions.

**27 April:** The Swiss Museum of Transport and Rega open the new exhibition, "Medical help from the air". Visitors can guide a rescue helicopter in to land in the downwash simulator, take a look round the Operations Centre or test their knowledge about Rega in an interactive quiz. Besides the two Rega rescue helicopters, the Alouette III SE 316 and the Agusta A 109 K2, the longest serving Rega jet, the Challenger CL-604 with the registration number HB-JRA, will also be on display at the exhibition from spring 2019.

**27 May:** Around 15,000 visitors make their way to the Rega Centre to attend the two Open Days. At Rega's headquarters at Zurich Airport, they have the opportunity to look behind the scenes of Switzerland's air rescue services and inspect Rega's new Challenger 650 ambulance jet for the first time. Helicopter and jet pilots, paramedics, emergency physicians, mechanics, mission coordinators and other Rega staff are on hand to provide information and answer questions.

**10 October:** With the aid of the IR/EOS multi-sensor search system, Rega successfully locates a missing person on the Niesen mountain (BE) at night. The high-tech system is mounted on the Rega helicopter and operated by a specially trained person. A highly sensitive infrared camera, optical sensors, a computer workstation in the cabin and a connected searchlight make it possible to perform searches from the air efficiently and over large areas – during the day and at night.

**23 October:** Rega's new Airbus Helicopters H145 rescue helicopter takes off on its first mission. The crew from the Rega base in Berne fly a seriously ill patient as an emergency case from the Spitalzentrum Biel to the Insel-spital in Berne. With its spacious cabin, the new Rega helicopter is ideally suited to special intensive care patient transports, such as with a heart-lung machine.

**2 November:** To mark its 50,000th patron in the City of Berne, Rega presents its brand new H145 rescue helicopter to the general public and lands in the middle of the Bundesplatz. Afterwards, members of the public are able to inspect the new rescue helicopter from the Berne base for the first time and have the Berne crew explain to them what makes this aircraft so special.

**11 December:** The measures to further develop Rega's tried-and-tested emergency app are now completed and the updated version is ready for the app stores. As soon as it is activated, the app automatically transmits the coordinates of the person raising the alarm, which saves valuable time in an emergency. Since its launch in 2011, the app has been downloaded more than 1.3 million times. The new Rega app offers useful additional features that can facilitate a speedy rescue in an emergency. Some of these functions are available exclusively to Rega patrons – as a token of thanks for their invaluable support.



17 April



27 April



27 May



10 October



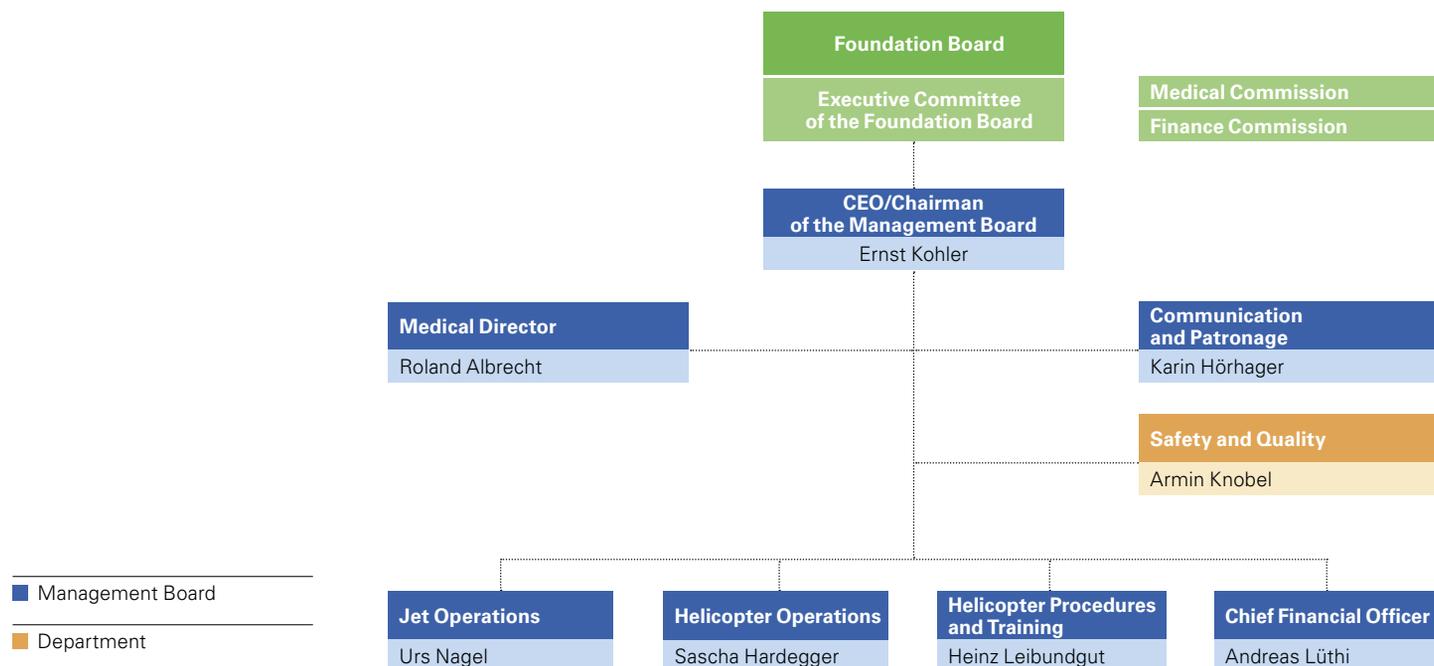
23 October



2 November

# Management Board

**Organigram** as of 1 January 2019



From left: Sascha Hardegger, Heinz Leibundgut, Karin Hörhager, Urs Nagel, Ernst Kohler (front), Roland Albrecht (back), Andreas Lüthi



# Conditions of Rega Patronage

In order to be able to provide a professional, round-the-clock and suitably equipped air rescue service in accordance with its purpose as a non-profit foundation, Rega is dependent on the financial support of its patrons.

You can become a Rega patron by paying the following minimum contributions:

- CHF 30.– for individuals
- CHF 60.– for couples (married/cohabiting couples or registered partners)
- CHF 70.– for families (parents with children who are under 18 years of age on the date of payment)
- CHF 40.– for one-parent families (single parents with children who are under 18 years of age on the date of payment)

Patronage is valid for the current calendar year and takes effect on the date of payment. If patronage is not renewed, it expires on 15 May of the following year.

In grateful acknowledgement of patrons' support, Rega can, at its own discretion and within the bounds of its resources, waive or reduce the costs of any emergency services listed below that it has provided or organised on their behalf, in the event that insurance companies or any other third party are not liable to pay and thus not required to reimburse the costs of the rescue operation, whether wholly or in part. In all cases, Rega provides its rescue services and also, where appropriate, waives or reduces the costs thereof without any legal obligation. Rega may be hindered or prevented from carrying out rescue missions in particular due to operational, medical or meteorological reasons.



## 1. Switzerland and the Principality of Liechtenstein

- Rescue flights and medically indicated transports by helicopter to the nearest suitable hospital
- Rescue operations conducted by rescue teams from the Swiss Alpine Club SAC
- Search operations in collaboration with the police and other competent organisations, provided that there is reasonable hope of being able to help missing persons
- Evacuations and preventive missions where a threat to life and limb exists
- Flights to recover dead persons, after consultation with the authorities responsible
- Flights to recover injured, sick or dead livestock and transport them to the nearest location accessible by another means of transport, provided that the owner of the livestock is a natural person and a Family patron

## 2. Worldwide

- Medical advice by Rega's Operations Centre in the event of medical problems arising abroad
- Medically indicated repatriation flights to Switzerland for patrons domiciled in Switzerland or the Principality of Liechtenstein, as well as for Swiss nationals living abroad

Rega decides whether emergency assistance should be provided based on medical, social and operational considerations, and is responsible for determining how and when the mission should be carried out. Rega may commission other organisations to perform missions on its behalf. In order to have the required leeway in providing this assistance, the patron concerned authorises Rega wherever necessary to pass on personal and medical data to other parties directly involved (operation partners, physicians, insurance companies etc.), both in Switzerland and abroad.

Rega's Operation Centre (emergency number from within Switzerland 1414, from abroad +41 333 333 333) is available around the clock to anyone in distress and in need of assistance due to a serious accident or acute illness.

**Rega Centre**

Postfach 1414  
8058 Zürich-Flughafen  
Tel. 044 654 33 11

**Rega 1, Dübendorf**

Überlandstrasse 299  
8600 Dübendorf  
Tel. 044 802 20 20

**Rega 2, Basel**

Postfach  
4030 Basel-Flughafen  
Tel. 061 325 29 66

**Rega 3, Bern**

Flugplatzstrasse 1  
3123 Belp  
Tel. 031 819 65 11

**Rega 4, Lausanne**

Route de Romanel 33  
1018 Lausanne  
Tel. 021 644 22 66

**Rega 5, Untervaz**

Postfach  
7204 Untervaz  
Tel. 081 300 09 99

**Rega 6, Locarno**

Via Aeroporto 15  
6596 Gordola  
Tel. 091 820 50 00

**Rega 7, St. Gallen**

Postfach 320  
9015 St. Gallen  
Tel. 071 313 99 33

**Rega 8, Erstfeld**

Reussstrasse 40  
6472 Erstfeld  
Tel. 041 882 03 33

**Rega 9, Samedan**

Plazza Aviatica 6  
7503 Samedan  
Tel. 081 851 04 04

**Rega 10, Wilderswil**

Bönigstrasse 17  
3812 Wilderswil  
Tel. 033 828 90 30

**Rega 12, Mollis**

Flugplatz  
8753 Mollis  
Tel. 055 614 55 55

**Rega 14, Zweisimmen**

Postfach 210  
3770 Zweisimmen  
Tel. 033 729 10 30

**Partner helicopter base****Rega 15, Genève**

Hôpitaux Universitaires  
de Genève  
Base hélicoptère  
1217 Meyrin  
Tel. 022 798 00 00

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